

Acceptance Test

Automated Grading System for Microsoft Excel Spreadsheets

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Section 1: Product Overview and Summary

Problem Definition

In the Fall 2005 semester at Siena College there were eight separate sections of lab offered for the class CSIS-010, Introduction to Computer Applications. There were three sections offered of CSIS-011, Problem Solving with Spreadsheets. Both of these classes teach the use Microsoft Excel as part of their curriculum. Thus, each semester, students produce hundreds of spreadsheets that must be submitted to their professors for grading, each of which must be printed out and reviewed manually.

Our clients, Dr. Scott Hunter and Ms. Jami Cotler, both of the Siena College Computer Science Department, approached Performance Software to develop a comprehensive solution to this time consuming and resource wasteful problem. The clients wished to automate the work of spreadsheet grading so that professors are not forced to dedicate so much of their time to such a menial process. This now completed system allows for online submission of assignments by the students, making it easy to deliver their work, no matter where they have performed the assignment. Upon submission, the application reviews the assignment and compares it to an instructor submitted key file. A report is generated by the application indicating the differences found between the key file and submitted file and allows the instructor to review and accept each discrepancy. The system integrates the individual student's grade details into more comprehensive class reports offering insight into areas where students had difficulty with the assignment, providing a teaching metric not previously available to the professors.

Reason For Project

The purpose of this application is to lessen the intense time requirements placed on instructors of the CSIS-010 and CSIS-011 classes at Siena College for the grading of their students work done using Microsoft Excel. By implementing an online submission system for the students and online access to automatically generated electronic reports for the instructor, the system ensures that all users will have a more agreeable experience for this aspect of the class.

Goals of Project

The goal for this project is to create software that will automatically grade Microsoft Excel spreadsheets. The software offers four types of accounts (student, lecture instructor, lab instructor, and course coordinator), as well as online submission for students, online access for instructors, and an easy to use Graphical User Interface (GUI). Furthermore, the software generates multiple reports to organize the results of the grading.

Section 2: Functional Requirements

User Case Scenarios

This section describes the functions of each user in the AGS (Automated Grading System) fully and in detail. The abilities of each user are laid out in entirety to specify exactly what capabilities each user will have in the system.

Course Coordinator:

The Course Coordinator (CC) is administrator of the AGS. This user logs into an account created by the developers. Once logged into the system, the CC has many tasks to perform, including management of users, setup of lab and lecture sections, setup of assignment lists, submission of grading keys and template files, and report generation.

The CC is responsible for creating a system profile for each instructor. This profile is independent of what type of section (lecture or lab) that instructor leads. The CC has the ability to reset passwords for all users in the system and to change the assignment of student user lab and lecture sections

The CC must create Lecture and Lab sections. During the creation process, the CC identifies what type of section is being made (lab or lecture), the details of the class (this includes meeting day(s), time, section number), and assign an instructor user to the class. This process identifies the instructor as a Lab Instructor or Lecture Instructor. Keep in mind that an instructor may be assigned multiple sections, and so may end up being both a Lab Instructor and Lecture Instructor.

To begin the process of setting up the assignment list, the CC must set up assignment categories and category weights. This allows the system to track student grades based on the CC specified weight criteria. Categories may be added at any time; however, an assignment cannot be created for a category that does not exist. Categories not designated to any assignments may be deleted. Percentage weights to existing categories may be changed. The percentages must add up to 100%. A typical set of category/weight pairs may be:

{Regular Labs: 50%; Midterm: 25%; Final:25%;}

The CC sets up assignments in the system. For a new assignment, this process includes choosing to create a new assignment, choosing a category for the assignment, identifying what files are expected from the students for submission, and assigning a point value for each file in the assignment. The CC has the ability to modify or remove created assignments from the system.

The CC must submit template files and key files for each expected file in an assignment. The template file is a correct copy of the assignment that is submitted by the students. The key file describes what is checked in the students' submitted labs and what point values each part of the template is worth.

Reports are available for the CC to view. Some possible reports include lists of students by section (lab or lecture) and class averages by section (lab or lecture).

The ability to change the user password is formed so that the Course Coordinator may enter the Course Coordinator's current password and the new password twice for confirmation.

Student:

The Student is a user of the AGS. This user logs in through the web interface using an account which they create upon initial login, using a registration password given to them by their lab or lecture instructors. Once logged into the system the Student has the option of submitting a lab, viewing graded labs, viewing individual lab grades, as well as overall course grades, and changing the student's password.

The Student's ability to submit a lab includes a view of what lab is currently due and the deadline for submission. Once this deadline is reached the system will still accept late submissions, and the instructors may note that they are late by the date submitted. Lab submissions may include multiple files which are uploaded individually through a submission box by the student.

The ability to view graded labs will allow the student to see labs which have been graded and approved by the Lab Instructor. These grades come in the form of the submitted lab assignment file that has been measured against a key provided by the Course Coordinator as well as any comments provided by the Lab Instructor.

A section in the Student user account is included that contains a table of the labs and the separate lab files the student has submitted. This table is where the student goes to open and view a graded lab, but the grade of each file is also visible from the table. Along with this there is a table which includes both lab grades as well as other course grades and therefore gives the student's entire course grade, as well as the lab and lecture section averages the student is enrolled in.

The ability to change the user password is of a form where the student may enter the student's current password and the new password twice for confirmation.

Lab Instructor:

The Lab Instructor is a user of the AGS. The lab instructor is an instructor who teaches either a CS 010 or CS 011 lab section. This user logs in through the web interface using an account previously established by the Course Coordinator. Once logged into the system the Lab Instructor has the option of viewing graded labs, changing the lab instructor's password, grading a specific set of labs or grading all labs, leaving comments on graded labs, manually overriding our software grade, viewing reports of the lab instructor's class averages and individual student grades, and including outside grades.

The ability to view graded labs allows the lab instructor to see labs which have been graded and approved for each student. These grades come in the form of a submitted lab

assignment file that has been measured against a key provided by the Course Coordinator.

The ability to change the user password is of a form where the lab instructor may enter the lab instructor's current password and the new password twice for confirmation.

The lab instructor has the option of grading a specific set of labs or grading all the labs that have been submitted. When the lab instructor logs onto the system the lab instructor sees a list of all the labs that have been submitted by students. At this point the lab instructor has the option to select all of the labs that are waiting to be graded, or to select a specific set of labs that are to be graded using check boxes next to each assignment.

The lab instructor has the ability to leave comments on labs that have been graded. After an assignment has been graded by our system, the lab instructor has the ability to view the lab to see what has been marked wrong. At this time the lab instructor has the option of leaving comments on an assignment telling the student any pertinent information.

The lab instructor is able to manually override our software. After a lab has been graded the lab instructor is able to view the assignment, seeing what has been marked as wrong and where a student has lost points. At this time the lab instructor is able to select certain portions of an assignment and override what our grading system has marked as being wrong.

The lab instructor has a sidebar with the lab instructor's lab sections listed. Upon clicking on a section a list of the students enrolled in this section appears in a table format. Along side each student's name are the labs the students have submitted and the scores the students have received for those labs. The bottom of the table shows the class average for each lab, as well as for all the labs together.

The lab instructor is able to include outside grades. An instructor is able to manually enter grades into our system without the submission of a file. The system allows for lab instructor to enter grades that are not excel documents, and include nothing but a grade, this allows lecture instructors to view all of a students grades in the course, not just the student's excel lab grades.

Lecture Instructor:

The lecture instructor is a user of the AGS. After logging into the system, under the account setup by the Course Coordinator, the user is able to change the lecture instructor's password, view the students in each of the lecture instructor's lecture sections and also download student grades.

To view the student information, the lecture instructor selects the desired lecture section link from the left menu pane. After choosing a section to view, the lecture instructor sees a list of the lecture instructor's students and the lab section that the students are in. The

lecture instructor is also able to view the total score that each student received on each lab and the score that the student received on each individual part of the lab.

To download the student grades, the lecture instructor selects the link in the left menu pane. A file is downloaded to the lecture instructor's computer containing the student grades for all of the sections that the lecture instructor teaches. The file that is downloaded is in the form of a text document.

The ability to change the user password is of a form where the lecture instructor may enter the lecture instructor's current password and the new password twice for confirmation.

Functional Requirements

This section describes the functions of each user in the AGS and what abilities are involved within each function. It summarizes the above User Case Scenarios.

Course Coordinator Functions:

- Log in under an account created by the developers
- Create a system profile for each instructor
 - Change instructor account passwords
 - Remove profiles already created
- Modify student accounts
 - Change student account passwords
 - Change lab and/or lecture sections chosen by the students at initial login
 - Remove profiles already created
- Create lecture and lab sections
 - Identify if the section is lab or lecture
 - Identify details of the section (meeting days, time, and section number of each)
 - Identify instructor of each section
 - Change or remove sections already created
- Set up assignment categories and category weights
 - Specify the type of assignment being accepted and the percentage of the overall class grade it will count for
 - Modify or remove empty categories
- Set up assignments for the system
 - Choose the category for the assignment to fall under
 - Identify expected files for grading
 - Assign point value for each file
 - Modify or remove the assignments already created
- Submit template files and key files for each expected file in assignments
 - The Template file is the correct version of the files that will be submitted by the students

- The Key file will specify which parts of each file are to be graded and the point values for each
- View reports
 - Lists of students by lab or lecture sections
 - Class average based on lab or lecture sections
- Change current password

Student Functions:

- Login to an account created upon initial login
- Submit a lab
 - View deadlines for the lab
 - Multiple files in each lab will be uploaded separately
- View graded labs
 - See submitted lab file as compared to the key lab submitted by Course Coordinator, as well as see comments from instructor
- View table of lab grades
 - This is where the files can be opened, and grade is visible from table
 - Table includes tests and other course grades so overall grade found here
- Change current password

Lab Instructor Functions:

- Login to an account established by Course Coordinator
- Choose to grade a specified set of labs, or all the labs ready for grading
 - Select all files ready to grade or specify with check boxes
 - View files in the grading process, waiting to be graded, or already graded, but not yet reviewed
- Review the labs graded by software
 - Override the answers given by the grading system
 - Make comments about the lab for the individual student
- Manually enter grades into the system without submission of a file
 - These may not be excel files and may include only a grade specified by instructor
- View graded labs for each student
 - View submitted lab file with corrections corresponding to key lab submitted by Course Coordinator, as well as comments made
- View grades of each student
 - When clicking on class section on sidebar table is opened with list of students
 - In table includes all grades for individual students on each lab file
- Change current password

Lecture Instructor Functions:

- Login to an account established by Course Coordinator

- Select a lecture section of students to view
- View lab section of each student and individual scores of each submitted lab, as well as each section of the lab
- Download the students' grades
 - A file will be downloaded to the instructor's computer containing the grades
- Change current password

Section 3: Testing Requirements

Project Testing

The testing that we have conducted in order to ensure a complete and correct working system included several specific types of analysis.

The first of these four testing steps is Unit Testing, and for convenience and further understanding of this stage we have included our Unit Tests in the following section (Section 4) of this document. Unit Testing is used to make certain the system has no data, logic, or standard errors. It checks that each function that the users should be able to perform can be performed with the correct outcome.

The next stage of testing is Integration Testing. This step combines the Unit Testing to ensure that the separate functions that were tested in Unit Testing follow through correctly when connecting them throughout the system. So a test that may affect another part of the system is checked not only in the present section of the system, but also all other affected portions.

The third stage is System Testing. This stage involves testing that everything that was promised of the system by the software developers is in tact and working correctly. The Requirements Specification document, which has been completed previously, will be a guideline for this stage of testing, and everything that was specified in that document will be tested to be in working order at this point.

The final stage of testing is Acceptance Testing. This stage of testing provides certainty for our clients, Dr. Hunter and Ms. Cotler, that all techniques for building the software promised were enforced, the Requirements Specification was met, and the final product is as it should be. Also, in this stage we test not only for success, but for failure. Therefore, we make sure that when we perform a function that should not allow work (i.e. logging in under the wrong username) the system will not perform the function. All in all, this stage guarantees that our clients are satisfied with the outcome of the system, and feel their requests were met.

Test Plan

This Test Plan was written prior to testing and has been included in this document to show the steps we took in testing our product. The results and outcomes of the testing we describe here can be found in the following section (Section 4: Testing Results).

Test Plan Identifier -

This test plan is the Master Plan of the Automated Grading System. It describes the testing requirements we, Performance Software, will follow throughout the creation of our program, which includes Unit Testing, Integration Testing, System Testing, as well as Acceptance Testing. All Unit Testing, as well as some Acceptance Testing will be included in this document, while System and Integration Testing will be described thoroughly.

Contact Information for Performance Software, the authors of this test plan document, can be found at <www.performancesoftware.org>.

References -

Our test plan outline is based upon the definition and description of test plan from Wikipedia Encyclopedia, found at <http://en.wikipedia.org/wiki/Test_Plan#Test_plan_template.2C_IEEE_829_format>.

Other resources we used for information include:
<<http://www.coleyconsulting.co.uk/testplan.htm>>.

We also modeled our test plan structure on Spartacus Computing Solutions Detailed Design Document from the Software Engineering class of 2004-2005.

Introduction -

The function of this test plan is to identify the exact steps we will be taking in testing our software. In this document we will describe what items in our software will be tested. We will examine these items and decide what areas of the software are critical in our testing process, as well as what risks present themselves. We will also look at the software from the user's perspective and find important testing areas from this point of view, as well as what testing areas are less important and will not be tested. We will identify our exact strategy in going about our testing, including the unit, integration, system, and acceptance testing. The steps we will take upon encountering problems during our testing will be identified. For instance, at what points may we need to stop and go back a few steps because of failed testing. We will specify what will be delivered upon the completion of this document, and what can be expected from it. Necessary environmental needs will be stated, along with the essential staff and staff preparation for the project. Our schedule for the project and testing thereof will be laid out in full. Risks and restrictions of our testing process will be defined. Lastly, required approvals for

moving further will be explained, including who must give the go ahead on proceeding forward. Documents that may be referenced in this test plan include the Software Plan, Requirements Specification, and the Preliminary Design.

Test Items -

Our testing of this program will begin with unit testing. The unit testing is to include testing that each function we described in the Requirements Specification document will be carried out correctly. The following is a working list of unit tests we will perform:

- Log in of every type of account
- Course Coordinator pages:
 - All side bar functions navigate the user to the correct desired screen
 - Log out
 - Change of Password
 - Listing of Assignments for Viewing
 - Adding users, class sections, and grading categories
 - Editing users, class sections, and grading categories
 - Viewing Reports
 - Searching for a User
 - Creating New Assignments
 - Submitting Grading Files
- Student pages:
 - Student ID upon initial log in
 - All side bar functions navigate the user to the correct desired screen
 - Log out
 - Change of Password
 - View All Grades for Course
 - View Individual Assignment Grades
 - Ungraded
 - Graded
 - Submit Assignment Files
- Lab Instructor pages:
 - All side bar functions navigate the user to the correct desired screen
 - Log out
 - Change of Password
 - View Grade Reports by Class Section
 - View Detailed Reports with all file grades in each Assignment
- Lecture Instructor pages:
 - All side bar functions navigate the user to the correct desired screen
 - Log out
 - Change of Password
 - View Grade Reports by Class Section
 - View Detailed Reports with all file grades in each Assignment

Software Risk Issues -

Difficulties in our testing of this software will occur when testing that all actions are carried out throughout the entire system. For instance, if a student user is deleted from the system by the Course Coordinator, the student should no longer be listed under any of the instructors' accounts in lab or lecture sections, the student should no longer be able to log on to the system, and all traces of the student being part of the courses should be gone in the Course Coordinator account as well. Along with this, the student user's grades should no longer be included in the total averages in the all student user reports, or in any of the specific section reports that the student was a part of previously. These areas will be more difficult to test for. Other examples of actions being carried out throughout the system include a category percentage being changed; it must be changed in all student accounts when viewing their personal grades, as well as in overall reports viewed by the instructors. If a section is added by the Course Coordinator, it should be added to the drop down menu for the students' initial log on and viewable by the instructor who teaches the section. Once a student submits his/her files for grading, they should show on the student account as submitted, and also on the lab instructor's account as ready to grade. A lab instructor overwriting what the grading software has counted as incorrect, or changing a previous score, should also change in the reports to the instructors and Course Coordinator, as well as on that student's account. These examples are several risk areas of our software that will have to be examined carefully for certain success of each. Another area in which testing will need to be tedious is in the clarification of correct formulas calculating the grades and scores of the students. There will be no room for error in the area of grading the labs and other assignments.

Features to be Tested –

The Features to be Tested section in our Test Plan is a summary of our unit tests.

Grading Software

Test Case	Expected Result	Pass/Fail
Click 'Connect'	Log user in to system	
Click 'Files to Grade'	Get updated list of available files	
Click 'Send Approved Files'	Update server with graded assignments	
Click 'Ready to Grade' Tab	Switch view to 'Ready to Grade'	
Click 'Need Review' Tab	Switch view to 'Need Review'	
Click 'Add'	Add record to pending list	
Click 'Add All'	Add all records to pending list	
Click 'Remove'	Remove record from pending list	
Click 'Remove All'	Remove all records from pending list	
Click 'Grade Selected Assignments'	Process assignments in pending list	
Click 'View File'	Open selected file	
Click 'Previous Arrow'	Move to previous entry	
Click 'Next Arrow'	Move to next entry	
Click 'Approved'	Set file to be ready for submission	

Login All Users

Test Case	Expected Result	Pass/Fail
Click on "Log In" Button	Logs user into the system with the correct permissions	

Course Coordinator – Side Panel Functions

Test Case	Expected Result	Pass/Fail
Click "Log Out"	User logged out of system	
Click "Change Password"	Navigate to change password page	
Click "All"	Remain on page	
Click a specific assignment	Navigate to page containing details on assignment	
Click "Add New"	Navigate to page for adding new assignments	
Click "Add/Edit Users"	Navigate to page to add or edit users	
Click "Add/ Edit Section"	Navigate to page to add or edit class sections	
Click "Add/Edit Category"	Navigate to page to add or edit categories	
Click "All Users"	Navigate to page displaying grade reports of all students	
Click "By Lecture Section"	Navigate to page allowing choice of lecture section to view grades of	
Click "By Lab Section"	Navigate to page allowing choice of lab section to view grades of	
Click "All Assignments"	Navigate to page displaying details of all assignment grades	

Course Coordinator – Class Section Creation and Editing

Test Case	Expected Result	Pass/Fail
Click "Remove"	Ask if the section should really be removed	
Click "Update" by section	Generate new page with updated section listed	
Click "Update" by instructor	Generate new page with updated instructor listed	
Click "Add"	Generate new page with updated course	

Course Coordinator – User Search Results and Editing

Test Case	Expected Result	Pass/Fail
Click "Search"	Create new page with search results	
Click "Reset Pass"	Create new page with option to change user password	
Click "Delete User"	Ask if really want to delete user	

Course Coordinator – User Tasks

Test Case	Expected Result	Pass/Fail
Click "Search"	Create new page with search results	
Click "Add" single user	Show message that user was added	
Click "Add" group	Show message that users were added	

Course Coordinator – Assignment Category Creation and Editing

Test Case	Expected Result	Pass/Fail
Click on "Remove" Button	Removes a category from the page displayed	
Click on "Add" Button	Adds a category to the page that is displayed	
Click on "Update" Button	Reloads the page to display the changed values	

Course Coordinator – Create New Assignment Page

Test Case	Expected Result	Pass/Fail
Click on "Create Assignment" Button	Creates a new assignment shell	

Course Coordinator – Edit Assignment

Test Case	Expected Result	Pass/Fail
Click on "Description" Dropdown Menu	Menu appears offering a list of possible descriptions for the assignment that is being edited	
Click on "Category" Dropdown Menu	Menu appears offering a list of possible Categories that the assignment may be	
Click on "Submit Changes" Button	Reloads the page to display the changed information	
Click on "Add File" Button	Adds another file to an assignment	
Click on "Delete Assignment" Button	Deletes the entire assignment from the system	
Click on "Delete File" Button	Deletes a single file from the assignment	

Course Coordinator – Grading Files Submission

Test Case	Expected Result	Pass/Fail
Click on "Browse" Button	Opens an explorer window to locate the files to be added	
Click on "Submit Files" Button	Files are sent to the system, a message informs the user of their status	

Student – Section Identification

Test Case	Expected Result	Pass/Fail
Click "Continue" with fields entered	Navigate to log in page	
Click "Continue" without fields entered	Error message	
Click "Cancel"	Navigate to exit page	

Student – View Graded Assignment Details

Test Case	Expected Result	Pass/Fail
Click "Log Out"	User logged out of system	
Click "Change Password"	Navigate to change password page	
Click "Click Here"	Navigate to student grades page	
Click an assignment	Navigate to grade details on assignment page	

Student – View Ungraded Assignment Details

Test Case	Expected Result	Pass/Fail
Click "Log Out"	User logged out of system	
Click "Change Password"	Navigate to change password page	
Click "Click Here"	Navigate to student grades page	
Click an assignment	Navigate to grade details on assignment page	
Click "Submit Files"	Navigate to file submission page	

Student – Landing Page Grade Overview

Test Case	Expected Result	Pass/Fail
Click "Log Out"	User logged out of system	
Click "Change Password"	Navigate to change password page	
Click "Click Here"	Navigate to student grades page	
Click an assignment	Navigate to grade details on assignment page	

Student - Submit Assignment Files

Test Case	Expected Result	Pass/Fail
Click on "Submit" Button	Submits users files to the database and informs user	
Click on "Submit" Button with incorrect file locations	Informs user and requests a resubmit	

Lab Instructor Landing Page

Test Case	Expected Result	Pass/Fail
Click on "log-out" Link	Logs Lab Instructor out of system and brings to log-in page	
Click on "change password" Link	Brings Lab Instructor to change password page	
Click on "lecture sections" Link	Brings Lab Instructor to the lecture sections page	
Click on "download all" Link	Brings Lab Instructor to the download all page	
Click on "printer friend version" Link	Brings Lab Instructor to the printer friendly version page of current page	
Mouse-Over "students name"	Provides additional information on student	
Click on "students name" Link	Brings Lab Instructor to a page with additional information on the student	

Lab Instructor – Lab Section Detail

Test Case	Expected Result	Pass/Fail
Click on "log-out" Link	Logs Lab Instructor out of system and brings to log-in page	
Click on "change password" Link	Brings Lab Instructor to change password page	
Click on "lecture sections" Link	Brings Lab Instructor to the lecture sections page	
Click on "download all" Link	Brings Lab Instructor to the download all page	
Click on "printer friend version" Link	Brings Lab Instructor to the printer friendly version page of current page	
Mouse-Over "students name"	Provides additional information on student	
Click on "students name" Link	Brings Lab Instructor to a page with additional information on the student	

Lecture Instructor Landing Page - Lecture Section Overview

Test Case	Expected Results	Pass/Fail
Click "Log Out"	Lecture Instructor is logged out of system.	
Click "Change Password"	Takes user to a page with a change password form.	
Click a specific lecture section	Generate Grade Report for the specified Lecture Section in the main pane.	
Click lecture section "detail"	Generate Grade Report with details about each assignment for the specified Lecture Section in the main pane.	
Click "Download All"	Generate Grade Report for all Lecture Sections combined in the main pane.	
Click a specific lab section	Generate Grade Report for all Lab Sections combined in the main pane.	
Click lab section "detail"	Generate Grade Report for all Lab Sections combined in the main pane.	
Click "Printer Friendly Version"	Generate a web page that is formatted to print properly.	

Lecture Instructor - Lecture Section Detail

Test Case	Expected Results	Pass/Fail
Click "Log Out"	Lecture Instructor is logged out of system.	
Click "Change Password"	Takes user to a page with a change password form.	
Click a specific lecture section	Generate Grade Report for the specified Lecture Section in the main pane.	
Click lecture section "detail"	Generate Grade Report with details about each assignment for the specified Lecture Section in the main pane.	
Click "Download All"	Generate Grade Report for all Lecture Sections combined in the main pane.	
Click a specific lab section	Generate Grade Report for all Lab Sections combined in the main pane.	
Click lab section "detail"	Generate Grade Report for all Lab Sections combined in the main pane.	
Click "Printer Friendly Version"	Generate a web page that is formatted to print properly.	

All Users - Change Password

Test Case	Expected Results	Pass/Fail
Click "Change Password"	User is taken to successful password changed page	

All Users - Successful Password Changes

Test Case	Expected Results	Pass/Fail
Click "Return"	User is taken back to homepage.	

Exception Testing -

We will also perform exception testing to make sure that the program properly handles all possible situations that could occur. This will help ensure that no data is lost or corrupted due to loop-holes in the program or possible user error. The testing will aim to test possible exceptions to the different units. One such example of a possible exception test is trying to create a user that already exists.

Approach -

Overall Approach to Testing:

The overall approach to testing will include unit level testing. The units will primarily be tested individually. However, if a given unit has dependencies with one or more other units, an integration test will occur to ensure their compatibility.

Testing Approach to be Used for Each Major Group of Features:

The testing approach to be used with all major groups and features will be based on testing the individual units in the groups. The units will be tested by themselves, and when integrated they will then be tested to ensure that they function together properly.

This bottom up approach will help ensure that problems are identified early, and will cut down on debugging time required.

Major Activities, Techniques, and Tools Which are Going to be Used to Test the Groups:

The major activities, techniques, and tools which will be used to test groups will be determined as the project progresses further into the development stages.

Minimum Degree of Comprehensiveness Required:

The minimum degree of comprehensiveness required will depend on the major activities, techniques and tools which will be decided upon at a later date.

Techniques Which Will be Used to Judge Comprehensiveness:

Techniques which will be used to judge comprehensiveness will be decided at a later date.

Additional Completion Criteria:

Any additional completion criteria will be determined at a later date.

Techniques Which Will be Used to Trace Requirements:

Techniques which will be used to trace requirements will be decided at a later date.

Significant Constraints on Testing:

The significant Constraints on testing are as follows:

- The limited number of people which are available for testing the application
- The deadline for the project is the Academic Celebration

Item Pass/Fail Criteria -

Criteria to be Used to Determine Whether Each Test Passes or Fails:

The criteria which will be used to determine whether the test item passes or fails testing is as follows:

- Task has to perform action specified
- Task has to perform action in a reasonable amount of time
- Task has to be performed with correct data
- Task has to be performed without errors
- Task has to display output correctly

The percentage of unit testing which will be considered acceptable before continuing forward will be discussed with Ms. Cotler and Dr. Hunter and will depend upon what items are being tested and the importance of the absolutely correctness of those items.

Suspension Criteria and Resumption Requirements -

Criteria to be Used to Suspend the Testing Activity:

Testing activity will be suspended under the following circumstances:

- Major code problems
- Minor code problems linked to only one module
- Extenuating circumstances which result in the inability of all team members to continue testing

Other criteria for testing suspension will be determined in the future upon discussion with our clients, Ms. Cotler and Dr. Hunter.

Testing Activities Which Must be Redone When Testing is Resumed:

- In the event of a major code problem all testing that can in anyway be related to the change should be retested, or if the change was extensive testing should be restarted
- In the event of a minor code problem all testing related to the module that was changed should be retested

Test Deliverables -

Deliverable Documents:

Documents that will be delivered upon the completion of testing will include:

- Updated test plan document (If any revisions are made)
- Test incident reports (SPRs)
- Test summary

Test Input and Output Data:

Test input data will be derived from the following locations:

- User input

Test data will be output to the following locations:

- Printer
- GUI

Testing Tasks -

Tasks Necessary to Prepare for and Perform Testing:

- Program needs to be in final stages of development
- All critical modules need to be completed
- Database need to be developed
- Database connections must be operational
- Files and user records must be stored in database

Task Interdependencies:

Task interdependencies exist between the database and the programs. The database needs to be developed and configured in order for other aspects to be designed to access and stored data. Likewise, parts of the program must be operational in order for users to retrieve and input data into the database.

Environmental Needs -**- Server**

- Database software
- Ethernet cards to connect to internet

- Desktop Computers

- Allow users to access application
- Ethernet cards to connect to internet
- Microsoft Excel
- Internet Browser

Required Level of Security -

Security information is as follows:

- Security level is MEDIUM
 - Program is not critical to operation of college
 - Limited access through Usernames and Passwords to preserve integrity of data
 - Usernames can be changed as frequently as needed
 - User Passwords can be changed as frequently as needed

Responsibilities -**Groups Responsible for Managing, Designing, Preparing, Executing, Witnessing, Checking, and Resolving Issues Involving Testing:**

Performance Software Solutions is responsible for all aspects of testing

Groups Responsible for Providing Test Items Identified in the Test Items Section

Performance Software Solutions is responsible for providing all test items identified in the Test Items section

Groups Responsible for Providing the Environmental Needs Identified in the Environmental Needs section:

Siena College is responsible for providing all environmental needs identified in the Environmental Needs section

Staffing and Training Needs -

Staffing and training needs are as followed

- Course Coordinator user
 - Requires most training
 - Responsible for overseeing other users
 - Responsible for creating other users
 - Responsible for deleting other users
 - Responsible for editing other users
 - Responsible for creating Lab/Lecture Sections
 - Responsible for setting up the assignment list and weights
 - Responsible for uploading the key files and template files
- Lab Instructor
 - Medium training
 - Responsible for submitting labs to the system for grading
 - Responsible for viewing graded labs
 - Responsible for leaving comments on graded labs
 - Responsible for manually overriding the grading software
 - Responsible for viewing lab section Grade Reports
 - Responsible for adding student non-lab grades into system
- Lecture Instructor
 - Basic training
 - Responsible for viewing their lecture section Grade Reports
 - Responsible for downloading student grades from all sections taught
- Student
 - Medium training
 - Responsible for submitting lab assignment
 - Responsible for viewing graded lab assignments
 - Responsible for viewing individual lab grades and overall course grades

Training Options for Providing Necessary Skills

Training for the application will be provided through the following means:

- A typed step-by-step tutorial will be provided
 - How to add users
 - How to delete users
 - How to edit users
 - How to create Lab/Lecture Sections
 - How to set up the assignment list and weights
 - How to upload the key files and template files
 - How to submit labs to the system for grading
 - How to log in
 - How to view graded lab assignments
 - How to leave comments on graded labs
 - How to manually override the grading software
 - How to view Grade Reports

- How to add non-lab grades into system
- How to download grades from all sections
- How to submit a lab assignment
- How to view individual lab grades and overall course grades
- One-on-one training can be provided also initially to cover the same processes as are listed above

Schedule -

Test Milestones:

Test Milestones are as follows:

- Excel Grading System Database tested
- Database and application interaction tested
- Course Coordinator Login and abilities tested
- Created accounts for lecturer, lab instructor, and students tested
- Lab instructor abilities tested
- Lecturer abilities tested
- Student abilities tested
- Final pre acceptance test check
- Acceptance test

Estimate Time Required to do Each Testing Task:

Testing time required for each task will vary. However, the typical range of time to complete any given task should be between 30 seconds and 10 minutes.

Schedule for all Testing Tasks and Test Milestones:

Schedule for testing tasks and test milestones are still pending. All work and testing will be completed by the Siena College Academic Celebration.

Risk and Contingencies -

High-Risk Assumptions of the Test Plan:

High-risk assumptions of the test plan are that if one case for a given user works correctly, then the same case should work for all users. This is a high-risk assumption that is only being made because of the time constraints on our group.

Contingency Plans:

If this high-risk event came into reality then steps would have to be taken to correct the error in coding as quickly as possible. Then tests would need to be undertaken to ensure that the problem was correctly fixed.

Approvals

Names and Titles for Approval:

Whitney Cave, Performance Software Team Leader

X _____

Ms. Cotler, Siena College Instructor

X _____

Dr. Hunter, Siena College Intstructor

X _____

SPR Form SPR # _____

Name of individual(s) who identified problem: _____

Date problem was identified: / / 06

Time problem was identified: : AM / PM

Issue:

Initials: _____

Possible Solution:

Initials: _____

Actual Solution:

Initials: _____

Person(s) that implemented solution: _____

Date solution was implemented: / / 06

Time solution was implemented: : AM / PM

Amount of time spent on problem solution: _____ Days _____ Hours _____ Minutes

Section 4: Testing Results

Unit Tests

Performance Software		Automated Grading System for Microsoft Excel Spreadsheets		Pass	Comments
UNIT TEST					
Unit Category: All Users - Login					
ID	Name	Description	Input	Expected Output	Pass
1.1	Proper Log-In (Student)	Attempt Log-In using valid student username and its corresponding password.	Student Username and Password	Generate web page for the student.	P
1.2	Proper Log-In (Lecture Instructor)	Attempt Log-In using valid lecture instructor username and its corresponding password.	Lecture Instructor Username and Password	Generate web page for the lecture instructor having all of their classes	P
1.3	Proper Log-In (Lab Instructor)	Attempt Log-In using valid lab instructor username and its corresponding password.	Lab Instructor Username and Password	Generate web page for the lab instructor having all of their classes	P
1.4	Proper Log-In (Lecture and Lab Instructor)	Attempt Log-In using valid lecture and lab instructor username and its corresponding password.	Lecture and Lab Instructor Username and Password	Generate web page for the lecture and lab instructor having all of their classes	P
1.5	Proper Log-In (Course Coordinator)	Attempt Log-In using valid course coordinator username and its corresponding password.	Course Coordinator Username and Password	Generate web page for the course coordinator having all of their classes	P
1.6	Invalid Username	Attempt Log-In using invalid username.	Invalid username and any password	Generate message saying that either username or password is incorrect.	P
1.7	Invalid Password	Attempt Log-In using valid username and invalid password.	Valid username and invalid password	Generate message saying that either username or password is incorrect.	P
1.8	Invalid Passwords	Attempt to Log-In 3 times using valid username and invalid password.	Same username each time and any incorrect password	Generate message saying that either username or password is incorrect and that the account has been locked.	P
1.9	Proper Username and Password to locked account	Attempt to Log-In to a locked account using valid username and password	Valid username and password where username is an account that has been locked (see 1.8)	Generate message saying that the account has been locked	P

Performance Software						
Automated Grading System for Microsoft Excel Spreadsheets						
UNIT TEST						
Unit Category: Course Coordinator - Side Panel Functions (Landing Page)						
ID	Name	Description	Input	Expected Output	Pass	Comments
2.1	Log Out	The "Log Out" button is clicked	None	Log out of the Course Coordinator account and generate web page with appropriate message	P	
2.2	Change Password	The "Change Password" button is clicked	None	Generate web page to change the Course Coordinator's password	P	
2.3	All Assignments	The "All" Button is clicked under "Assignments"	None	The current web page remains	P	
2.4	Specific Assignment	A specific assignment is clicked under "Assignments"	None	A web page is generated with the details of the specified assignment	P	
2.5	Add New Assignment	The "Add New" button is clicked under "Assignments"	None	Generate web page to add a new assignment	P	
2.6	Add/Edit Users	The "Add/Edit Users" button is clicked under "Tasks"	None	Generate a web page to add a user to the system or edit settings of current users	F	
2.7	Add/Edit Sections	The "Add/Edit Sections" button is clicked under "Tasks"	None	Generate a web page to add a lab or lecture section, or to edit a current lab or lecture section	F	
2.8	Add/Edit Categories	The "Add/Edit Categories" button is clicked under "Tasks"	None	Generate a web page to add a category for grading, or edit the settings of a current category	F	
2.9	Generate Reports	The "Generate Reports" button is clicked under "Reports"	None	Generate a web page with detailed reports based on all students' grades	F	
2.1	Archive	The "Archive" button is clicked under "Reports"	None	Generate a web page allowing change to another semester	F	

Performance Software						
Automated Grading System for Microsoft Excel Spreadsheets						
UNIT TEST						
Unit Category: Course Coordinator - User Tasks						
ID	Name	Description	Input	Expected Output	Pass	Comments
3.1	Search All Users	The "Search" button is clicked without any input entered	None	Generate web page with a listing of all users in the system	F	The Search function cannot yet be navigated to
3.2	Search a Last Name	The "Search" button is clicked with only a last name entered	User last name	Generate web page listing all users with the entered last name	F	
3.3	Search a First Name	The "Search" button is clicked with only a first name entered	User first name	Generate a web page listing all users with the entered first name	F	
3.4	Search a lecture section	The "Search" button is clicked with only a lecture section entered	Lecture Section	Generate a web page listing all users in the specified lecture section	F	
3.5	Search a lab section	The "Search" button is clicked with only a lab section entered	Lab Section	Generate a web page listing all users in the specified lab section	F	
3.6	Search a specific user	The "Search" button is clicked with all or some fields entered	User last name, and/or Lecture Section, and/or Lab Section	Generate a web page listing all users matching the specified categories	F	
3.7	Invalid Search	The "Search" button is clicked with all or some fields entered	Incorrect User last name, and/or User first name, and /or Lecture Section, and/or Lab Section	Generate web page with message explaining that no matching users were found in the system	F	
3.8	Add a User	The "Add" button is clicked with all fields entered	Correct Last Name, First Name, User Name, User Type, Lecture Section, and Lab Section	Generate a web page with a message saying the new user has been entered	F	
3.9	Add a User Incorrectly	The "Add" button is clicked with all or some fields entered	Last Name, and/or First Name, and/or User Name, and/or User Type, and/or Lecture Section, and/or Lab Section	Generate web page with message explaining either not all fields were specified or the user already exists	F	
3.10	Add a Group of Users	The "Add" button is clicked with all fields entered			F	
3.11	Add a Group of Users Incorrectly	The "Add" button is clicked with all or some fields entered			F	

Performance Software		Automated Grading System for Microsoft Excel Spreadsheets		UNIT TEST		
Unit Category:		Course Coordinator - User Results and Editing				
ID	Name	Description	Input	Expected Output	Pass	Comments
4.1	Search All Users	The "Search" button is clicked without any input entered	None	Generate web page with a listing of all users in the system	F	The Search pages cannot yet be navigated to
4.2	Search a Last Name	The "Search" button is clicked with only a last name entered	User last name	Generate web page listing all users with the entered last name	F	
4.3	Search a First Name	The "Search" button is clicked with only a first name entered	User first name	Generate a web page listing all users with the entered first name	F	
4.4	Search a lecture section	The "Search" button is clicked with only a lecture section entered	Lecture Section	Generate a web page listing all users in the specified lecture section	F	
4.5	Search a lab section	The "Search" button is clicked with only a lab section entered	Lab Section	Generate a web page listing all users in the specified lab section	F	
4.6	Search a specific user	The "Search" button is clicked with all or some fields entered	User last name, and/or User first name, and /or Lecture Section, and/or Lab Section	Generate a web page listing all users matching the specified categories	F	
4.7	Invalid Search	The "Search" button is clicked with all or some fields entered	Incorrect User last name, and/or User first name, and /or Lecture Section, and/or Lab Section	Generate web page with message explaining that no matching users were found in the system	F	
4.8	Reset User Password	The "Reset Password" button is clicked next to a user	None	Generate web page allowing Course Coordinator to reset a user's password	F	
4.9	Delete User	The "Delete User" button is clicked next to a user	None	Generate web page asking if the Course Coordinator is sure he/she wants to delete the user from the system	F	
4.10	Change Lab Section	"Submit" is clicked after selecting a different Lab Section next to a user in the drop down list	The selected Lab Section	Generate web page with a message stating the changes to the user	F	
4.11	Change Lecture Section	"Submit" is clicked after selecting a different Lecture Section next to a user in the drop down list	The selected Lecture Section	Generate web page with a message stating the changes to the user	F	

Performance Software						
Automated Grading System for Microsoft Excel Spreadsheets						
UNIT TEST						
Unit Category:						
ID	Name	Description	Input	Expected Output	Pass	Comments
5.1	Remove a lecture or lab section	The "Remove" button is clicked next to a lab or lecture section	None	Generate a web page asking if the section should really be removed	F	These pages cannot yet be navigated to
5.2	Change Section Type	The "Update" button is clicked after changing the section type in the drop down menu	None	Generate an updated web page with the new type of section listed	F	
5.3	Change the Section Instructor	The "Update" button is clicked after changing the instructor in the drop down menu	None	Generate an updated web page with the new instructor listed	F	
5.4	Add Section	"Add" button is clicked after entering the categories	Section number, type, day and time, and instructor	Generate an updated web page with the new course entered	F	
5.5	Add Section Incorrectly	"Add" button is clicked after entering some or all of the categories	Section number, and/or type, and/or day and time, and/or instructor	Generate web page with a message indicating the fields were entered incorrectly	F	

Performance Software		Automated Grading System for Microsoft Excel Spreadsheets		UNIT TEST		
Unit Category: Course Coordinator - Assignment Category Creating and Editing						
ID	Name	Description	Input	Expected Output	Pass	Comments
6.1	Invalid Percentage Value for Assignments	Total percentage values for the categories do not add up to 100%	Invalid percentage is entered	Generate Message saying the percentages of the categories don't add up to 100%	F	Cannot navigate to category editing pages yet
6.2	Invalid Percentage Value	The value entered for each of the categories	Value that is not a numeric value, or is greater than 100% or less than 0%	Generate message saying an invalid % has been entered	F	
6.3	Proper Remove Button	Attempt to remove an assignment category	Request to remove a category	Generate webpage minus the removed category	F	
6.4	Invalid Remove Button	Attempt to remove an assignment category	Invalid request to remove a category	Generate message saying why the assignment couldn't be removed	F	
6.5	Proper Add Button	Attempt to create an assignment category	valid request to create a new category	Generate webpage with the specified category added to the category list	F	
6.6	Invalid Add Button	Attempt to create an assignment category	Invalid request to create a new category	Generate message saying why the assignment couldn't be created	F	
6.7	Proper Update Button	Attempt to update page with changed category values	Valid request to update	Generate webpage with all the updated values	F	
6.8	Invalid Update Button	Attempt to update page with changed category values	Invalid request to update	Generate message saying why the values could not be updated	F	

Performance Software						
Automated Grading System for Microsoft Excel Spreadsheets						
UNIT TEST						
Unit Category:						
Course Coordinator - Create New Assignment Shell						
ID	Name	Description	Input	Expected Output	Pass	Comments
7.1	Proper Create Assignment	Attempt to create a new assignment shell	Valid new assignment name	Generate webpage with the assignment shell created	P	
7.2	Invalid Create Assignment	Attempt to create a new assignment shell	Invalid new assignment name	Generate message saying why the new assignment shell has not been created	F	

Performance Software						
Automated Grading System for Microsoft Excel Spreadsheets						
UNIT TEST						
Unit Category:						
Course Coordinator - Grading Files Submission						
ID	Name	Description	Input	Expected Output	Pass	Comments
9.1	Proper Browse	Opens up an explorer window to locate the file to be submitted	Valid request to browse for files to be submitted	Explorer window opens to locate where the files are	F	
9.2	Invalid Browse	Opens up an explorer window to locate the file to be submitted	Invalid request to browse for files to be submitted	Generate message saying that the explorer window could not be opened	F	
9.3	Proper Submit Files	Attempt to submit files to server to be graded	Valid request to submit files to the server	Generate message saying the files have been submitted to the server for grading	F	
9.4	Invalid Submit Files	Attempt to submit files to server to be graded	Invalid request to submit files to the server	Generate message saying why the files have not been submitted to the server for grading	F	

Performance Software						
Automated Grading System for Microsoft Excel Spreadsheets						
UNIT TEST						
Unit Category:						
Students - Section ID						
ID	Name	Description	Input	Expected Output	Pass	Comments
10.1	Correct Submission	All fields are entered or selected and valid and the "Continue" button clicked	Username, email, passwords, registration password, lecture and lab sections.	Bring student to log in page	P	
10.2	Invalid password form is Entered	All fields are entered or selected and valid except the student password is not of the form identified	Username, email, passwords, registration password, lecture and lab sections.	Show an error message asking student to enter a valid password	F	
10.3	Cancel	The "Cancel" button is clicked	Username, email, passwords, registration password, lecture and lab sections.	A web page is generated with the option to go back to initial log in or close the window	P	
10.4	Invalid registration password is entered	All fields are entered or selected and valid except the registration password is not correct	Username, email, passwords, registration password, lecture and lab sections.	Show an error message asking student to enter a valid registration password	P	
10.5	Username is entered that is not an email	All fields are entered or selected and valid except the username is not in the correct form	Username, email, passwords, registration password, lecture and lab sections.	Show an error message asking the student to enter a valid username	P	
10.6	Lecture or Lab sections are not selected	All fields are entered or selected and valid except the lab and/or lecture sections	Username, email, passwords, registration password.	Show an error message asking the student to select a lab and/or lecture section.	P	

Performance Software					
Automated Grading System for Microsoft Excel Spreadsheets					
UNIT TEST					
Unit Category:					
ID	Name	Description	Input	Expected Output	Pass Comments
11.1	Log Out	The "Log Out" button is clicked	None	Log out of the Course Coordinator account and generate web page with appropriate message	P
11.2	Change Password	The "Change Password" button is clicked	None	Generate web page to change the Course Coordinator's password	P
11.3	All Grades	The "Click Here" button is clicked	None	Generate web page showing all the student user's grades for all assignments	P
11.4	Assignments	A specific assignment is clicked under the Assignments category	None	Generate web page showing details of the specific assignment or the submission options	P

Performance Software					
Automated Grading System for Microsoft Excel Spreadsheets					
UNIT TEST					
Unit Category: Students - View Ungraded Assignment Details					
ID	Name	Description	Input	Expected Output	Pass Comments
12.1	Submit Files	The "Submit Files" button is clicked	None	Generate web page with options for student to browse files to submit	F

Performance Software		Automated Grading System for Microsoft Excel Spreadsheets				
UNIT TEST						
Unit Category: Students - Submit Assignment Files						
ID	Name	Description	Input	Expected Output	Pass	Comments
13.1	Proper Submit(Single File)	Attempt to submit a single file in slot A	Single File Slot A	Generate successful upload webpage	F	Submit page cannot be navigated to yet
13.2	Proper Submit(Single File Slot B)	Attempt to submit a single file in slot B	Single File Slot B	Generate successful upload webpage	F	
13.3	Proper Submit(Single File Slot C)	Attempt to submit a single file in slot C	Single File Slot C	Generate successful upload webpage	F	
13.4	Proper Submit(Two Files Slots A and C)	Attempt to submit two files in slots A and C	Two Files, Slots A and C	Generate successful upload webpage	F	
13.5	Proper Submit(Two Files Slots A and B)	Attempt to submit two files in slots A and B	Two Files, Slots A and B	Generate successful upload webpage	F	
13.6	Proper Submit(Two Files Slots B and C)	Attempt to submit two files in slots B and C	Two Files, Slots B and C	Generate successful upload webpage	F	
13.7	Proper Submit(Three Files Slots A, B and C)	Attempt to submit three files in slots A, B and C	Three Files, Slots A, B and C	Generate successful upload webpage	F	
13.8	Incorrect Submit(File A Error)	Attempt to submit files with slot A pointing to an incorrect address.	Incorrect address in slot A	Generate webpage informing that file A could not be found and request resubmit	F	
13.9	Incorrect Submit(File B Error)	Attempt to submit files with slot B pointing to an incorrect address.	Incorrect address in slot B	Generate webpage informing that file B could not be found and request resubmit	F	
13.10	Incorrect Submit(File C Error)	Attempt to submit files with slot C pointing to an incorrect address.	Incorrect address in slot C	Generate webpage informing that file C could not be found and request resubmit	F	
13.11	Incorrect Submit(File A and B Error)	Attempt to submit files with slot A and slot B pointing to incorrect addresses.	Incorrect address in slot A and slot B	Generate webpage informing that file A and file B could not be found and request resubmit	F	
13.12	Incorrect Submit(File A and C Error)	Attempt to submit files with slot A and slot C pointing to incorrect addresses.	Incorrect address in slot A and slot C	Generate webpage informing that file A and file C could not be found and request resubmit	F	
13.13	Incorrect Submit(File B and C Error)	Attempt to submit files with slot B and slot C pointing to incorrect addresses.	Incorrect address in slot B and slot C	Generate webpage informing that file B and file C could not be found and request resubmit	F	
13.14	Incorrect Submit(File A, B and C Error)	Attempt to submit files with slot A, B and slot C pointing to incorrect addresses.	Incorrect address in slot A, B and slot C	Generate webpage informing that file A, B and file C could not be found and request resubmit	F	

Performance Software						
Automated Grading System for Microsoft Excel Spreadsheets						
UNIT TEST						
Unit Category:						
Lab and Lecture Instructors - Side Panel Functions						
ID	Name	Description	Input	Expected Output	Pass	Comments
14.1	Logout	Lecturer is logged out of system.	Lecture Instructor Password.	Generate web page confirming that the Lecture Instructor has logged out.	P	
14.2	Change Password	Lecture Instructor creates a new password for their account.	Lecture Instructor Current Password & the new desired Password entered twice.	Generate web page that has a change password form.	P	

Performance Software						
Automated Grading System for Microsoft Excel Spreadsheets						
UNIT TEST						
Unit Category:						
Lab Instructors - Section Detail						
ID	Name	Description	Input	Expected Output	Pass	Comments
16.1	Link(lecture sections)	Lab instructor clicks on "lecture sections" link	mouse click	Brings user to the lecture sections screen	P	
16.2	Link(lab sections)	Lab instructor clicks on "lab sections" link	mouse click	Brings user to the lab sections screen	P	
16.3	Link(printer friendly version)	Lab instructor clicks on "printer friendly version" link	mouse click	Generates a printer friendly version of the current page	F	
16.4	MouseOver(students name)	Lab instructor moves cursor over "students name"	mouse over	Provides additional information about the student without leaving current page	P	
16.5	Link(students name)	Lab instructor clicks on "students name" link	mouse click	Brings user to a screen providing additional information about the student	F	

Performance Software						
Automated Grading System for Microsoft Excel Spreadsheets						
UNIT TEST						
Unit Category: Grading Software Login						
ID	Name	Description	Input	Expected Output	Pass	Comments
17.1	Proper Login (Lab Instructor)	Attempt login using valid lab instructor username and its corresponding password.	Lab Instructor username & Password	Login panel color changes and text changes to reflect status of 'logged in'. Populate list of assignments ready to grade, sorted by section, assignment, file name. Assignments should come only from the instructors assigned classes.		
17.2	Invalid Username	Attempt login using invalid username.	Invalid username & password.	Generate message saying that either username or password is incorrect.		
17.3	Non-Lab Instructor Username	Attempt login using valid username for an identity that is not a Lab Instructor.	Valid non-Lab Instructor username & password	Generate message saying that the user does not have the proper privileges.		
17.4	Invalid Password	Attempt login using valid username and invalid password.	Valid username & invalid password	Generate message saying that either username or password is incorrect.		
17.5	3 Invalid Passwords	Attempt to login 3 times using valid username and invalid password.	Same username each time and any incorrect password	Generate message saying that either username or password is incorrect and that the account has been locked.		
17.6	Proper Username and Password to Locked Account	Attempt login to a locked account using valid username and password.	Valid username & password where username is an account that has been locked (see 1.8).	Generate message saying that the account has been locked.		

Performance Software		Automated Grading System for Microsoft Excel Spreadsheets		UNIT TEST	Shared Panel Elements	ID	Name	Description	Input	Expected Output	Pass	Comments
18.1	Login Panel / Login Timeout	Let 10 minutes pass without having the program communicate with the server. Server independent tasks should not influence this.	Click login button before timeout occurs.	None required	Panel color & text should change to reflect state of 'logged out'. Additionally, message describing that a session timeout occurred.							
18.2	Connect Button - Logged In State	Click login button before timeout occurs.	Attempt login using valid username (Lab Instructor) and password.	None required	Nothing should change							
18.3	Connect Button - Logged Out State	Attempt login using valid username (Lab Instructor) and password.	Click button.	Valid username & password.	Panel color & text should change to reflect state of 'logged in'. Other than login panel, screens should not refresh.							
18.4	Check for Files to Grade Button (Logged in)	Click button.	Click button.	None required	Populate list of assignments ready to grade, sorted by section, assignment, file name. Assignments should come only from the instructors assigned classes.							
18.5	Check for Files to Grade Button (Logged out)	Click button.	Click button.	None required	Generate message indicating session timeout and instruct user to sign in before continuing.							
18.6	Send Approved Files Button (Logged in)	Click button.	Click button.	None required	Submit grade detail to server for all files that have been marked as having their final grade approved.							
18.7	Send Approved Files Button (Logged out)	Click button.	Click button.	None required	Generate message indicating session timeout and instruct user to sign in before continuing.							
18.8	Ready to Grade Tab Handle	Click button.	Click button.	None required	Change main panel to 'Ready to Grade' panel.							
18.9	Need Review Tab Handle	Click button.	Click button.	None required	Change main panel to 'Grade Assignments' panel.							

Performance Software		Automated Grading System for Microsoft Excel Spreadsheets		UNIT TEST	Expected Output	Pass	Comments
ID	Name	Description	Input	Expected Output	Pass	Comments	
Unit Category: 'Ready to Grade' Panel							
19.1	'Add' button	Click button.	None required	Add highlighted records from 'Ready to Grade' list box (top) to 'Selected for Grading' list box (bottom).			
19.2	'Add All' button	Click button.	None required	Add all records from 'Ready to Grade' list box (top) to 'Selected for Grading' list box (bottom).			
19.3	'Remove' button	Click button.	None required	Remove highlighted records from 'Selected for Grading' list box (bottom) to 'Ready to Grade' list box (top).			
19.4	'Remove All' button	Click button.	None required	Remove all records from 'Selected for Grading' list box (bottom) to 'Ready to Grade' list box (top).			
19.5	'Grade Selected Assignments' button (Logged in)	Click button.	None required	Download files listed in list box as well as all necessary grade keys to temporary local folder. Process assignments through grading engine and populate initial grade reports for the 'Need Review' panel.			
19.6	'Grade Selected Assignments' button (Logged out)	Click button.	None required	Generate message indicating session timeout and instruct user to sign in before continuing.			

Performance Software		Automated Grading System for Microsoft Excel Spreadsheets		Pass	Comments
UNIT TEST					
Unit Category: 'Need Review' Panel					
ID	Name	Description	Input	Expected Output	Pass
20.1	'Student', 'Assignment', 'File' labels	Click on a record in the list box.	None required	Labels update to reflect currently selected file.	
20.2	'View File' button	Click button.	None required	Open the currently selected file for review in read-only mode.	
20.3	'Previous Arrow' button	Click button.	None required	Entry number description should change to reflect current entry. Points worth label should reflect point value of current entry. Points awarded should reflect either score assigned by grading engine or persist the value entered by the user. Expected value text box should be populated from the grading key excel file. Actual value text box should be populated from the student's file.	
20.4	'Next Arrow' button	Click button.	None required	Entry number description should change to reflect current entry. Points worth label should reflect point value of current entry. Points awarded should reflect either score assigned by grading engine or persist the value entered by the user. Expected value text box should be populated from the grading key excel file. Actual value text box should be populated from the student's file.	
20.5	'Approved' Checkbox	Click box.	None required	This checked value should persist if a different record is selected for review. It will only be unset when the assignment is submitted or when the user unselects it.	

Performance Software		Automated Grading System for Microsoft Excel Spreadsheets		UNIT TEST	Unit Category:	All Users - Change Password	ID	Name	Description	Input	Expected Output	Pass	Comments
21.1	Proper Password Change (Student)	Attempt to Change Password using valid <i>Student</i> username, its corresponding old password & the new desired password	Student Username, old Password & the new desired Password	Generate web page confirming successful password change.	P								
21.2	Proper Password Change (Lecture Instructor)	Attempt to Change Password using valid <i>lecture instructor</i> username, its corresponding old password & the new desired	Lecture Instructor Username, old Password & the new desired Password	Generate web page confirming successful password change.	P								
21.3	Proper Password Change (Lab Instructor)	Attempt to Change Password using valid <i>lab instructor</i> username, its corresponding old password & the new desired	Lab Instructor Username, old Password & the new desired Password	Generate web page confirming successful password change.	P								
21.4	Proper Password Change (Lecture & Lab Instructor)	Attempt to Change Password using valid <i>lecture & lab instructor</i> username, its corresponding old password & the new desired	Lecture & Lab Instructor Username, old Password & the new desired Password	Generate web page confirming successful password change.	P								
21.5	Proper Password Change (Course Coordinator)	Attempt to Change Password using valid <i>course coordinator</i> username, its corresponding old password & the new desired	Course Coordinator Username, old Password & the new desired Password	Generate web page confirming successful password change.	P								
21.6	Invalid Old Password	Attempt to Change Password using valid username and invalid old password.	Valid Username, invalid old password & any new password	Generate message saying that either username or old password is incorrect.	P								
21.7	3 Invalid Old Passwords	Attempt to Change Password 3 times using invalid old password.	Attempt to change password using any invalid old password, & new password	Generate message saying that old password is incorrect and that the account has been locked.	F								This function is now unnecessary, as the user now changes his/her password within the account
21.8	Invalid Retyped New Password	Attempt to Change Password using an invalid retyped new password.	Valid old password & invalid retyped new password	Generate message saying that the retyped new password does not match the new desired password.	P								

Performance Software		Automated Grading System for Microsoft Excel Spreadsheets		Pass	Comments	
UNIT TEST						
Unit Category: All Users – Successful Password Changes						
ID	Item Name	Description	Input	Expected Output	Pass	Comments
22.1	Return (Student)	Attempt to return to Student homepage.	Student Username & Password	Generate web page for the student.	P	
22.2	Return (Lecture Instructor)	Attempt to return to Lecture Instructor homepage.	Lecture Instructor Username & Password	Generate web page for the lecture instructor.	F	
22.3	Return (Lab Instructor)	Attempt to return to Lab Instructor homepage.	Lab Instructor Username & Password	Generate web page for the lab instructor.	F	
22.4	Return (Lecture & Lab Instructor)	Attempt to return to the Lecture & Lab Instructor homepage.	Lecture & Lab Instructor Username & Password	Generate web page for the lecture & lab instructor.	F	
22.5	Return (Course Coordinator)	Attempt to return to the Course Coordinator homepage.	Course Coordinator Username & Password	Generate web page for the course coordinator.	P	

Acceptance Tests

This section describes each function that each user in the AGS will be allowed to perform and describes what should happen upon performing these specific functions. This is how we will go about testing our software in our final testing step.

Course Coordinator Acceptance Test Criteria:

Function Performed:	Necessary Outcome:	P/F:
Log into system	Successfully brings user to opening page An incorrect username produces an error message saying either username or password is incorrect Locks account after three incorrect passwords	P
Create a system profile for each instructor	The account is created in the system The instructor has all required capabilities	F
Change instructor account passwords	The instructor's previous password no will log the instructor into the system The new password now logs the instructor into the system	F
Remove instructor profiles in existence	The instructor username and password are no longer recognized upon attempted login No students are listed as members in any lab or lecture sections of this instructor	F
Import a list of students to create student profiles	A profile is successfully created for each student in the list All students have the ability to login, submit labs, and view grades	F
Change student account passwords	The student's previous password no will log the student into the system The new password now logs the student into the system	P

<p>Change lab and/or lecture section chosen by the students at initial login</p>	<p>The student no longer sees the student as enrolled in the original lab/lecture section under the student's account</p> <p>The student sees the student as enrolled in the new lab/lecture section under the student's account</p> <p>The instructor(s) of the original lab/lecture section no longer see the student in their list of that section or have the ability to view or grade labs</p> <p>The instructor(s) of the new lab/lecture section now see the student in the instructor(s) list of that section or have the ability to view or grade labs</p>	<p>F</p>
<p>Remove student profiles in existence</p>	<p>The student username and password are no longer recognized upon attempted login</p> <p>No instructors see the deleted student as a member of the instructor's sections</p>	<p>P</p>
<p>Create lecture and lab sections</p>	<p>The section is created in the system and identified as either lab or lecture</p> <p>The section has all required information (meeting days, time, section number, and instructor)</p> <p>The section is included as a choice in the drop down menu upon initial login for students</p> <p>The section can be viewed by the instructor on the instructor's sidebar when logged into the system, as well as accessed by clicking</p>	<p>P</p>

<p>Change or remove sections already created</p>	<p>If the instructor is changed: the change is applied to all relevant parts of the system (dropdown menu for students' initial login, and the listed instructor in student and course coordinator accounts), the instructor no longer has access to the section in the instructor's profile, and the new instructor does have access</p> <p>If the change is applied to meeting days, time, section number, or whether the section is lab or lecture: the change is applied to all relevant parts of the system (dropdown menu for students' initial login, the listed change in student profiles, and the listed change in instructor and course coordinator account)</p> <p>If the change is a removal: the section is no longer visible as a section in any instructor's account</p>	<p>P</p>
<p>Set up assignment categories and category weights</p>	<p>A new category of the course is created (i.e. labs, midterm, final) and included in all accounts upon viewing student grades</p> <p>When submitting files the files are sent to the specified category</p> <p>The grades within each category are weighted to account for the specified percentage of the final grade and this is represented through the final grade</p>	<p>P</p>
<p>Modify or remove empty categories</p>	<p>The category is removed from view in all accounts of the system</p> <p>The category no longer has any affect over the final course grade, or if the percentage is modified, it affects the course grade correctly</p>	<p>P</p>
<p>Set up assignments for the system</p>	<p>The assignment is entered into the correct category in the system and weighted accordingly for the students' final grade</p> <p>The expected files are identified and prepared for accepting</p> <p>Each file in the assignment has a point value attached to it</p>	<p>F</p>

Modify or remove the assignments already created	<p>The modifications are made correctly so that there is a file added, or a point value changed, etc., and the changes apply accordingly to the grade of the assignment</p> <p>The removal of the assignment makes the users unable to view it any longer and no longer counts toward the students' grades</p>	P
Submit template files and key files for each expected file in assignments	<p>The template file is added into the system and can be compared correctly to a submitted file by the student</p> <p>The key file is added into the system and can be used correctly to create the grade outcome using point values of the different parts to the assignment</p>	P
View reports	The reports are shown with correct and up to date grades and averages of students based on either section of lab/lecture or on class average of section	P
Change current password	<p>The Course Coordinator's previous password no will log the Course Coordinator into the system</p> <p>The new password now logs the Course Coordinator into the system</p>	P

Student Acceptance Test Criteria:

Function Performed:	Necessary Outcome:	P/F:
Log into system	Successfully brings student to opening page An incorrect username produces an error message saying either username or password is incorrect Locks account after three incorrect passwords Initial login requires the student to specify lecture and lab sections	P
Submit a lab	The files for each lab are uploaded separately into the system The lab instructor sees the submitted files as ready for grading The student sees the files were submitted successfully by having the ability to click on them	P
View graded labs	When clicking on the date of the desired file, it is opened and the incorrect portions of the file are marked for visibility A comment section is included for the student to see specific notes from the instructor	F
View grades	When click on lab section the table of labs submitted already, and those yet to be submitted is shown, along with grades of submitted labs	P
Change current password	The student's previous password will not log the student into the system The new password now logs the student into the system	P

Lab Instructor Acceptance Test Criteria:

Function Performed:	Necessary Outcome:	P/F:
Log into system	Successfully brings lab instructor to opening page An incorrect username produces an error message saying either username or password is incorrect Locks account after three incorrect passwords	P
Choose to grade a specified set of labs, or all the labs ready for grading	The labs ready to be graded will be viewable when logged in Check boxes are provided to indicate which should be graded by system; a select all option is included Once marked and entered the files are graded by the system	P
Review the labs graded by software	Opens specified file when clicking on the date submitted Incorrect portions are marked visibly Comments can be seen that were added upon grading Answers marked correct or incorrect by the software can be overridden by instructor	P
Manually enter grades into the system without submission of a file	A file is shown that is not an excel file and may or may not be opened, but is included as part of the final grade (the percentage of which is specified by what category it is entered under)	F
View graded labs for each student	Can open submitted and graded files by clicking on date submitted by student in the table of students and view graded files with comments	F
View grades for each student	Reports of the grades for each student are visible with by clicking on the section the student is in and looking on the corresponding row of the student table	P
Change current password	The lab instructor's previous password no will log the lab instructor into the system The new password now logs the lab instructor into the system	P

Lecture Instructor Acceptance Test Criteria:

Function Performed:	Necessary Outcome:	P/F:
Log into system	Successfully brings lecture instructor to opening page An incorrect username produces an error message saying either username or password is incorrect Locks account after three incorrect passwords	P
Select a lecture section of students to view	Clicking on the section on the sidebar brings up the list of students in that section to the screen, including the students' information	P
View lab section of each student and individual scores of each submitted lab, as well as each section of the lab	The list of students in each section includes a table which shows the grades of each file in the lab	P
Download the students' grades	A file is downloaded to the instructor's computer containing the grades of the students'	F
Change current password	The lecture instructor's previous password no will log lecture instructor into the system The new password now logs lecture instructor into the system	P

Grading Software Acceptance Test Criteria:

Function Performed:	Necessary Outcome:	P/F:
Log into system	Successfully brings lab instructor to opening page An incorrect username produces an error message saying either username or password is incorrect Locks account after three incorrect passwords Text and panel color changes List of files ready to be graded appears	
Login Timeout	After ten minutes without activity results in a change of panel and text color and a message indicating a login timeout has occurred	
Login Time-in	Must re-enter username and password correctly to re-login	
Check Files to Grade	If logged in a sorted list of files ready to grade appears If logged out a message appears indicating the necessity of logging back in	
Sending Approved Files	If logged in send grades to server that have been approved as complete and correct If logged out create message indicating the necessity of logging back in	
Ready to Grade/Need Review Buttons	When either button clicked change either to the Ready to Grade panel or the Grade Assignments panel	
Ready to Grade Panel	Add assignments chosen for Ready to Grade to Selected for Grading list by clicking 'Add' Add all the assignments in Ready to Grade to Selected for Grading list by clicking 'Add All' Remove assignments chosen in Selected for Grading and put back in Ready to Grade list by clicking 'Remove' Remove all assignments in Selected for Grading list and put back in Ready to Grade list by clicking 'Remove All' Grade the assignments in Selected for Grading list by clicking 'Grade Selected Assignments' button and once done grading add to Need Review list	

Need Review Panel	View the files that have been graded by clicking 'View File' Navigate through assignments using arrow buttons, with each entry coming up with details about the grading performed and the option of overwriting grade or approving it	
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Section 5: Error Identification and Resolution

SPR Form SPR # 1

Name of individual(s) who identified problem: Whitney Cave

Date problem was identified: 04 / 30 / 06

Time problem was identified: 11:15 AM

Issue:

Attempted to change password three times with invalid old passwords and the system did not lock.

Initials:

Possible Solution:

Perhaps the locked system is no longer necessary since we are changing the passwords within a user account, so if they have already been able to log in, there may not be any need to lock them out.

Initials:

Actual Solution:

Decision made not to lock the system because the change password function is now within the user account.

Initials:

Person(s) that implemented solution: Whitney Cave and Nick Sitterly

Date solution was implemented: 04 / 30 / 06

Time solution was implemented: 3:00 PM

Amount of time spent on problem solution: 0 Days 3 Hours 45 Minutes

SPR Form SPR # 2

Name of individual(s) who identified problem: Whitney Cave

Date problem was identified: 04 / 30 / 06

Time problem was identified: 11:20 AM

Issue:

Attempted to change my password with new passwords that did not match. The system gave me a message saying the two new passwords did not match, but upon trying to change my password again I received a message saying that my old password did not match the database. I tried logging out and logging in, receiving the same message. I was allowed to log in using the first password I had typed in the new password when I tried to change my password.

Initials:

Possible Solution:

Though the correct message was given, the system still changed my password. Needs to not change.

Initials:

Actual Solution:

Set so password doesn't change when an invalid password change is executed.

Initials:

Person(s) that implemented solution: Nick Sitterly

Date solution was implemented: 04 / 30 / 06

Time solution was implemented: 4:00 PM

Amount of time spent on problem solution: 0 Days 4 Hours 40 Minutes

SPR Form SPR # 3

Name of individual(s) who identified problem: Whitney Cave

Date problem was identified: 04 / 30 / 06

Time problem was identified: 2:30 PM

Issue:

When change the password for the Course Coordinator, the account is changed from type Administrator to type Instructor.

Initials:

Possible Solution:

Initials:

Actual Solution:

Set to keep the Course Coordinator type at password change.

Initials:

Person(s) that implemented solution: Nick Sitterly

Date solution was implemented: 04 / 30 / 06

Time solution was implemented: 4: 00 PM

Amount of time spent on problem solution: 0 Days 1 Hours 30 Minutes

SPR Form SPR # 4

Name of individual(s) who identified problem: Whitney Cave

Date problem was identified: 04 / 30 / 06

Time problem was identified: 4:00 PM

Issue:

No Password field present under Add Single User section of Course Coordinator account.

Initials:

Possible Solution:

Add a password field.

Initials:

Actual Solution:

Still in progress.

Initials:

Person(s) that implemented solution:

Date solution was implemented:

Time solution was implemented:

Amount of time spent on problem solution: Days Hours Minutes

SPR Form SPR # 5

Name of individual(s) who identified problem: Whitney Cave

Date problem was identified: 04 / 30 / 06

Time problem was identified: 11:00 PM

Issue:

When changing password, and the new entered passwords do not match, the system does not change my password anymore (I can go back and log in using the old password), however, when attempting immediately to change the password again, the system does not recognize the old password as the password in the database.

Initials:

Possible Solution:

Initials:

Actual Solution:

Still in progress.

Initials:

Person(s) that implemented solution:

Date solution was implemented:

Time solution was implemented:

Amount of time spent on problem solution: Days Hours Minutes

SPR Form SPR # 6

Name of individual(s) who identified problem: Whitney Cave

Date problem was identified: 04 / 30 / 06

Time problem was identified: 11:15 PM

Issue:

When clicking the Detailed report in the lab and lecture sections, the detailed report pops up, but the name and section links disappear from the side panel.

Initials:

Possible Solution:

Initials:

Actual Solution:

Still in progress.

Initials:

Person(s) that implemented solution:

Date solution was implemented:

Time solution was implemented:

Amount of time spent on problem solution: Days Hours Minutes

SPR Form SPR # 7

Name of individual(s) who identified problem: Whitney Cave

Date problem was identified: 04 / 30 / 06

Time problem was identified: 11:20 PM

Issue:

When clicking on the "Archive" link under the Course Coordinator, the account is changed to a type lecture or lab instructor account.

Initials:

Possible Solution:

Initials:

Actual Solution:

Still in progress.

Initials:

Person(s) that implemented solution:

Date solution was implemented:

Time solution was implemented:

Amount of time spent on problem solution: Days Hours Minutes

SPR Form SPR # 8

Name of individual(s) who identified problem: Whitney Cave

Date problem was identified: 04 / 30 / 06

Time problem was identified: 11:30 PM

Issue:

The Lecture and Lab Instructors cannot return to their accounts after changing their passwords.

Initials:

Possible Solution:

Initials:

Actual Solution:

Still in progress.

Initials:

Person(s) that implemented solution:

Date solution was implemented: / / 06

Time solution was implemented: AM / PM

Amount of time spent on problem solution: Days Hours Minutes

SPR Form SPR # 8

Name of individual(s) who identified problem: Whitney Cave

Date problem was identified: 04 / 30 / 06

Time problem was identified: 11:30 PM

Issue:

The following pages cannot be navigated to: CC – Add/Edit Users, Add/Edit Sections, Add/Edit Categories, Generate Reports, Archive. Instructors – Detailed Reports.

Initials:

Possible Solution:

Initials:

Actual Solution:

Still in progress.

Initials:

Person(s) that implemented solution:

Date solution was implemented:

Time solution was implemented:

Amount of time spent on problem solution: Days Hours Minutes

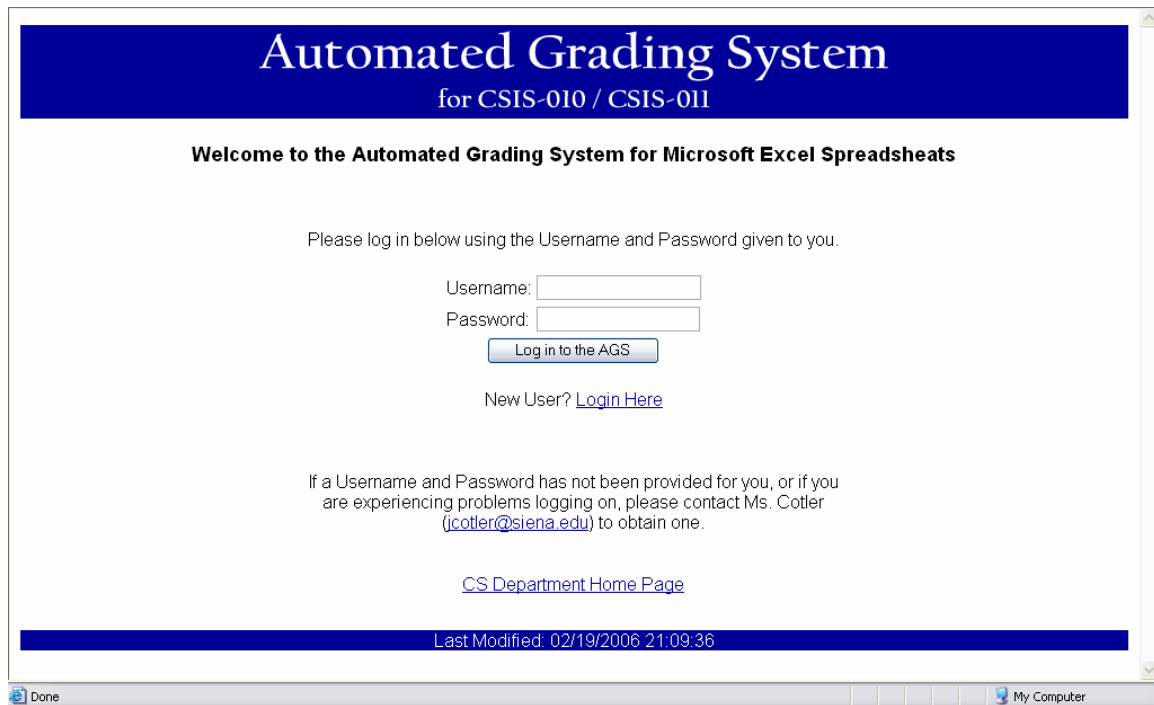
Section 6: User Environment and Performance Requirements

Our grading software (for instructors and course coordinator only) will have to be installed onto the user's machine before use. This software is designed for the Windows XP operating system. Machines running our software will also need Microsoft Office 2003. The software will be available for any instructors who need installation.

The AGS software will be available through Microsoft Internet Explorer 6.0, Netscape Navigator 7.1, and Mozilla Firefox 1.0. The AGS will be viewable on a 1024 x 768 screen resolution. It can be viewed on a computer monitor or on a classroom projector. To use the AGS the user should go to the webpage http://oraserv.cs.siena.edu/%7Eperm_pss/test/index.php and log in his/her username and password.

Section 7: User Displays and Command Summary

Log In Screen



The screenshot shows a web browser window displaying the login page for the Automated Grading System. The page has a blue header with the title "Automated Grading System for CSIS-010 / CSIS-011". Below the header, it says "Welcome to the Automated Grading System for Microsoft Excel Spreadsheets". The main content area contains a login form with fields for "Username:" and "Password:", a "Log in to the AGS" button, and a "New User? Login Here" link. A footer section provides contact information for Ms. Cotler and a link to the "CS Department Home Page". The browser's status bar at the bottom shows "Done" and "My Computer".

Automated Grading System
for CSIS-010 / CSIS-011

Welcome to the Automated Grading System for Microsoft Excel Spreadsheets

Please log in below using the Username and Password given to you.

Username:

Password:

New User? [Login Here](#)

If a Username and Password has not been provided for you, or if you are experiencing problems logging on, please contact Ms. Cotler (jcotler@siena.edu) to obtain one.

[CS Department Home Page](#)

Last Modified: 02/19/2006 21:09:36

This is the generic log in screen that all users of the system will interact with. The user will enter their username and password and then click on the “Log in to the AGS” to proceed to their appropriate landing page. If the user has never used the system before they will need to follow the Login Here link to create their account.

New User Account Creation

The screenshot shows a web browser window with a blue header bar containing the text "Automated Grading System for CSIS-010 / CSIS-011". Below the header, a welcome message reads: "Welcome to the AGS. Please enter your first and last name as well as your Siena email address. The system password you were given for your lecture and lab sections is also needed to gain access to the system. The system will remember this information and you will not be asked for it again." The form includes five input fields: "First Name", "Last Name", "Siena Email", and "Password", each followed by a text box. Below these are two dropdown menus for "Lecture Section" and "Lab Section", both with the placeholder text "- Please select your [lecture/lab] section from the list below -". At the bottom of the form are "Cancel" and "Continue" buttons. The browser's taskbar at the bottom shows a "Done" button on the left and "My Computer" on the right.

This is where a new user will create their account by entering all of their information including a password for their lecture and lab sections that will be provided to them upon entering the course.

Course Coordinator Landing Page – All Assignments

Automated Grading System

for CSIS-010 / CSIS-011

Logged In As:
[Course Coordinator](#)
[Log Out](#)
[Change Password](#)

Assignments:
[All](#)
[Lab 1](#)
[Lab 2](#)
[Midterm](#)
[Lab 3](#)
[Lab 4](#)
[Final](#)
[- Add New -](#)

Tasks:
[Add/Edit Users](#)
[Add/Edit Sections](#)
[Add/Edit Categories](#)
[Generate Reports](#)
[Archive](#)

All Assignments

Lab 1
Description:Description of Lab 1
Category: Lab (50%)

File	Due	Possible Points	Key Submitted	Template Submitted
File A	10/10/2005	20	10/1/05	10/1/05
File B	10/10/2005	60	10/1/05	10/2/05
File C	10/10/2005	20	10/1/05	10/1/05

Lab 2
Description:Description of Lab 2
Category: Lab (50%)

File	Due	Possible Points	Key Submitted	Template Submitted
File A	10/17/2005	30	10/8/05	10/8/05
File B	10/17/2005	30	10/8/05	10/8/05
File C	10/17/2005	40	10/10/05	10/10/05

Midterm
Description:Description of Midterm
Category: Midterm (25%)

After logging in, the Course Coordinator will be taken to this landing page.

Course Coordinator – User Tasks (Search, Add, Batch Add)

Automated Grading System
for CSIS-010 / CSIS-011

Logged In As:
Course Coordinator
[Log Out](#)
[Change Password](#)

Assignments:
[All](#)
[Lab 1](#)
[Lab 2](#)
[Midterm](#)
[Lab 3](#)
[Lab 4](#)
[Final](#)
[- Add New -](#)

Tasks:
[Add/Edit Users](#)
[Add/Edit Sections](#)
[Add/Edit Categories](#)
[Generate Reports](#)
[Archive](#)

User Search

Searching with empty values will return all users.

Last Name:

First Name:

Lecture Section:

Lab Section:

Add Single User

Last Name:

First Name:

User Name:

Student:

Lecture Section:

Lab Section:

Done Sunday, February 19, 2006

After selecting to Add/Edit Users from the Tasks menu, the Course Coordinator will be taken to this page. The Course Coordinator has the ability to search for users and add users.

Course Coordinator – User Search Results and Editing

The screenshot displays the 'Automated Grading System' interface for CSIS-010 / CSIS-011. The page is divided into a left sidebar and a main content area. The sidebar contains navigation links for 'Logged In As: Course Coordinator', 'Assignments' (All, Lab 1-4, Midterm, Final, Add New), and 'Tasks' (Add/Edit Users, Sections, Categories, Reports, Archive). The main content area features a 'User Search' section with input fields for Last Name, First Name, Lecture Section, and Lab Section, and a 'Search' button. Below this is a 'Search Results' table with columns for Last Name, First Name, User Name, Lecture Section, Lab Section, and three action buttons: Reset Pass, Edit User, and Delete User. The table lists six users, with the first four having specific lecture and lab sections, and the last two being 'Not Student'.

Automated Grading System
for CSIS-010 / CSIS-011

Logged In As:
Course Coordinator
[Log Out](#)
[Change Password](#)

Assignments:
[All](#)
[Lab 1](#)
[Lab 2](#)
[Midterm](#)
[Lab 3](#)
[Lab 4](#)
[Final](#)
[- Add New -](#)

Tasks:
[Add/Edit Users](#)
[Add/Edit Sections](#)
[Add/Edit Categories](#)
[Generate Reports](#)
[Archive](#)

User Search

Searching with empty values will return all users.

Last Name:

First Name:

Lecture Section:

Lab Section:

Search Results

Last Name	First Name	User Name	Lecture Section	Lab Section	Reset Pass	Edit User	Delete User
Last1	First1	slf1234	CSIS010-03	CSIS010-Lab 8	<input type="button" value="Reset Pass"/>	<input type="button" value="Edit User"/>	<input type="button" value="Delete User"/>
Last2	First2	slf2345	CSIS010-03	CSIS010-Lab 4	<input type="button" value="Reset Pass"/>	<input type="button" value="Edit User"/>	<input type="button" value="Delete User"/>
Last3	First3	slf3456	CSIS010-04	CSIS010-Lab 6	<input type="button" value="Reset Pass"/>	<input type="button" value="Edit User"/>	<input type="button" value="Delete User"/>
Last4	First4	slf4567	CSIS010-05	CSIS010-Lab 5	<input type="button" value="Reset Pass"/>	<input type="button" value="Edit User"/>	<input type="button" value="Delete User"/>
Last5	First5	alecturer	Not Student	Not Student	<input type="button" value="Reset Pass"/>	<input type="button" value="Edit User"/>	<input type="button" value="Delete User"/>
Last6	First6	alabguy	Not Student	Not Student	<input type="button" value="Reset Pass"/>	<input type="button" value="Edit User"/>	<input type="button" value="Delete User"/>

Page Generated: Sun Feb 19 22:14:04 EST 2006

This page is displayed after the Course Coordinator clicks on the Search button on the User Search page. The Search Results are displayed and the Course Coordinator has the option of performing another search.

Course Coordinator – Class Section Creation and Editing

AGS - Sections - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address: C:\Documents and Settings\Nicholas\Desktop\PerformanceSoftware\prototype\14.html

Automated Grading System for CSIS-010 / CSIS-011

Logged In As:
[Course Coordinator](#)
[Log Out](#)
[Change Password](#)

Assignments:
[All](#)
[Lab 1](#)
[Lab 2](#)
[Midterm](#)
[Lab 3](#)
[Lab 4](#)
[Final](#)
[- Add New -](#)

Tasks:
[Add/Edit Users](#)
[Add/Edit Sections](#)
[Add/Edit Categories](#)
[Generate Reports](#)
[Archive](#)

Class Sections

Section	Type	Description	Instructor		
CSIS010-02	Lecture	MW, 8:15-9:20	electurer	Update	Remove
CSIS010-03	Lecture	MW, 9:20-10:15	electurer	Update	Remove
CSIS010-04	Lecture	WF, 10:25-11:20	blecturer	Update	Remove
CSIS010-05	Lecture	WF, 11:30-12:25	blecturer	Update	Remove
CSIS010-Lab 5	Lab	F, 8:15-10:15	blabguy	Update	Remove
CSIS010-Lab 7	Lab	M, 8:15-10:15	elabguy	Update	Remove

Add Section

Section	Type	Description	Instructor	
<input type="text"/>	Lecture	<input type="text"/>	Select One	Add

Page Generated: Sun Feb 19 22:15:07 EST 2006

Done My Computer

After selecting Add/Edit Sections from the Tasks menu, the Course Coordinator will be taken to this page. The Course Coordinator has the ability to edit the type (lecture or lab), the description (date and time), and the instructor for each section. The Course Coordinator also has the option of adding a section.

Course Coordinator – Assignment Category Creation and Editing

Automated Grading System
for CSIS-010 / CSIS-011

Logged In As:
Course Coordinator
[Log Out](#)
[Change Password](#)

Assignments:
[All](#)
[Lab 1](#)
[Lab 2](#)
[Midterm](#)
[Lab 3](#)
[Lab 4](#)
[Final](#)
[- Add New -](#)

Tasks:
[Add/Edit Users](#)
[Add/Edit Sections](#)
[Add/Edit Categories](#)
[Generate Reports](#)
[Archive](#)

Assignment Categories and Weights

Category	Value (%)	
Lab	50	<input type="button" value="Remove"/>
Midterm	25	<input type="button" value="Remove"/>
Final Exam	25	<input type="button" value="Remove"/>

Add Category

Category	Value (%)	
<input type="text"/>	50	<input type="button" value="Add"/>

Page Generated: Sun Feb 19 22:15:56 EST 2006

Done My Computer

After selecting Add/Edit Categories from the Tasks menu, the Course Coordinator will have the option of removing categories from courses and also creating new categories with specific weights.

Course Coordinator – Create New Assignment Shell

Automated Grading System
for CSIS-010 / CSIS-011

Logged In As:
Course Coordinator
[Log Out](#)
[Change Password](#)

Assignments:
[All](#)
[Lab 1](#)
[Lab 2](#)
[Midterm](#)
[Lab 3](#)
[Lab 4](#)
[Final](#)
[- Add New -](#)

Tasks:
[Add/Edit Users](#)
[Add/Edit Sections](#)
[Add/Edit Categories](#)
[Generate Reports](#)
[Archive](#)

Create New Assignment

Name:

Page Generated: Sun Feb 19 22:18:41 EST 2006

Done My Computer

After selecting Add New from the Assignments column in the Tasks bar, the Course Coordinator will be able to choose a name for the new assignment and submit it to the database.

Course Coordinator – Edit Assignment

Automated Grading System

for CSIS-010 / CSIS-011

Logged In As:
[Course Coordinator](#)
[Log Out](#)
[Change Password](#)

Assignments:
[All](#)
[Lab 1](#)
[Lab 2](#)
[Midterm](#)
[Lab 3](#)
[Lab 4](#)
[Final](#)
[- Add New -](#)

Tasks:
[Add/Edit Users](#)
[Add/Edit Sections](#)
[Add/Edit Categories](#)
[Generate Reports](#)
[Archive](#)

Lab 2

Description:

Category:

File	Due	Possible Points	Key Submitted	Template Submitted	
File A	10/17/2005	30	10/8/05	10/8/05	<input type="button" value="Delete File"/>
File B	10/17/2005	30	10/8/05	10/8/05	<input type="button" value="Delete File"/>
File C	10/17/2005	40	10/10/05	10/10/05	<input type="button" value="Delete File"/>

Page Generated: Sun Feb 19 22:19:43 EST 2006

Done My Computer

After creating a name for the new assignment, the Course Coordinator is allowed to edit its properties. Here, the assignment description may be chosen and also its category which in turn has a corresponding weight. Below this it may be specified how many files this assignment has and their weights. In addition to this the grading files for the assignment may be submitted by clicking “Submit Grading Files”.

Course Coordinator – Grading Files Submission

Automated Grading System

for CSIS-010 / CSIS-011

Logged In As:
[Course Coordinator](#)
[Log Out](#)
[Change Password](#)

Assignments:
[All](#)
[Lab 1](#)
[Lab 2](#)
[Midterm](#)
[Lab 3](#)
[Lab 4](#)
[Final](#)
[- Add New -](#)

Tasks:
[Add/Edit Users](#)
[Add/Edit Sections](#)
[Add/Edit Categories](#)
[Generate Reports](#)
[Archive](#)

Lab 2 - Submit Grading Files

File	Location	
File A - Template	<input type="text"/>	<input type="button" value="Browse"/>
File A - Key	<input type="text"/>	<input type="button" value="Browse"/>
File B - Template	<input type="text"/>	<input type="button" value="Browse"/>
File B - Key	<input type="text"/>	<input type="button" value="Browse"/>
File C - Template	<input type="text"/>	<input type="button" value="Browse"/>
File C - Key	<input type="text"/>	<input type="button" value="Browse"/>
<input type="button" value="Submit Files"/>		

Page Generated: Sun Feb 19 22:20:30 EST 2006

Done My Computer

Here, the Course Coordinator has selected “Submit Grading Files” from the previous screen. The number of files that the assignment contains shows up with an option for the selection of a grading Template and grading Key for each. After selecting all files the Course Coordinator may submit the files via the “Submit Files” button.

Course Coordinator – Archive

Automated Grading System
for CSIS-010 / CSIS-011

Logged In As:
[Course Coordinator](#)
[Log Out](#)
[Change Password](#)

Assignments:
[All](#)
[Lab 1](#)
[Lab 2](#)
[Midterm](#)
[Lab 3](#)
[Lab 4](#)
[Final](#)
[- Add New -](#)

Tasks:
[Add/Edit Users](#)
[Add/Edit Sections](#)
[Add/Edit Categories](#)
[Generate Reports](#)
[Archive](#)

Archive

Semester Password:

Page Generated: Sun Feb 19 22:37:45 EST 2006

Done My Computer

Here the course coordinator has the option to archive the current database or change the semester without updating the database and providing a new semester password for student logins.

Student Landing Page – Grade Overview

AGS - View Grades - Microsoft Internet Explorer

Address: L:\PSS_Prototypes\COPY of New Folder\MainStudent.html

Automated Grading System

for CSIS-010 / CSIS-011

Logged In As:
Joe Student
[Log Out](#)
[Change Password](#)

Lecture Section:
CSIS010 - 3

Lab Section:
CSIS010 - Lab 6

All Grades:
[Click Here](#)

Assignments:
[Lab 1](#)
[Lab 2](#)
[Midterm](#)
[Lab 3](#)
[Lab 4](#)
[Final Exam](#)

Course Grades

This page presents your current lab grade and allows you to see how you rank against your peers.

Assignment	Score	Lecture Avg.	Lab Avg.
Lab 1	95	88	83
Lab 2	-	-	-
Midterm	-	-	-
Lab 3	-	-	-
Lab 4	-	-	-
Final Exam	-	-	-
Total	95	88	83

Use the links on the left side of the page to navigate to an assignment in order to submit files for grading by the AGS.

Page Generated: Tue Nov 29 12:43:38 EST 2005

Here we see the student interface where grades for various pieces of work they have done in the course of the semester are populated from the database. In this example the “All Grades” option was selected.

Student – View Graded Assignment Details

Automated Grading System
for CSIS-010 / CSIS-011

Logged In As:
Joe Student
[Log Out](#)
[Change Password](#)

Lecture Section:
CSIS010 - 3

Lab Section:
CSIS010 - Lab 6

All Grades:
[Click Here](#)

Assignments:
[Lab 1](#)
[Lab 2](#)
[Midterm](#)
[Lab 3](#)
[Lab 4](#)
[Final Exam](#)

Lab 1

Description: Description of assignment.
Category: Lab (50%)

File	Due	Submitted	Possible Points	Score	Lecture Avg.	Lab Avg.
File A	10/10/2005	10/10/2005	20	18	17	16
File B	10/10/2005	10/10/2005	60	57	54	50
File C	10/10/2005	10/10/2005	20	20	17	17
Total				95	88	83

Page Generated: Tue Nov 29 12:35:53 EST 2005

Upon selecting a particular assignment, the student will then be able to view information on the specific files. Here we see that Lab 1 contained three files each with specific scores and weights which correspond to the student's grade for that assignment.

Student – View Ungraded Assignment Details

AGS - View Grades - Microsoft Internet Explorer

Address: L:\PSS_prototypes\Copy of New Folder\StudentUnsubmitted.html

Automated Grading System

for CSIS-010 / CSIS-011

Logged In As:
Joe Student
[Log Out](#)
[Change Password](#)

Lecture Section:
CSIS010 - 3

Lab Section:
CSIS010 - Lab 6

All Grades:
[Click Here](#)

Assignments:
[Lab 1](#)
[Lab 2](#)
[Midterm](#)
[Lab 3](#)
[Lab 4](#)
[Final Exam](#)

Lab 2

Description: Description of assignment.
Category: Lab (50%)

File	Due	Submitted	Possible Points	Score	Lecture Avg.	Lab Avg.
File A	10/17/2005	-	30	-	-	-
File B	10/17/2006	-	30	-	-	-
File C	10/17/2007	-	40	-	-	-
Total				-	-	-

Page Generated: Tue Nov 29 12:36:33 EST 2005

Here the student has the option to view specific grade details for assignments that have not been submitted yet. This allows the student to be aware of the due dates and the weights of the various files.

Student – Submit Assignment Files

The screenshot shows a web browser window titled "AGS - Submit - Microsoft Internet Explorer". The address bar shows a local file path: "L:\PSS_Prototypes\COPY of New Folder\SubmitAssignment.html". The main content area has a blue header with the text "Automated Grading System for CSIS-010 / CSIS-011". Below the header, the page is titled "Lab 2 - Submit Assignment". On the left side, there is a navigation menu with links for "Logged In As: Joe Student", "Log Out", "Change Password", "Lecture Section: CSIS010 - 3", "Lab Section: CSIS010 - Lab 6", "All Grades: Click Here", "Assignments: Lab 1, Lab 2, Midterm, Lab 3, Lab 4, Final Exam". The main submission area contains a table with three rows for "File A", "File B", and "File C". Each row has a "Location" input field and a "Browse" button. Below the table is a "Submit Files" button. At the bottom of the page, it says "Page Generated: Tue Nov 29 12:37:14 EST 2005".

File	Location	
File A	<input type="text"/>	<input type="button" value="Browse"/>
File B	<input type="text"/>	<input type="button" value="Browse"/>
File C	<input type="text"/>	<input type="button" value="Browse"/>

The student submission form is accessed by choosing to submit a particular assignment. The number of files required shows up and the student may browse their system for each one individually before submitting them.

Lab Instructor Landing Page – Lab Section Overview

Automated Grading System

for CSIS-010 / CSIS-011

Logged In As:
[Guacamole, Prof](#)
[Log Out](#)
[Change Password](#)

Lecture Sections:
[CSIS010 - 3 \(Detail\)](#)
[CSIS010 - 4 \(Detail\)](#)

Lab Sections:
[CSIS010 - Lab 6 \(Detail\)](#)

Tasks:
[Reset Student Pass](#)
[Generate Reports](#)

Grade Report

Section: CSIS010 - Lab 6
Description: F, 10:25-12:25

[Printer Friendly Version](#)

	Lab 1	Lab 2	Midterm	Lab 3	Lab 4	Final Exam	Total
LastName1, FirstName1	86	-	-	-	-	-	86
LastName2, FirstName2	93	-	-	-	-	-	93
LastName3, FirstName3	90	-	-	-	-	-	90
LastName4, FirstName4	87	-	-	-	-	-	87
LastName5, FirstName5	94	-	-	-	-	-	94
LastName6, FirstName6	99	-	-	-	-	-	99
LastName7, FirstName7	96	-	-	-	-	-	96
LastName8, FirstName8	71	-	-	-	-	-	71
LastName9, FirstName9	62	-	-	-	-	-	62
LastName10, FirstName10	68	-	-	-	-	-	68
LastName11, FirstName11	55	-	-	-	-	-	55
LastName12, FirstName12	101	-	-	-	-	-	101
LastName13, FirstName13	83	-	-	-	-	-	83
LastName14, FirstName14	80	-	-	-	-	-	80
LastName15, FirstName15	79	-	-	-	-	-	79
LastName16, FirstName16	81	-	-	-	-	-	81
LastName17, FirstName17	80	-	-	-	-	-	80
LastName18, FirstName18	81	-	-	-	-	-	81

Done My Computer

The Lab Instructor is logged in here and has access to the grades of everyone from their specific course as well as from individual sections. This is simply for viewing purposes of students' grades, and is the screen that is initially brought forth upon login.

Lab Instructor – Lab Section Detail

Automated Grading System

for CSIS-010 / CSIS-011

Logged In As:
Guacamole, Prof

[Log Out](#)
[Change Password](#)

Lecture Sections:
[CSIS010 - 3 \(detail\)](#)
[CSIS010 - 4 \(detail\)](#)

Lab Sections:
[CSIS010 - Lab 6 \(detail\)](#)

Tasks:
[Reset Student Pass](#)
[Generate Reports](#)

Detailed Grade Report

Section: CSIS010 - Lab 6
Description: F, 10:25-12:25

[Printer Friendly Version](#)

	Lab 1			Lab 2			Midterm			Lab 3		
	File A	File B	File C	File A	File B	File C	File A	File B	File C	File A	File B	File C
LastName1, FirstName1	18	50	18	-	-	-	-	-	-	-	-	-
LastName2, FirstName2	Lecture Section	CSIS010 - 3	9	-	-	-	-	-	-	-	-	-
LastName3, FirstName3	Lab Section	CSIS010 - Lab 6	8	-	-	-	-	-	-	-	-	-
LastName4, FirstName4	17	53	17	-	-	-	-	-	-	-	-	-
LastName5, FirstName5	18	58	18	-	-	-	-	-	-	-	-	-
LastName6, FirstName6	20	59	20	-	-	-	-	-	-	-	-	-
LastName7, FirstName7	18	60	18	-	-	-	-	-	-	-	-	-
LastName8, FirstName8	20	31	20	-	-	-	-	-	-	-	-	-
LastName9, FirstName9	15	32	15	-	-	-	-	-	-	-	-	-
LastName10, FirstName10	14	40	14	-	-	-	-	-	-	-	-	-
LastName11, FirstName11	5	45	5	-	-	-	-	-	-	-	-	-
LastName12, FirstName12	18	65	18	-	-	-	-	-	-	-	-	-
LastName13, FirstName13	19	45	19	-	-	-	-	-	-	-	-	-
LastName14, FirstName14	20	40	20	-	-	-	-	-	-	-	-	-
LastName15, FirstName15	17	45	17	-	-	-	-	-	-	-	-	-
LastName16, FirstName16	18	45	18	-	-	-	-	-	-	-	-	-

After choosing to see either the entire course or the specific sections in detail the Lab Instructor is presented with this screen. Here individual files are shown as opposed to just the overall grade for the assignment.

Lecture Instructor Landing Page – Lecture Section Overview

Automated Grading System

for CSIS-010 / CSIS-011

Logged In As:
Guacamole, Prof
[Log Out](#)
[Change Password](#)

Lecture Sections:
[CSIS010 - 3 \(detail\)](#)
[CSIS010 - 4 \(detail\)](#)

Lab Sections:
[CSIS010 - Lab 6 \(detail\)](#)

Tasks:
[Reset Student Pass](#)
[Generate Reports](#)

Grade Report

Section: CSIS010 - 3
Description: MW, 10:25-11:20

[Printer Friendly Version](#)

	Lab 1	Lab 2	Midterm	Lab 3	Lab 4	Final Exam	Total
LastName1, FirstName1	86	-	-	-	-	-	86
LastName2, FirstName2	93	-	-	-	-	-	93
LastName3, FirstName3	90	-	-	-	-	-	90
LastName4, FirstName4	87	-	-	-	-	-	87
LastName5, FirstName5	94	-	-	-	-	-	94
LastName6, FirstName6	99	-	-	-	-	-	99
LastName7, FirstName7	96	-	-	-	-	-	96
LastName8, FirstName8	71	-	-	-	-	-	71
LastName9, FirstName9	62	-	-	-	-	-	62
LastName10, FirstName10	68	-	-	-	-	-	68
LastName11, FirstName11	55	-	-	-	-	-	55
LastName12, FirstName12	101	-	-	-	-	-	101
LastName13, FirstName13	83	-	-	-	-	-	83
LastName14, FirstName14	80	-	-	-	-	-	80
LastName15, FirstName15	79	-	-	-	-	-	79
LastName16, FirstName16	81	-	-	-	-	-	81
LastName17, FirstName17	80	-	-	-	-	-	80
LastName18, FirstName18	81	-	-	-	-	-	81

Done My Computer

Here the Lecture Instructor is logged in and has access to all of the student's grades in their classes or in just specific sections.

Lecture Instructor – Lecture Section Detail

Automated Grading System

for CSIS-010 / CSIS-011

Logged In As:
Guacamole, Prof
[Log Out](#)
[Change Password](#)

Lecture Sections:
[CSIS010 - 3 \(Detail\)](#)
[CSIS010 - 4 \(Detail\)](#)

Lab Sections:
[CSIS010 - Lab 6 \(Detail\)](#)

Tasks:
[Reset Student Pass](#)
[Generate Reports](#)

Detailed Grade Report

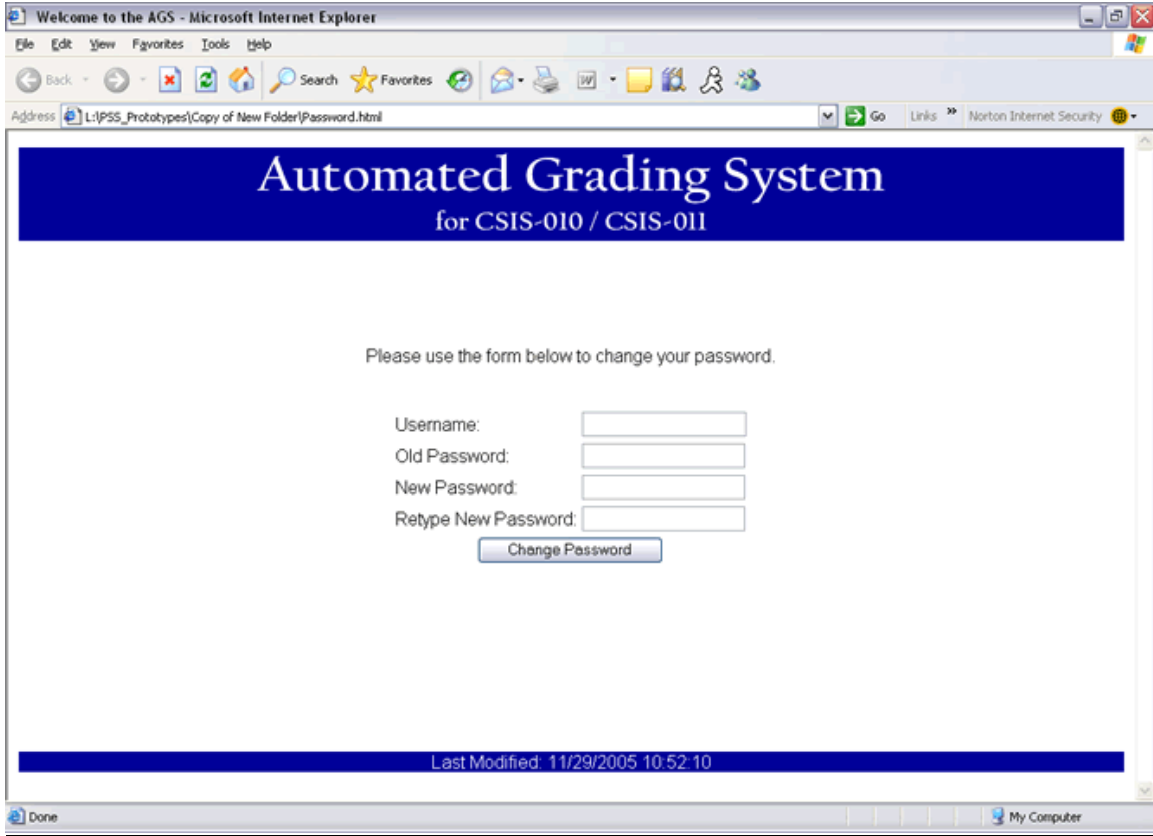
Section: CSIS010 - 3
Description: MW, 10:25-11:20

[Printer Friendly Version](#)

	Lab 1			Lab 2			Midterm			Lab 3		
	File A	File B	File C	File A	File B	File C	File A	File B	File C	File A	File B	File C
LastName1, FirstName1	18	50	18	-	-	-	-	-	-	-	-	-
LastName2, FirstName2	18	50	18	-	-	-	-	-	-	-	-	-
LastName3, FirstName3	18	50	18	-	-	-	-	-	-	-	-	-
LastName4, FirstName4	17	53	17	-	-	-	-	-	-	-	-	-
LastName5, FirstName5	18	58	18	-	-	-	-	-	-	-	-	-
LastName6, FirstName6	20	59	20	-	-	-	-	-	-	-	-	-
LastName7, FirstName7	18	60	18	-	-	-	-	-	-	-	-	-
LastName8, FirstName8	20	31	20	-	-	-	-	-	-	-	-	-
LastName9, FirstName9	15	32	15	-	-	-	-	-	-	-	-	-
LastName10, FirstName10	14	40	14	-	-	-	-	-	-	-	-	-
LastName11, FirstName11	5	45	5	-	-	-	-	-	-	-	-	-
LastName12, FirstName12	18	65	18	-	-	-	-	-	-	-	-	-
LastName13, FirstName13	19	45	19	-	-	-	-	-	-	-	-	-
LastName14, FirstName14	20	40	20	-	-	-	-	-	-	-	-	-
LastName15, FirstName15	17	45	17	-	-	-	-	-	-	-	-	-
LastName16, FirstName16	18	45	18	-	-	-	-	-	-	-	-	-

Here the Lecture Instructor has chosen to see detailed information about the students so the individual files as opposed to just the assignment grade are shown.

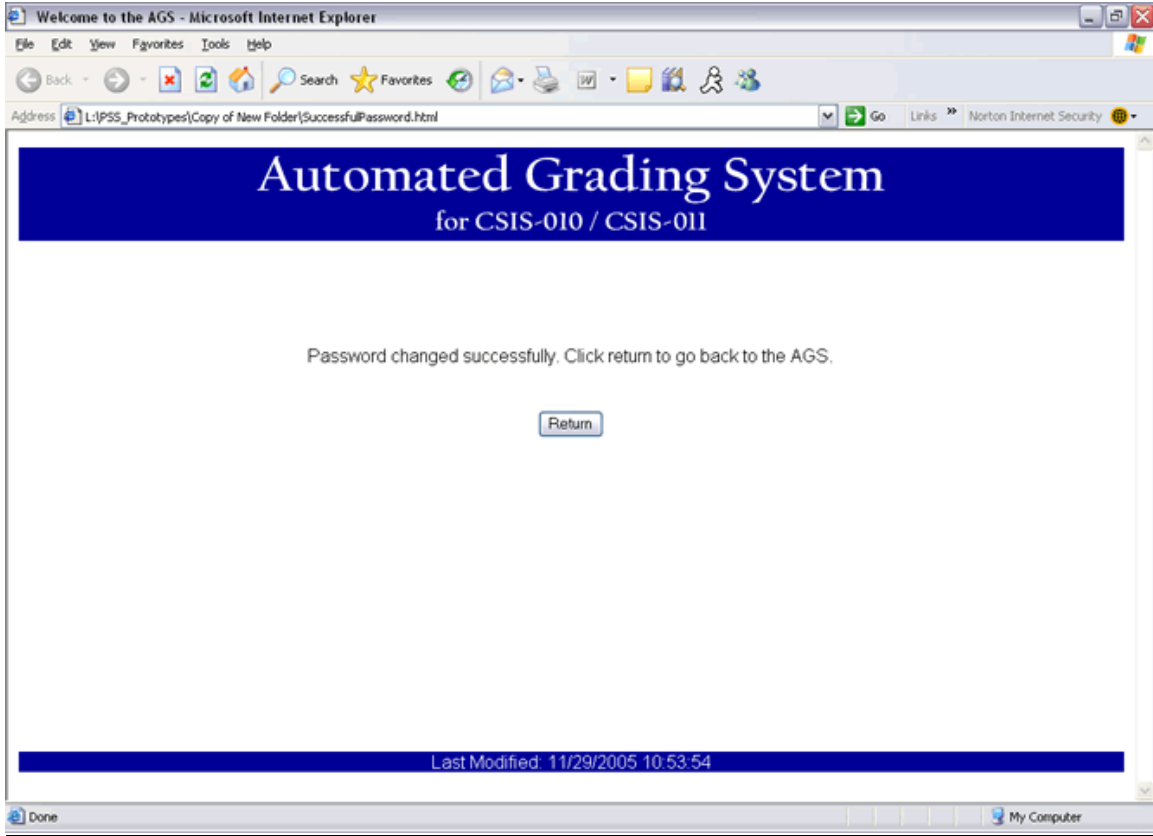
All Users – Change Password



The screenshot shows a Microsoft Internet Explorer window titled "Welcome to the AGS - Microsoft Internet Explorer". The address bar displays "L:\PSS_prototypes\COPY of New Folder\Password.html". The main content area features a blue header with the text "Automated Grading System for CSIS-010 / CSIS-011". Below the header, a message reads "Please use the form below to change your password." The form consists of four input fields: "Username:", "Old Password:", "New Password:", and "Retype New Password:". A "Change Password" button is positioned below the "Retype New Password" field. At the bottom of the page, a blue bar contains the text "Last Modified: 11/29/2005 10:52:10". The browser's status bar at the bottom shows "Done" and "My Computer".

This is the form for which all users will see upon choosing to change their password from the side menu. A Username, Old Password, and New Password must be submitted to change a user's password in the database.

All Users – Successful Password Changes



If the information entered in the new password form was correct and verified by the database the user is brought to this screen confirming the change.

Reset Student Password

Automated Grading System

for CSIS-010 / CSIS-011

Logged In As:
[Guacamole, Prof](#)
[Log Out](#)
[Change Password](#)

Lecture Sections:
[CSIS010 - 3 \(detail\)](#)
[CSIS010 - 4 \(detail\)](#)
[Download All](#)

Lab Sections:
[CSIS010 - Lab 6 \(detail\)](#)

Reset Student Password

Lecture Section:

Student Name:

Page Generated: Sun Feb 19 22:30:40 EST 2006

Done My Computer

This is the screen where the Instructor may reset a student's password.

Course Coordinator Downloadable Report

Course Coordinator Report
CSIS-010

				Lab1		Lab2			Lab3	Lab4	
				80	20	20	30	50	100	50	50
Last Name	First Name	Lecturer	Grader	File1	File2	File1	File2	File3	File1	File1	File2
Sitterly	Nicholas	Dr. Albright	Dr. Phisher	56%	78%	94%	95%	95%	87%	86%	76%
Navarette	Raymond	Dr. Albright	Dr. Phisher	95%	69%	87%	76%	76%	95%	45%	77%
Strube	Joe	Dr. James	Dr. Mueller	97%	56%	87%	68%	76%	76%	95%	87%
Durham	Patrick	Dr. James	Dr. Phisher	87%	76%	57%	97%	84%	87%	65%	98%
Cave	Whitney	Dr. James	Dr. Phisher	56%	67%	98%	100%	87%	99%	76%	67%
Hall	Christopher	Dr. James	Dr. Mueller	100%	54%	34%	99%	68%	77%	98%	65%
Steffinson	Matthew	Dr. Larry	Dr. Mueller	88%	76%	67%	45%	48%	67%	67%	87%
Faltico	Carl	Dr. Larry	Dr. Alger	86%	57%	38%	96%	98%	45%	56%	98%
Morse	Robert	Dr. Larry	Dr. Alger	87%	67%	56%	100%	78%	65%	45%	23%
Summerfield	Trevor	Dr. Larry	Dr. Alger	85%	100%	84%	99%	86%	76%	56%	43%
Heiser	Travis	Dr. Larry	Dr. Alger	56%	22%	98%	88%	83%	95%	67%	54%
Cane	Kevin	Dr. Larry	Dr. Phisher	76%	96%	78%	78%	95%	0%	78%	88%
Miller	Robert	Dr. Larry	Dr. Mueller	67%	78%	100%	98%	54%	56%	89%	67%
Clark	John	Dr. Melbroy	Dr. Alger	87%	67%	98%	67%	87%	77%	90%	87%
Austin	Ashley	Dr. Melbroy	Dr. Mueller	89%	87%	78%	98%	97%	43%	78%	56%
Vaughan	Megan	Dr. Melbroy	Dr. Mueller	77%	98%	98%	56%	76%	56%	98%	76%
Volpi	Hannah	Dr. Melbroy	Dr. Mueller	77%	67%	99%	87%	67%	95%	76%	78%
Petty	Brenden	Dr. Melbroy	Dr. Phisher	67%	87%	89%	77%	88%	87%	66%	9%
Nellis	Jennifer	Dr. Melbroy	Dr. Phisher	87%	98%	87%	89%	77%	95%	56%	22%
Peck	Scott	Dr. Melbroy	Dr. Alger	87%	99%	88%	67%	66%	98%	45%	98%

Here we have the downloadable report which will be presented to the Course Coordinator, displaying all of the grade information for the students registered in the courses.

Lecture Instructor Downloadable Report

Lecture Instructor Report

Dr. Melbroy

Lecture Section:CSIS 010-01

Lecture Description:MWF 11:30-12:25pm

First Name	Last Name	Lab Section	Lab1	Lab2	Lab3	Lab4	Lab5	Avg
Peck	Scott	CSIS 010-8H	87%	99%	88%	67%	66%	81.4%
Clark	John	CSIS 010-8H	87%	67%	98%	67%	87%	81.2%
Austin	Ashley	CSIS 010-9H	89%	87%	78%	98%	97%	89.8%
Vaughan	Megan	CSIS 010-9H	77%	98%	98%	56%	76%	81%
Volpi	Hannah	CSIS 010-9H	77%	67%	99%	87%	67%	79.4%
Petty	Brenden	CSIS 010-10H	67%	87%	89%	77%	88%	81.6%
Nellis	Jennifer	CSIS 010-10H	87%	98%	87%	89%	77%	87.6%

Here is the report for which the Lecture Instructor will have access to download which will provide grade information for everyone in their classes.

Lab Instructor Downloadable Report

Lab Instructor Report
Dr. Phisher
Course:CSIS 010
Lab Description:T 1:30-3:30pm

Last Name	First Name	Lecture Section	Lab1	Lab2	Lab3	Lab4	Lab5	Avg
Sitterly	Nicholas	CSIS 010-01	56%	78%	94%	95%	95%	83.6%
Navarette	Raymond	CSIS 010-01	95%	69%	87%	76%	76%	80.6%
Durham	Patrick	CSIS 010-02	87%	76%	57%	97%	84%	97%
Cave	Whitney	CSIS 010-02	56%	67%	98%	100%	87%	81.6%
Cane	Kevin	CSIS 010-03	76%	96%	78%	78%	95%	84.6%
Petty	Brenden	CSIS 010-03	67%	87%	89%	77%	88%	81.6%
Nellis	Jennifer	CSIS 010-03	87%	98%	87%	89%	77%	87.6%

Here is the report for which the Lab Instructor will have access to download which will provide grade information for everyone in their labs.

Lab Instructor – Grading Software

AGS - Lab Instructor Grading Tool

Assignments: Ready To Grade Assignments: Need Review

NOT CONNECTED

Log Into Remote DB

Username:

Password:

Connect

Check for Files to Grade

Send Approved Files

Review Panel

Student: Assignment: File:

Expected

Actual

◀ ▶ Entry _ of _ View File

Points Worth: _ Points Awarded: Approved

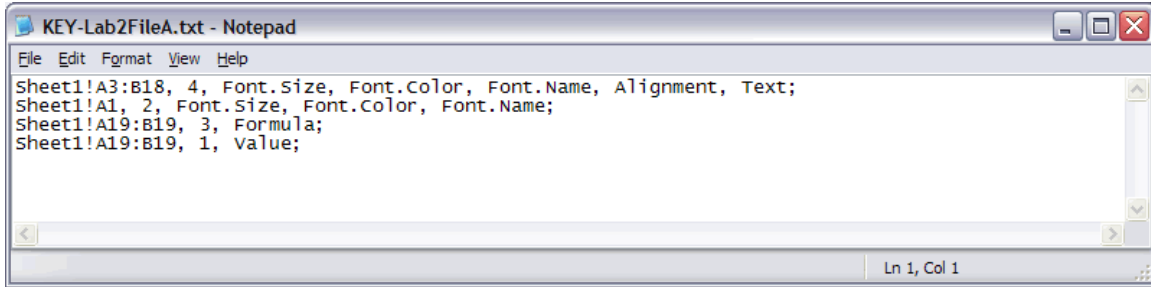
Here we have a view of the grading system software. The Lab Instructor uses this software to query the database and initialize grading. Clicking the “Assignments: Need Review” tab will result in a list of files that have already been graded, and now need to be approved by the instructor. By clicking “View File” the Lab Instructor will see the graded assignment, and the first wrong answer will appear in the “Actual” section, and the correct answer will be in the “Expected” section. Navigating through these answers can be done using the Entry arrows. Each answer is then either approved, or a new point value can be entered by the Lab Instructor in the “Points Awarded:” category.

Lab Instructor – Lab Section Detail

Section	Last Name	First Name	Assignment	File
CSIS010 - Lab 2	Last1	First1	Lab 1	File A
CSIS010 - Lab 2	Last1	First1	Lab 1	File B
CSIS010 - Lab 2	Last1	First1	Lab 1	File C
CSIS010 - Lab 2	Last10	First10	Lab 1	File A
CSIS010 - Lab 2	Last10	First10	Lab 1	File B
CSIS010 - Lab 2	Last10	First10	Lab 1	File C
CSIS010 - Lab 2	Last2	First2	Lab 1	File A
CSIS010 - Lab 2	Last2	First2	Lab 1	File B
CSIS010 - Lab 2	Last2	First2	Lab 1	File C
CSIS010 - Lab 2	Last3	First3	Lab 1	File A

The Lab Instructor uses the red login box shown here to connect to the system database. Once connected, the database is queried and the results are presented in the window. By clicking on the “Assignments: Ready to Grade” tab, the Lab Instructor will see a list of files that are ready to be graded by the software. The Lab Instructor then highlights any files he/she wishes to grade, and adds them to the list in the lower section of the screen by clicking “Add”. He/she may also choose to simply add all the files, and this works similarly for removing the items from the lower list. Once all files are selected, by clicking “Grade Selected Assignments” the software will begin grading each file, and once finished, the files will be put into the “Need Review” list.

Course Coordinator – File Grading Key



```
KEY-Lab2FileA.txt - Notepad
File Edit Format View Help
Sheet1!A3:B18, 4, Font.Size, Font.Color, Font.Name, Alignment, Text;
Sheet1!A1, 2, Font.Size, Font.Color, Font.Name;
Sheet1!A19:B19, 3, Formula;
Sheet1!A19:B19, 1, Value;
Ln 1, Col 1
```

This is the general form that a File Grading Key will take. Each line of the key will indicate a specific area of the student's Excel project to be checked against the submission provided by the Course Coordinator. Entries in this file will follow a specified format. There will first be the range of the Excel file in question. This is followed by a comma and the number of points this entry is worth. Another comma follows this and then a list of the properties to check over the given range. Each entry will end with a semi-colon.

Section 8: User Manual

This section describes in detail how each user can take advantage of the full usage of the AGS and grading software.

Automated Grading System Users

Course Coordinator

The Course Coordinator will log in to the AGS at the log in page (http://oraserv.cs.siena.edu/%7Eperm_pss/test/index.php), using a username and password that has already been provided.

To log out of the AGS the Course Coordinator must simply click the “Log Out” link on the side panel.

The Course Coordinator has the ability to change his/her password by entering his/her old password, followed by the new desired password twice at the “Change Password” page.

Once logged into the AGS the Course Coordinator is brought to a landing page which displays a grade report for all assignments. This report lists each assignment that has been created by the Course Coordinator, the assignment description, the assignment category, and a table of the files submitted. The file table shows the points possible for each file, the date the key file was submitted by the Course Coordinator, and the date the template file was submitted by the Course Coordinator (if not submitted yet, a “-” is present in the date space). If the Course Coordinator navigates away from this page and wishes to return, he/she must merely click “All” on the side panel.

When clicking on a specific assignment on the side panel (i.e. “lab1, lab2, Midterm, etc.), a more detailed showing of that assignment will appear. The information shown here can all be edited by typing in new information and clicking the “Submit Changes” button. This information includes the description of the assignment, the category it is placed in, the file names, and the possible points for each file. The choice to delete a file is an option by clicking on the “Delete File” button next to the file that the Course Coordinator wishes to delete. To add files to the assignment click the “Add File” button. A new row in the table will appear, ready for information to be inputted. To submit template or key files click the “Submit Grading Files” button. The AGS will navigate to another page allowing the Course Coordinator to browse and submit the chosen files. And to delete the entire assignment click the “Delete Assignment” button.

To add a new assignment to the AGS, the Course Coordinator should click on the “-Add New-” link on the side panel. The AGS will navigate to another page allowing the Course Coordinator to specify the name of the assignment, which will then be added as a link on the side panel under the specified name. This link can be clicked to bring up the assignment and input the files and other necessary information for the new assignment.

By clicking the “Add/Edit User” link on the side panel, the AGS will navigate to a page allowing the Course Coordinator to search for a specific user (then edit the user information if desired), add a user, or add a group of users. To search for users, any number of the following fields may be filled in, followed by clicking “Search” : Last Name, First Name, Lecture Section, and Lab Section. The AGS will return any users matching the entered fields. To add a single user the Course Coordinator must input the following information and then click “Add”: Last Name, First Name, User Name, User Password, Student (Y/N), Lab Section, and Lecture Section. To add a group of users the file where the listing of users and their information must be inputted and then the button “Add” clicked.

Once a user search has been completed, the Course Coordinator has the ability to change information about the users displayed. A new lab or lecture section can be chosen from a drop down menu next to the user’s name and clicking “Edit User”. To reset the user’s password to a generic password (cookie13428), “Reset Password” can be clicked. To delete the user from the AGS simply click “Delete User”.

By clicking the “Add/Edit Sections” link on the side panel, the AGS will navigate to a page with a table of the current lab and lecture sections. The section number, type (lab or lecture), description (day and time), and instructor is shown. The type, description and instructor can all be changed by modifying the values in the table and clicking the “Update” button in the row of that section. By clicking “Remove” in that row, the section will be deleted from the AGS. To add a section, input the section number, type, description, and instructor in the available fields under the “Add Section” portion, and click “Add”.

By clicking the “Add/Edit Category” link on the side panel, the AGS navigates to a page showing a table that includes the current categories in the AGS. The table shows the category name and the percentage of the course grade it possesses. This percentage can be modified and updated by clicking “Update”. By clicking “Remove” next to a category, the category will be deleted from the AGS. To add a category simply input the category name and percentage of the course grade and click “Add”.

By clicking the “Archive” link on the side panel, the AGS navigates to a page that allows the Course Coordinator to work in another term in years past. Select the year and semester from the drop down menus, and enter the semester password. Then choose to either “Replicate Database” or “Update/Change Semester Without Replication” by clicking the corresponding buttons.

Student

The Student will initially log in to the AGS by registering. At registration they will need to enter first and last names, username (an email address), personal password for the system twice (which must be 8 characters long and include a number or a special character), registration password (given to them by their lab or lecture instructors), and lab and lecture sections (which will be available for selection from a drop down menu.

After this first log in, the student will log in to the AGS by entering their username and password at the log in page (http://oraserv.cs.siena.edu/%7Eperm_pss/test/index.php).

To log out of the AGS the Student must simply click the “Log Out” link on the side panel.

The Student has the ability to change his/her password by entering his/her old password, followed by the new desired password twice at the “Change Password” page.

Once logged in to the AGS the Student will see their Course Grades in a table. The table shows each assignment name, the score the Student received on it, the average score of his/her lab section, and the average score of his/her lecture section. This page can also be navigated to by clicking the “Click Here” link on the side panel.

By clicking a specific assignment under the “Assignments” heading on the side panel the Student will be brought to a page displaying a table of the files in that specific assignment. The information stored in this table includes the due date, if the file has been submitted yet, the points possible, the Student’s score, and the Student’s lab and lecture average scores. If the files have not been submitted or graded, this is indicated by a “-” in the table. To submit files for the lab click “Submit Files” (which is only present if the files have not yet been submitted). The AGS navigates to a page that displays each file that is wanted for grading of the assignment and allows the Student to input the location of these files, and upload them to the AGS by clicking “Submit Files”.

Lab Instructor

The Lab Instructor will log in to the AGS at the log in page (http://oraserv.cs.siena.edu/%7Eperm_pss/test/index.php), using a username and password that has been created by the Course Coordinator.

To log out of the AGS the Lab Instructor must simply click the “Log Out” link on the side panel.

The Lab Instructor has the ability to change his/her password by entering his/her old password, followed by the new desired password twice at the “Change Password” page.

Once logged in to the AGS, the Lab Instructor will see a table that includes the students in his/her first section listed on the side panel. Next to the names in the table are the scores of that student on each assignment, as well as the total percentage for that student in the course. The average of each assignment and final grade percentage for every student in the section is found at the bottom of the table. A table similar to this can be viewed for any section by clicking on the specific section link on the side panel.

By clicking the “Detail” link next to any section in the side panel, a more detailed table is shown for each section. This table shows each student, the scores on each file of each

assignment, and the total average for the course. The averages can again be found at the bottom of this table.

By clicking the “Reset Student Password” link on the side panel, the Lab Instructor will be navigated to a page allowing him/her to specify the section and user name. Upon clicking “Continue” the student’s password will be changed to the generic password (cookie13428).

By clicking the “Generate Reports” link on the side panel, the Lab Instructor can specify a section he/she wishes to view a report for from a drop down menu. The Lab Instructor can choose for the report to be detailed by checking the “Detailed” box. Once clicking the “Generate” button the report will appear on the screen.

Lecture Instructor

The Lecture Instructor will log in to the AGS at the log in page (http://oraserv.cs.siena.edu/%7Eperm_pss/test/index.php), using a username and password that has been created by the Course Coordinator.

To log out of the AGS the Lecture Instructor must simply click the “Log Out” link on the side panel.

The Lecture Instructor has the ability to change his/her password by entering his/her old password, followed by the new desired password twice at the “Change Password” page.

Once logged in to the AGS, the Lecture Instructor will see a table that includes the students in his/her first section listed on the side panel. Next to the names in the table are the scores of that student on each assignment, as well as the total percentage for that student in the course. The average of each assignment and final grade percentage for every student in the section is found at the bottom of the table. A table similar to this can be viewed for any section by clicking on the specific section link on the side panel.

By clicking the “Detail” link next to any section in the side panel, a more detailed table is shown for each section. This table shows each student, the scores on each file of each assignment, and the total average for the course. The section averages can again be found at the bottom of this table.

By clicking the “Reset Student Password” link on the side panel, the Lecture Instructor will be navigated to a page allowing him/her to specify the section and user name. Upon clicking “Continue” the student’s password will be changed to the generic password (cookie13428).

By clicking the “Generate Reports” link on the side panel, the Lecture Instructor can specify a section he/she wishes to view a report for from a drop down menu. The Lecture Instructor can choose for the report to be detailed by checking the “Detailed” box. Once clicking the “Generate” button the report will appear on the screen.

Grading Software Users

The Lab Instructor uses the Grading Software to query the database and initialize grading. The Lab Instructor first connects to the system database by entering his/her username and password. Once connected, the database is queried and the results are presented in the window. By clicking on the “Assignments: Ready to Grade” tab, the Lab Instructor will see a list of files that are ready to be graded by the software. The Lab Instructor then highlights any files he/she wishes to grade, and adds them to the list in the lower section of the screen by clicking “Add”. He/she may also choose to simply add all the files, and this works similarly for removing the items from the lower list. Once all files are selected, by clicking “Grade Selected Assignments” the software will begin grading each file, and once finished, the files will be put into the “Need Review” list.

The “Assignments: Need Review” tab can be clicked to show a list of files that are ready to grade, and need to be approved by the instructor. By clicking “View File” the Lab Instructor will see the graded assignment that has been highlighted, the first wrong answer will appear in the “Actual” section, and the correct answer will be in the “Expected” section. Navigating through these answers can be done using the Entry arrows. Each answer is then either approved, or a new point value can be entered by the Lab Instructor in the “Points Awarded:” category. Once the Lab Instructor has checked all the files he/she wishes to, he/she may click “Send Approved Files” for the files to be sent back to the AGS and seen by his/her students.

Section 9: Source Code

As a result of our extremely lengthy Source Code, it will not be included in this document. However, it will be present on the CD that is distributed to Dr. Lederman at the Software Engineering party on May 8th, 2006, and also available upon request.

Section 10: Sources of Information

Our information was gathered from meetings with our clients, Ms. Jami Cotler and Dr. Scott Hunter in addition to Dr. Lederman's class lectures, the Software Engineering class textbook *Software Engineering: A Practitioner's Approach* by Roger S. Pressman, and various Software Engineering teams' projects from previous years located at: <http://www.cs.siena.edu/~lederman/csis410/csis410.html>, including some of our own documents that have been made earlier in the project.

Section 11: Glossary of Terms

AGS:

Automated Grading System

Code:

A system of symbols and rules used to represent instructions to a computer.

Course Coordinator (CC):

A user in the AGS which is the only account created by the software developers. This user is responsible for creating student and instructor accounts, and adding key and template files to be used to grade the submitted student labs.

Database:

A collection of data arranged for ease and speed of search and retrieval.

Data Flow:

Depicts the movement of one to many items of data. Data can enter a system from the outside.

Data Store:

A place where data is kept while it is not actively being processed. Data can only enter a data store from a process and can only exit a data store to a process.

ERD (Entity-Relationship Diagram):

A graphical depiction of the conceptual structure of a database. It contains entities, attributes, and relationships. An attribute may be a primary or foreign key.

External Entity:

An entity that is outside the boundary of the system that is being modeled. It can either send data to the system or receive data from it. External entities are optional.

Foreign Key:

An attribute or combination of attributes that is not the primary key of the relation, but that is a primary key of another existing relation. A foreign key represents a logical connection between relations.

Gantt Chart:

A chart that depicts progress in relation to time, often used in planning and tracking a project.

GUI - Graphical User Interface:

A user interface based on graphics (icons, pictures, and menus) instead of text; uses a mouse as well as a keyboard as an input device.

Internet:

An interconnected system of networks that connects computers around the world via the TCP/IP protocol.

Key File:

This is a file added to the system by the Course Coordinator, which is used to specify what parts of the submitted student files to grade and how much each part is worth.

Lab Assignment:

The full assignment of lab included multiple files that all are put together to be one lab assignment as a portion of the final grade.

Lab Instructor:

A user of the AGS, the lab instructor account is set up by the Course Coordinator and has the ability to grade the labs submitted by the students in their lab sections, as well as view the grades of these students. The lab instructor can also override the grading done by the system and make comments on graded labs to their students.

Lab Assignment File:

One file of the lab assignment, each of which will be submitted separately by the students to make up one full lab assignment.

Lecture Instructor:

A user of the AGS, the lecture instructor account is set up by the Course Coordinator and has the ability to view the grades of all the students that are enrolled in their lecture courses.

Metrica:

A specific methodology for structuring and representing relationships in Data Flow Diagrams.

Primary Key:

An attribute or combination of attributes that is recognized as the normal way to identify entities and access records.

Process:

Signifies that something is happening to transform the data. Processes have numbers that reflect the decomposition hierarchy.

Software:

Written programs, procedures, or rules and associated documentation pertaining to the operation of a computer system and that are stored in read/write memory.

SSADM:

Structured Systems Analysis and Design Methodology

Student:

A user of the AGS, the student account is set up by the Course Coordinator and has the ability to submit labs to the system, as well as view their graded assignments.

System:

A group of independent but interrelated elements comprising a unified whole.

Template File:

This is file added to the system by the Course Coordinator, and is a correct copy of the files submitted by the students. It is used by the system to compare the student answers to the template file answers.

Section 12: Gantt Chart

