

Detailed Design

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Generation Java

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**Generation Java
Detailed Design**

Table of Contents

Section 1: Product Overview and Summary-----	4
External Design Specifications-----	4
Section 2: User displays, report formats, and user command summary-----	4
2.1: Login Page-----	4
2.2: Forgot Password-----	5
2.3: Student Home Screen-----	6
2.4: System Administrator Home Screen-----	8
2.5: Program Administrator Home Screen-----	9
2.6: Instructor Home Screen-----	10
2.7: Student Account Creation-----	11
2.8: Student Account Creation Pop-up-----	12
2.9: Created Account – System Administrator-----	13
2.10: Created User Account System Administrator-----	14
2.11: Create Question – Instructor/Program & System Administrator-----	18
2.12: Student Question/ Question Set Answer Page-----	19
2.13: Student Grade book-----	20
2.14: Administrator Grade book-----	21
2.15: Instructor Grade book-----	22
2.16: System Admin Course Management – Link to Create Course-----	23
2.17: System Administrator – Create Course-----	24
2.18: Instructor – Published Content Pool-----	25
2.19: Instructor – My Pool-----	26
2.20: Instructor – Course Pool-----	27
2.21: Instructor – Global Pool-----	28
2.22: Question Set Creation-----	29
2.23: Question Set (Adding Question)-----	30
2.24: Submitted Created Question-----	31
2.25: Question Set Publication-----	32
2.26: Editing Live Question-----	33
2.27: Editing Live Question Set-----	34
2.28: Account Management – Student-----	35
2.29: Account Management – Instructor-----	36
2.30: Account Management – Program Administrator-----	38
2.31: Account Management – System Administrator-----	39
2.32: Course Home Page – Student-----	40
2.33: Course Home Page – Instructor/ Program & System Admin-----	41
2.34: Pool Management – Program Administrator-----	42
2.35: Pool Management – System Administrator-----	43
2.36: Student Question Compile and Run-----	44
2.37: Pop-up Save Student Question-----	45
2.38: Created Course – System Administrator-----	46
2.39: Approval of Global Pool Requests – System Administrator-----	47
2.40: Approval of Course Pool Requests – Program Administrator-----	48

Section 3: Logical data stores-----	49
Section 4: Logical data dictionary-----	50
Architectural Design Specification-----	55
Section 5: Structure diagram-----	55
Section 6: Data Flow Diagrams (See attached Data Flow Diagram Document)	
Testing Requirements-----	56
Section 7: Functional Requirements Inventory-----	56
7.1: Non-Functional Requirements Inventory-----	62
Section 8: Acceptance Test (See attached Test Plan Document)	
Section 9: Unit Tests (See attached Test Plan Document)	
Section 10: Subprogram Interface Specification-----	62
Section 11: Appendix-----	63
11.1 Glossary of Terms-----	63
11.3 Packaging Specifications-----	63

Section 1: Product Overview and Summary

Students learn best through practice and application of course materials. Generation Java will provide students with the ability to practice, complete homework assignments, take quizzes and test, in an input based web application that will compile and run the student's Java code for instantaneous feedback. Instructors will be able to create question sets and allow student access as well as being able to offer more practice for students. Administrators will manage, update, and maintain this application management system.

External Design Specifications

Section 2: User displays, report formats, and user command summary

2.1: Login Page

This is the page that all users will see when first locating the website. This page is where all users will enter their username and password. If a user has not already created an account, they can click on the appropriate "New Account" link that will take them to the account creation page.

2.2: Forgot Password

When a user forgets their password they must be able to provide their user id. The system will then send an e-mail to the user's e-mail address that was given at registration with their password.

My Info: Password Retervial

To recover your password, please enter your Generation Java ID.

(Hint: Your Generation Java ID is your Siena College Email Username.)

Generation Java ID

Continue

My Info: Password Retervial

To recover your password, please enter your Generation Java ID.

(Hint: Your Generation Java ID is your Siena College Email Username.)

Generation Java ID

Incorrect ID, Please try again.

Continue

My Info: Password Retervial

To recover your password, please enter your Generation Java ID.

(Hint: Your Generation Java ID is your Siena College Email Username.)

Generation Java ID

ID not found. Check your ID and please try again.

Continue

My Info: Password Retervial

To recover your password, please enter your Generation Java ID.

(Hint: Your Generation Java ID is your Siena College Email Username.)

Generation Java ID

ID not found. Please Register your ID and try again.

Continue

2.3: Student Home Screen

After a student successfully logs in they will be redirected to their home page.

Student Welcome Aaron! **GENERATION JAVA**

Home	Assignments	Practice Problems	Gradebook	Logout
------	-------------	-------------------	-----------	--------

Your Courses

CSIS225: Object Oriented Programming & Design

Current Announcements

You have 2 **uncompleted assignments**.

[CSIS225 Homework #1](#)
[Csis225 Quiz #1](#)

Your Completed Courses

CSIS210: Data Structures
CSIS120: Introduction to Java

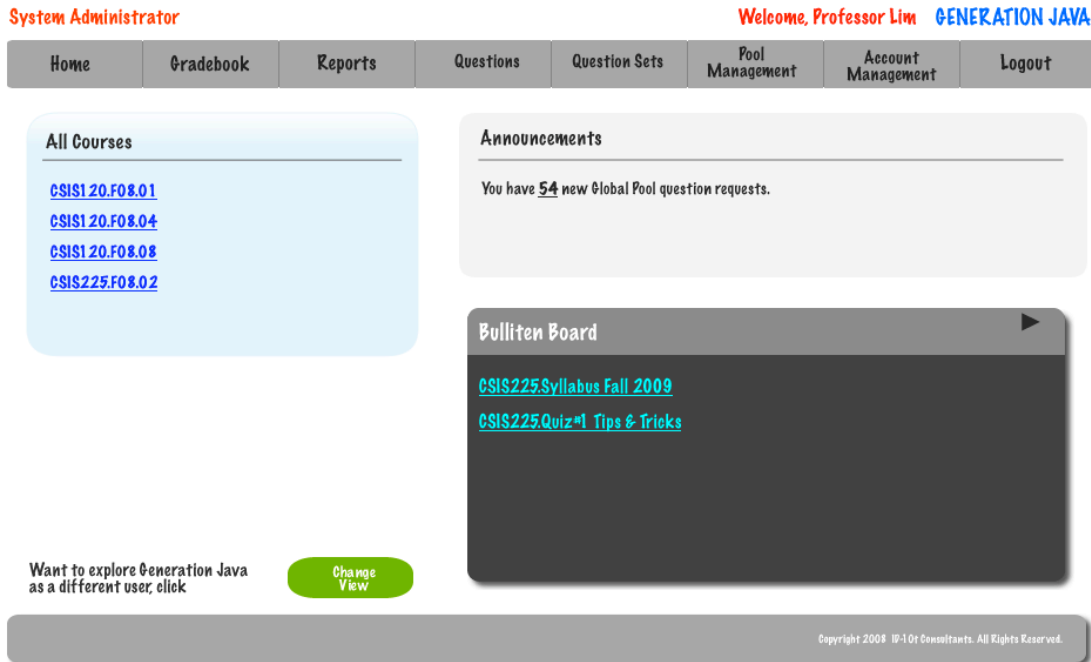
Bulliten Board

[CSIS225 Syllabus Fall 2009](#)
[CSIS225 Quiz #1 Tips & Tricks](#)

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2.4: System Administrator Home Screen

Once the System Administrator has logged in using the correct username and password they will be redirected to their Home Screen.



System Administrator Welcome, Professor Lim GENERATION JAVA

Home Gradebook Reports Questions Question Sets Pool Management Account Management Logout

All Courses

- [CSIS120.F08.01](#)
- [CSIS120.F08.04](#)
- [CSIS120.F08.08](#)
- [CSIS225.F08.02](#)

Announcements

You have **54** new Global Pool question requests.

Bulliten Board

- [CSIS225.Syllabus Fall 2009](#)
- [CSIS225.Quiz#1 Tips & Tricks](#)

Want to explore Generation Java as a different user, click [Change View](#)

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2.5: Program Administrator Home Screen

Once a Program Administrator has logged in using the correct username and password they will be redirected to their Home Screen.

The screenshot shows the Program Administrator Home Screen. At the top left, it says "Program Administrator" in pink. At the top right, it says "Welcome, Professor White" in red and "GENERATION JAVA" in blue. Below this is a navigation bar with buttons for Home, Gradebook, Reports, Question, Question Set, Pool Management, Account Management, and Logout. The main content area is divided into three sections: "Your Courses" (light blue box) with links for CSIS1 20.F08.01, CSIS1 20.F08.04, and CSIS1 20.F08.08; "Announcements" (light gray box) with the text "You have 5 new Course Pool question requests."; and "Bulletin Board" (dark gray box) with links for CSIS1 20.Syllabus Fall 2009 and CSIS1 20.F08.04.Homework*1 Tips & Tricks. At the bottom left, there is a link "Want to explore Generation Java as a different user, click" and a green "Change View" button. At the bottom right, there is a copyright notice: "Copyright 2008 IP-1 Of Consultants. All Rights Reserved."

2.6: Instructor Home Screen

Once an Instructor has logged in using the correct username and password they will be redirected to their Home Screen.

The screenshot shows the instructor's home screen. At the top left, it says "Instructor" in blue. At the top right, it says "Welcome, Professor Lim! GENERATION JAVA" in red and blue. Below this is a navigation bar with buttons for "Home", "Gradebook", "Reports", "Question", "Question Set", "Pool Management", "Account Management", and "Logout".

There are three main content areas:

- Your Courses:** A light blue box containing two course titles: "CSIS225-11: Object Oriented Programming & Design" and "CSIS225-13: Object Oriented Programming & Design".
- Announcements:** A light gray box containing the text "You have 5 submitted quizzes."
- Bulliten Board: CSIS225 All Sections:** A dark gray box containing the text "Study Guide Test #1" in blue.

At the bottom left, there is a link "Want to explore Generation Java as a different user, click" next to a green "Change View" button. At the bottom right, there is a small copyright notice: "Copyright 2008 IP-10t Consultants. All Rights Reserved."

2.7: Student Account Creation

A student must successfully fill out this screen in order to be given an account for Generation Java.

GENERATION JAVA

Create your Generation Java ID.
Complete the fields below, then click the Continue button.

Siena College Email address username (this will be your new Generation Java ID). * Password (at least 8 alphanumeric characters). * Re-type your password. *

First Name* Last Name*

* Required Field

Cancel & Exit **Continue**

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If a student is trying to register with an e-mail address that has already been used and registered they will be given an error.

GENERATION JAVA

Create your Generation Java ID.
Complete the fields below, then click the Continue button.

Siena College Email address username (this will be your new Generation Java ID). * Password (at least 8 alphanumeric characters). * Re-type your password. *

First Name* Last Name*

* Required Field

The E-mail address you entered is already registered. Please try again.

Cancel & Exit **Continue**

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If a student cannot enter the same password in both of the necessary boxes they will be given an error message.

Create your Generation Java ID.

Complete the fields below, then click the Continue button.

Siena College Email address username (this will be your new Generation Java ID). *

Password (at least 8 alphanumeric characters). *

Re-type your password. *

First Name *

Last Name *

* Required Field

The Passwords you entered do not match. Check your password and please try again.

Cancel & Exit Continue

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If a student did not complete all the necessary fields on the registration field they will be shown an error message.

Create your Generation Java ID.

Complete the fields below, then click the Continue button.

Siena College Email address username (this will be your new Generation Java ID). *

Password (at least 8 alphanumeric characters). *

Re-type your password. *

First Name *

Last Name *

* Required Field

All required fields not filed in. Please try again.

Cancel & Exit Continue

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If the system encounters an error beyond the student's control they will be shown an error message that will instruct them to contact the System Administrator.

Create your Generation Java ID.

Complete the fields below, then click the Continue button.

Siena College Email address username (this will be your new Generation Java ID). *

Password (at least 8 alphanumeric characters). *

Re-type your password. *

First Name *

Last Name *

* Required Field

System Error. Please contact the System Administrator.

Cancel & Exit

Continue

2.8: Student Account Creation Pop-up

After a student successfully registers for a Generation Java a pop-up will appear that will allow them to log into the system.

Welcome: <Generation Java ID>

You have successfully created a Generation Java ID
A confirmation email of your successful enrollment was sent to your email address on file.

Please login to continue and register for classes.

Generation Java ID

Password

Continue

If a student enters a user ID and password that don't match they will be shown an error and allowed to retry entering a user ID and password.

Welcome: <Generation Java ID> X

Please login to continue and register for classes.

Your ID and Password do not match. Please try again.

Generation Java ID

Password

Continue

2.9: Created Account – System Administrator

Once the System Administrator has successfully created a user a pop-up will appear that allows them to return to their home page or to create another user account.

Congratulations: <Sys admin Name>

You have successfully created a Generation Java ID for <Registered User>.

A confirmation email of your successful enrollment was sent to the registered user's email address on file.

[Create another Account](#)

[Return to Homepage](#)

2.10: Created User Account System Administrator

The System Administrator must complete all the of these fields in order to successfully create a user account.

System Administrator Hello, Professor Lim **GENERATION JAVA**

Home Gradebook Reports Question Question Set Pool Management **Account Management** Logout

Create a new Generation Java User Account.

Complete the fields below, then click the Continue button.

Siena College Email address username (this will be the user's Generation Java ID). *

Password (at least 8 alphanumeric characters). *

Re-type password. *

First Name *

Last Name *

Account Type (Select one) *

- Program Administrator
- Instructor
- Student

Course List (select courses to add) *

- CSIS1 20.F08.01
- CSIS1 20.F08.04
- CSIS1 20.F08.07

* Required Field

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If the passwords that the System Administrator entered do not match they will be given an error message.

System Administrator Hello, Professor Lim **GENERATION JAVA**

Home Gradebook Reports Question Question Set Pool Management **Account Management** Logout

Create a new Generation Java User Account.

Complete the fields below, then click the Continue button.

Siena College Email address username (this will be the user's Generation Java ID). *

Password (at least 8 alphanumeric characters). *

Re-type password. *

First Name *

Last Name *

Account Type (Select one) *

- Program Administrator
- Instructor
- Student

Course List (select courses to add) *

- CSIS1 20.F08.01
- CSIS1 20.F08.04
- CSIS1 20.F08.07

The Passwords you entered do not match. Please check the passwords and try again.

* Required Field

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If the System Administrator enters a user ID that has already been registered then they will be given an error message.

System Administrator Hello, Professor Lim [GENERATION JAVA](#)

Home Gradebook Reports Question Question Set Pool Management **Account Management** Logout

Create a new Generation Java User Account.

Complete the fields below, then click the Continue button.

Siena College Email address username (this will be the user's Generation Java ID). *

Password (at least 8 alphanumeric characters). *

Re-type password. *

First Name *

Last Name *

Account Type (Select one) *

- Program Administrator
- Instructor
- Student

Course List (select courses to add) *

- CSIS1 20.F08.01
- CSIS1 20.F08.04
- CSIS1 20.F08.07

The ID you entered is already registered. Please check the ID and try again. Or go to account management and manage IDs.

[Create Account](#)

* Required Field

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2.11: Create Question – Instructor/Program & System Administrator

In order for an Instructor, Program Administrator, or System Administrator to create a questions they must complete several required fields.

Hello, Professor Lim! [GENERATION JAVA](#)

Home	Gradebook	Reports	Question	Question Set	Pool Management	Account Management	Logout
----------------------	---------------------------	-------------------------	-----------------	------------------------------	---------------------------------	------------------------------------	------------------------

Create a new Question. Complete the fields below, then click the submit button to save question.

Question Title * <input type="text"/>	Method Signature * (Note: System adds open & closing curly braces) <input type="text"/>	Type (select one) * <input type="radio"/> Practice <input type="radio"/> Homework <input type="radio"/> Quiz <input type="radio"/> Test
Question * <input type="text"/> Upload file <input type="text"/> <input type="button" value="Browse"/>	Viewable Test Cases * <input type="text"/> Upload file <input type="text"/> <input type="button" value="Browse"/>	Category (select one) <input type="radio"/> Arrays <input type="radio"/> Logic <input type="radio"/> Loops <input type="radio"/> ...
Solution <input type="text"/> Upload file <input type="text"/> <input type="button" value="Browse"/>	Hidden Test Cases <input type="text"/> Upload file <input type="text"/> <input type="button" value="Browse"/>	Recursive (Select one) * <input type="radio"/> Yes <input type="radio"/> No

Hints: [Add](#) [QuestionHint](#) [Remove](#)

* Required Field

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2.12: Student Question/ Question Set Answer Page

This is the screen that students will have when they are going to answer a question.

Student Welcome, Aaron! **GENERATION JAVA**

Home Assignments Practice Problems Gradebook Manage Account Logout

1. Given 2 ints, a and b, return true if one if them is 10 or if their sum is 10.

```
public boolean makes10(int a, int b){}
```

[Link to Java 1.6 API](#)

```
public boolean makes10(int a, int b) {  
  
}  
}
```

Question Set: SampleQuestionSet #1
Question Point Value: 10 points

Input	Output	Correct
Hidden Cases		

Hints

```
makes10(9, 10) --> true  
makes10(9, 9) --> false  
makes10(1, 9) --> true
```

Save Compile / Run

Attempts Remaining: 3/3

Solution

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2.13: Student Grade book

In order for a student to view their grades or a completed assignment they must use the gradebook.

Student

Hello, Aaron! [GENERATION JAVA](#)

Home	Assignments	Practice Problems		Gradebook	Manage Account	Logout
----------------------	-----------------------------	-----------------------------------	--	---------------------------	--------------------------------	------------------------

Course: CSIS120 Object Oriented Programming & Design ↓

Date	Assignment Name	Points Received	Possible Points	Category	Weight
10/01	Lab#1	7	10	LAB	5%

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2.14: Administrator Grade book

Program Administrators are able to view a grade book for a course they are coordinating.

Program Administrator

Hello, Professor White! GENERATION JAVA

Home	Gradebook	Reports	Question	Question Set	Pool Management	Account Management	Logout
------	-----------	---------	----------	--------------	-----------------	--------------------	--------

Course: [CSIS120 Object Oriented Programming & Design](#)  -- Click on down arrow to change course.
To change table sort order, click on the underlined table field names.

<u>Student Name</u>	<u>Section Number</u>	<u>Assignment Name</u>	Points Received	Possible Points	%	Category	Weight	Assgn Average
Fox, Christine	01	Lab#1	8.5	10	85	LAB	5%	86.25%
Miller, Nick	01	Lab#1	9	10	90	LAB	5%	86.25%
Mulcahy, Kevin	08	Lab#1	8	10	80	LAB	5%	86.25%
Steans, Jordan	08	Lab#1	9	10	90	LAB	5%	86.25%


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The System Administrator is able to view the grade book for any course.

System Administrator

Hello, Professor Lim! GENERATION JAVA

Home	Gradebook	Reports	Question	Question Set	Pool Management	Account Management	Logout
------	-----------	---------	----------	--------------	-----------------	--------------------	--------

Course: [CSIS120 Object Oriented Programming & Design](#)  -- Click on down arrow to change course.
To change table sort order, click on the underlined table field names.

<u>Student Name</u>	<u>Section Number</u>	<u>Assignment Name</u>	Points Received	Possible Points	%	Category	Weight	Assgn Average
Fox, Christine	01	Lab#1	8.5	10	85	LAB	5%	86.25%
Miller, Nick	01	Lab#1	9	10	90	LAB	5%	86.25%
Mulcahy, Kevin	08	Lab#1	8	10	80	LAB	5%	86.25%
Steans, Jordan	08	Lab#1	9	10	90	LAB	5%	86.25%


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2.15: Instructor Grade book

An Instructor is able to view the grade book for any course that they are instructing and can sort the grade book by student, section, assignment, and category.

Instructor Hello, Professor White! [GENERATION JAVA](#)

Home Gradebook Reports Question Question Set Pool Management Account Management Logout

Course: [CSIS120 Object Oriented Programming & Design](#)  Click on down arrow to change course.
To change table sort order, click on the underlined table field names.

<u>Student Name</u>	<u>Section Number</u>	<u>Assignment Name</u>	Points Received	Possible Points	%	Category	Weight	Assgn Average
Fox, Christine	01	Lab#1	8.5	10	85	LAB	5%	86.25%
Miller, Nick	01	Lab#1	9	10	90	LAB	5%	86.25%
Mulcahy, Kevin	08	Lab#1	8	10	80	LAB	5%	86.25%
Steans, Jordan	08	Lab#1	9	10	90	LAB	5%	86.25%

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2.16: System Admin Course Management – Link to Create Course

The System Administrator has the ability to create a new course by entering a title, course number, section, and instructor.

System Administrator Welcome, Professor Lim [GENERATION JAVA](#)

Home Gradebook Reports Question Question Set Pool Management Account Management Logout

Course Management

Title	Number	Section	Instructor		
Intro to CS	CSIS110	01	Horowitz	Edit	Remove
Intro to Prgm	CSIS120	01	Egan	Edit	Remove
Data Structures	CSIS210	08	Flatland	Edit	Remove
Object Oriented	CSIS225	02	Lim	Edit	Remove
Data Base Mgt.	CSIS350	02	Vandenberg	Edit	Remove

Want to add a new course?

[New Course](#)

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2.17: System Administrator – Create Course

The System Administrator must enter 4 fields in order to create a course.

System Administrator Welcome, Professor Lim **GENERATION JAVA**

Home	Gradebook	Reports	Question	Question Set	Pool Management	Account Management	Logout
------	-----------	---------	----------	--------------	-----------------	--------------------	--------

Course Creation

Course Title:

Course Number:

Course Section:

Course Instructor:

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2.18: Instructor – Published Content Pool

An Instructor has a pool that contains just the questions that are currently published.

Instructor Welcome, Professor White! [GENERATION JAVA](#)

Home Gradebook Reports Question Question Set Pool Management Account Management Logout

Pool Management

Global Pool Course Pool My Pool **Published Pool**

Name	Submitted By	Type		
ForLoops1	Mrs. White	Question	Edit	Remove
WhileLoops1	Mrs. White	Question	Edit	Remove
MidtermExam1	Dr. Lim	Question Set	Edit	Remove

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2.19: Instructor – My Pool

An Instructor is able to view questions in the global and course pools as well as submit questions to be considered for them. They are able to edit and add questions to their pool as well as the published pool.

Instructor Welcome, Professor White! [GENERATION JAVA](#)

Home	Gradebook	Reports	Question	Question Set	Pool Management	Account Management	Logout
------	-----------	---------	----------	--------------	-----------------	--------------------	--------

Pool Management

Global Pool	Course Pool	My Pool	Published Pool
-------------	-------------	---------	----------------

Name	Submitted By	Type	Edit	Remove
ForLoops1	Mrs. White	Question	Edit	Remove
WhileLoops1	Mrs. White	Question	Edit	Remove
MidtermExam1	Dr. Lim	Question Set	Edit	Remove

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2.20: Instructor – Course Pool

An Instructor is able to view questions in the global and course pools as well as submit questions to be considered for them. They are able to edit and add questions to their pool as well as the published pool.

Instructor Welcome, Professor White! [GENERATION JAVA](#)

Home Gradebook Reports Question Question Set Pool Management Account Management Logout

Pool Management

Global Pool Course Pool My Pool Published Pool

Name	Submitted By	Type		
ForLoops1	Mrs. White	Question	Edit	Remove
WhileLoops1	Mrs. White	Question	Edit	Remove
MidtermExam1	Dr. Lim	Question Set	Edit	Remove

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2.21: Instructor – Global Pool

An Instructor is able to view questions in the global and course pools as well as submit questions to be considered for them. They are able to edit and add questions to their pool as well as the published pool.

Instructor Welcome, Professor White! [GENERATION JAVA](#)

Home Gradebook Reports Question Question Set Pool Management Account Management Logout

Pool Management

Global Pool Course Pool My Pool Published Pool

Name	Submitted By	Type		
ForLoops1	Mrs. White	Question	Edit	Remove
WhileLoops1	Mrs. White	Question	Edit	Remove
MidtermExam1	Dr. Lim	Question Set	Edit	Remove

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2.22: Question Set Creation

In order to create a question set the user (Instructor, Program Administrator, or System Administrator) must give the set a name and select a type for the set.

Hello, Professor Lim! [GENERATION JAVA](#)

Home	Gradebook	Reports	Question	Question Set	Pool Management	Account Management	Logout
------	-----------	---------	----------	--------------	-----------------	--------------------	--------

Create Set

Create Question Set.

Question Set Title *

Type*

Homework
Quiz
Test
Practice

* Required Field

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2.23: Question Set (Adding Question)

An Instructor, Program Administrator, or System Administrator is able to easily add an already completed question to a set.

Hello, Professor Lim! [GENERATION JAVA](#)

Home	Gradebook	Reports	Question	Question Set	Pool Management	Account Management	Logout
------	-----------	---------	----------	--------------	-----------------	--------------------	--------

Add Question(s) to Question Set.

Question Set Title *

▼
Question Set1
Question set2
example arrays set
Practie set

Add Questions to Set From *

▼
My Pool
Course Pool
Global Pool

Question Set Title *

▼
<input type="checkbox"/> Question 1 preview
<input type="checkbox"/> Question 2 preview
<input type="checkbox"/> Question 3 preview
...

Filter by Type:

<input type="checkbox"/> Arrays
<input type="checkbox"/> Logic
<input type="checkbox"/> Loops

Question Preview:

Edit Question SetAdd New QuestionAdd Questions to Set

* Required Field

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2.24: Submitted Created Question

When a user has successfully created a question a pop-up will appear on their screen allowing them to either be redirected to create another question or to be redirected to their homepage.

Congratulations: <Qst Creator Name>

You have successfully created a new question.

Create another
Question

Return to
Homepage

2.25: Question Set Publication

When an Instructor, Program Administrator, or System Administrator would like to publish a question set they must first fill out 9 required fields.

Hello, Professor Lim! [GENERATION JAVA](#)

Home	Gradebook	Reports	Question	Question Set	Pool Management	Account Management	Logout
------	-----------	---------	----------	--------------	-----------------	--------------------	--------

Question Set Publication. Publish

Question Set Title *

▼
Question Set1
Question set2
example arrays set
Practice set

Course Pool *

▼
CSIS1 10
CSIS1 20
CSIS225

Time Available *

Date Available *

Time Due *

Date Due *

Time Limit
**Leave blank for unrestricted, otherwise enter the number of hours (e.g., 1.5 mins * 0.25; 30 mins * 0.5 etc).

Number of Attempts *
(per question)

Allow Late submissions (Select one) *
**Allows late submission but marks assignment late.

Yes No

Viewable after due date (Select one) *
**Does not allow late submissions

Yes No

Cancel Publish Set

* Required Field

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2.26: Editing Live Question

An Instructor, Program Administrator, or System Administrator is able to edit a live question.

Hello, Professor Lim! [GENERATION JAVA](#)

Home	Gradebook	Reports	Question	Question Set	Pool Management	Account Management	Logout
----------------------	---------------------------	-------------------------	--------------------------	------------------------------	---------------------------------	------------------------------------	------------------------

Edit Live Question.

Question Title <input type="text" value="BooleanMakes10"/>	Method Signature * (Note: System adds open & closing curly braces) <input type="text" value="boolean makes10(int a, int b)"/>	Recursive (Select one) * <input checked="" type="radio"/> Yes <input type="radio"/> No
Question * <input type="text" value="Given 2 ints, a and b, return true if one if them is 10 or if their sum is 10."/> <input type="text" value=""/> Upload file <input type="text"/> <input type="button" value="Browse"/>	Viewable Test Cases * <input type="text" value="makes10(5, 5) makes10(10, 1) makes10(12, 8) makes10(7, 3)"/> Upload file <input type="text"/> <input type="button" value="Browse"/>	Hints: Add QuestionHint Remove
Solution <input type="text"/> Upload file <input type="text"/> <input type="button" value="Browse"/>	Hidden Test Cases <input type="text"/> Upload file <input type="text"/> <input type="button" value="Browse"/>	<input type="button" value="Cancel"/> <input type="button" value="Submit"/>

* Required Field

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2.27: Editing Live Question Set

An Instructor, Program Administrator, or System Administrator is able to edit a live question set. They are able to edit a question in the set, the date due, or the time limit.

Hello, Professor Lim! [GENERATION JAVA](#)

Home	Gradebook	Reports	Question	Question Set	Pool Management	Account Management	Logout
------	-----------	---------	----------	---------------------	-----------------	--------------------	--------

Edit Live Set

Edit Live Question Set.

Editing Question Set *

Question Set1
Question set2
example arrays set
Practice set

Date Due*

Time Limit

**Leave blank for unrestricted, otherwise enter the number of hours.

Question	Point Value	Preview	Edit	Remove
LoopQuestion1	<input type="text"/>			
ForEachQuestion2	<input type="text"/>			
WhileLoop2	<input type="text"/>			

[Save Offline](#)
[Update](#)

* Required Field

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2.28: Account Management - Student

A student is able to change their password by utilizing the account management section of the system.

The screenshot displays the user interface for a student's account management. At the top left, the word "Student" is written in green. At the top right, a welcome message reads "Welcome, Christine! GENERATION JAVA" in red and blue. Below this is a horizontal navigation bar with buttons for "Home", "Assignments", "Practice Problems", "Gradebook", "Manage Account", and "Logout". The "Manage Account" button is highlighted, and a sub-menu is open showing a "Change Password" option. The "Change Password" form is centered on the page and contains the following elements:

- Title: "Account Management (* Required Field)"
- Form fields:
 - "Old Password: *" with a text input field.
 - "New Password: *" with a text input field.
 - "Re-Enter New Password: *" with a text input field.
- Buttons:
 - A red button labeled "Cancel & Return to Homepage".
 - A green button labeled "Save".

At the bottom of the page, a grey footer bar contains the text "Copyright 2009 ID-10t Consultants. All Rights Reserved."

2.29: Account Management – Instructor

An Instructor is able to change their password by utilizing the account management section of the system.

Instructor Welcome, Professor Lim! [GENERATION JAVA](#)

Home	Gradebook	Reports	Question	Question Set	Pool Management	Account Management	Logout
------	-----------	---------	----------	--------------	-----------------	--------------------	--------

Change Password

Account Management (* Required Field)

Old Password: *

New Password: *

Re-Enter New Password: *

Cancel & Return to Homepage Save

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2.30: Account Management – Program Administrator

If a Program Administrator wishes to change their password they must use Account Management.

Program Administrator Welcome, Professor White! GENERATION JAVA

Home	Gradebook	Reports	Question	Question Set	Pool Management	Account Management	Logout
------	-----------	---------	----------	--------------	-----------------	--------------------	--------

Change Password

Account Management (* Required Field)

Old Password: *

New Password: *

Re-Enter New Password: *

Cancel & Return to Homepage Save

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When changing a password the user must be able to identify their old password or they will be given an error.

Program Administrator Welcome, Professor White! GENERATION JAVA

Home	Gradebook	Reports	Question	Question Set	Pool Management	Account Management	Logout
------	-----------	---------	----------	--------------	-----------------	--------------------	--------

Change Password

Account Management (* Required Field)

Old Password: *

New Password: *

Re-Enter New Password: *

**Your Old Password is incorrect. Check your old password and try again.

Cancel & Return to Homepage Save

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When creating a new Password a user must be able to type the password twice so the system can verify that the user did not have a typo in their first attempt.

Program Administrator Welcome, Professor White! [GENERATION JAVA](#)

Home	Gradebook	Reports	Question	Question Set	Pool Management	Account Management	Logout
------	-----------	---------	----------	--------------	-----------------	--------------------	--------

Change Password

Account Management (* Required Field)

Old Password: *

New Password: *

Re-Enter New Password: *

**Your New Passwords do not match. Please try again.

Cancel & Return to Homepage Save

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To enhance the security of the system a password must meet certain parameters.

Program Administrator Welcome, Professor White! [GENERATION JAVA](#)

Home	Gradebook	Reports	Question	Question Set	Pool Management	Account Management	Logout
------	-----------	---------	----------	--------------	-----------------	--------------------	--------

Change Password

Account Management (* Required Field)

Old Password: *

New Password: *

Re-Enter New Password: *

**Your new password does not meet the parameters of a password. Please try again.

Cancel & Return to Homepage Save

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2.31: Account Management – System Administrator

The System Administrator is able to delete users as well as reset their passwords if they are incurring difficulties doing it on their own.

System Administrator Welcome, Professor Lim! [GENERATION JAVA](#)

Home	Gradebook	Reports	Question	Question Set	Pool Management	Account Management	Logout
------	-----------	---------	----------	--------------	-----------------	--------------------	--------

Account Management (* Required Field)

Generation Java ID*

ea21fox
lim
na13mill
white

New Password: *

Re-Enter New Password: *

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2.32: Course Home Page - Student

When a Student selects a course they will be redirected to the course home page.

Student Welcome Aaron! [GENERATION JAVA](#)

Home Assignments Practice Problems Gradebook Logout

Your Courses

CSIS225: Object Oriented Programming & Design

Your Completed Courses

CSIS210: Data Structures
CSIS120: Introduction to Java

Current Announcements

You have 2 uncompleted assignments.
[CSIS225 Homework #1](#)
[CSIS225 Quiz #1](#)

Bulliten Board

[CSIS225 Syllabus Fall 2009](#)
[CSIS225 Quiz #1 Tips & Tricks](#)

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2.33: Course Home Page – Instructor/ Program & System Admins

When a Instructor/Program Administrator or System Administrator chooses a course they will be redirected to the course home page.

Welcome Professor Lim! [GENERATION JAVA](#)

Home	Reports	Gradebook	Question	Question Set	Pool Management	Account Management	Logout
------	---------	-----------	----------	--------------	-----------------	--------------------	--------

Course: [CSIS225.Object Oriented](#)

CSIS225: Object Oriented Programming & Design

Current Announcements

You have 2 uncompleted assignments.

[CSIS225.Homework #1](#)

[CSIS225.Quiz#1](#)

Course Information

Instructor: Dr. Lim
E-mail address: llm@siena.edu

Bulliten Board

[CSIS225.Syllabus Fall 2009](#)

[CSIS225.Quiz#1 Tips & Tricks](#)

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2.34: Pool Management – Program Administrator

A Program Administrator has access to their pool, the course pool, and the global pool.

Program Administrator Welcome, Professor White! [GENERATION JAVA](#)

Home Gradebook Reports Question Question Set Pool Management Account Management Logout

Pool Management

Global Pool Course Pool My Pool

Name	Submitted By	Type		
ForLoops1	Mrs. White	Question	Edit	Remove
WhileLoops1	Mrs. White	Question	Edit	Remove
MidtermExam1	Dr. Lim	Question Set	Edit	Remove

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2.35: Pool Management – System Administrator

The System Administrator has access to their pool, all course pools, and the global pool.

System Administrator Welcome, Professor Lim [GENERATION JAVA](#)

Home Gradebook Reports Question Question Set Pool Management Account Management Logout

Pool Management

Global Pool Course Pool My Pool

Name	Submitted By	Type		
ForLoops1	Mrs. White	Question	Edit	Remove
WhileLoops1	Mrs. White	Question	Edit	Remove
MidtermExam1	Dr. Lim	Question Set	Edit	Remove

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2.36: Student Question Compile and Run

After a student feels their code is correct they are able to have the system compile and then run it. If the code compiles then the student will receive feedback based on viewable and hidden test cases.

Student Welcome, Aaron! [GENERATION JAVA](#)

Home Assignments Practice Problems Gradebook Manage Account Logout

1. Given 2 ints, a and b, return true if one if them is 10 or if their sum is 10.

```
public boolean makes10(int a, int b){}
```

[Link to Java 1.6 API](#)

```
public boolean makes10(int a, int b) {
    if ((a == 10) || (b == 10) || ((a + b) == 10)) return true;
    else return false;
}
```

Hints

```
makes10(9, 10) --> true
makes10(9, 9) --> false
makes10(1, 9) --> true
```

Save **Compile / Run**

Saving, Compiling, & Running...

Attempts Remaining: 2/3

Question Set: SampleQuestionSet #1
Question Point Value: 10 points

Input	Output	Correct
Hidden Cases		

Solution

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2.37: Pop-up Save Student Question

Once a student saves a question a popup will appear to confirm the success of the saving and allow the student to either navigate back to the question or to their home page.

Congratulations: <Student Name>

You have successfully saved question <Question No. / Name>.

**Go Back
To Question**

**Return to
Homepage**

2.38: Created Course – System Administrator – Popup

Once the System Administrator successfully creates a course a popup will appear to confirm the creation of the course and allows the System Administrator to navigate back to creating another course or to their homepage.

Congratulations: <Sys Admin Name>

You have successfully created a new course.

Create another
Course

Return to
Homepage

2.39: Approval of Global Pool Requests – System Administrator

Before a question can be admitted into the Global Pool the System Administrator must first approve it.

System Administrator Welcome, Professor Lim [GENERATION JAVA](#)

Home Gradebook Reports Question Question Set Pool Management Account Management Logout

Global Pool Requests

Name	Submitted By	Type	Date	View	Accept	Deny
ForLoops1	Mrs. White	Question	1/1/09			
WhileLoops1	Mrs. White	Question	1/1/09			
MidtermExam1	Dr. Lim	Set	1/1/09			

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2.40: Approval of Course Pool Requests – Program Administrator

Before a question can be admitted into the Course Pool the Program Administrator must first approve it.

Program Administrator Welcome, Professor White! [GENERATION JAVA](#)

Home Gradebook Reports Question Question Set Pool Management Account Management Logout

Course Pool Requests

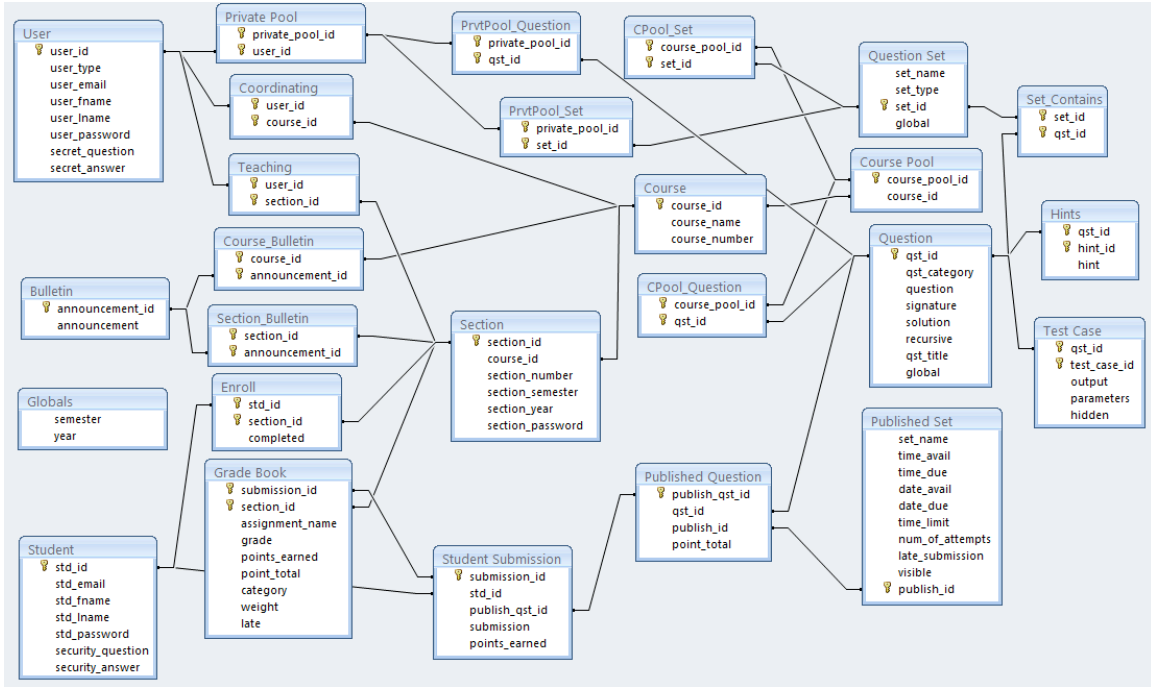
Course Pool Requests: [CSIS110](#)

Name	Submitted By	Type	Date	View	Accept	Deny
ForEachLoops1	Mrs. White	Question	01/02/09			
WhileLoops1	Dr. Egan	Question	01/01/09			
MidtermExam1	Dr. Lim	Set	01/01/09			

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Section 3: Logical data stores

The following information presents a detailed description of the data stored in the Generation Java database. The data is presented in a layout of the table structure.



Section 4: Logical data dictionary

Field Name	Column Name	Data Type	Description	Notes	Validation
Section	section_id	AUTONUMBER	section id number	Primary Key	
Section	section_number	CHAR(2)	Section Number		Date: 03/02/
Section	course_id	CHAR(7)	Course id number	Foreign Key referencing course_id from Course	AlphaNumeric
Section	std_id	VARCHAR(8)	Siena College network identifier	Primary Key	AlphaNumeric
Section	section_semester	VARCHAR(10)	begin the section first & middle initial - the day of the month year were both (two digits)	Varations/Exceptions: -If you have no middle initial, just skip it -if you have an apostrophe in your name (e.g., O'Brien), leave it out -if your last name is less than four letters, write what you have	
Section	section_year	NUMBER	the first four letters of section name	Foreign Key referencing user_id from Users	AlphaNumeric
Section	section_password	VARCHAR(10)	password for instructor teaching the section	PK	
Section	user_id	VARCHAR(8)	instructor teaching the section	Foreign Key referencing user_id from Users	AlphaNumeric
Section	std_email	VARCHAR(30)	student's e-mail	PK	
Section	section_id	AUTONUMBER	address and section being taught	Foreign Key referencing section_id from Section	
Section	std_fname	VARCHAR(20)	student's first name	Foreign Key referencing user_id from Users	AlphaNumeric
Section	user_id	VARCHAR(8)	coordinating program administrator	PK	AlphaNumeric
Section	std_lname	VARCHAR(20)	student's last name	Foreign Key referencing user_id from Users	
Section	std_password	VARCHAR(15)	student's password coordinated	PK	AlphaNumeric
Section	secret_question	VARCHAR(128)	student's secret	Foreign Key referencing course_id from Course	
Section	std_id	VARCHAR(8)	student enrolled in the section	PK	AlphaNumeric
Section	secret_answer	VARCHAR(30)	student's answer to secret question	Foreign Key referencing std_id from Student	
Section	section_id	AUTONUMBER	course and section users identification	PK	
Section	user_id	AUTONUMBER	students are enrolled number	Foreign Key referencing section_id from Section	
Section	is_in_pool	BOOL	type of user is compelled, false if not	Types of users are: -System Administrator -Program Administrator -Instructor	
Section	set_name	VARCHAR(20)	question set name		
Section	user_email	VARCHAR(30)	question set type	Types available: -Test -Quiz -Homework -Practice	
Section	user_fname	VARCHAR(20)	user's first name		
Section	user_lname	VARCHAR(20)	user's last name		
Section	set_id	AUTONUMBER	question set id	Primary Key	
Section	user_password	VARCHAR(15)	user's password		AlphaNumeric
Section	global	BOOL	true if in global pool, false if not		
Section	secret_question	VARCHAR(128)	user's secret question		
Section	set_name	VARCHAR(20)	question set name		
Section	secret_answer	VARCHAR(30)	user's answer to secret question		
Section	time_avail	TIME	the time the question set becomes available	Chosen at publication of Primary Key	
Section	course_id	AUTONUMBER	course id number	Primary Key	
Section	time_due	TIME	the time the question set's name becomes unavailable	Chosen at publication of the question set	
Section	course_name	VARCHAR(30)	course name	Example: Intro to Computer Science	
Section	date_avail	DATE	the date the question set becomes available	Chosen at publication of the question set	
Section	course_number	CHAR(7)	course number	Example: CSIS110	AlphaNumeric
Section	date_due	DATE	the date the question set is due or becomes	Chosen at publication of the question set	

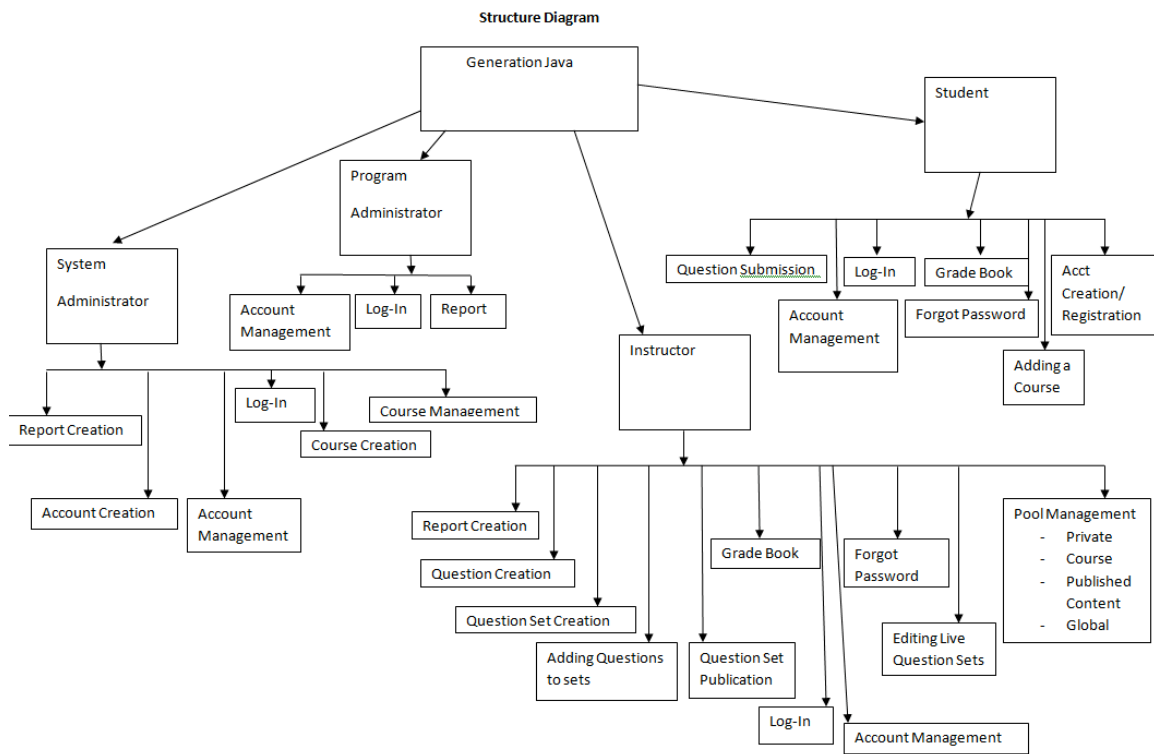
blished_set	date_case_id	AUTONUMBER	test case id number set is due or becomes unavailable	Primary Key publication of the question set
blished_set	output_time_limit	TEXT TIME	test case output how long a user has to submit the question	Chosen at publication of the question set. This is an optional field and can be left empty
blished_set	parameters	TEXT	test case parameters started answering the question set	Chosen at publication of the question set
blished_set	hidden_num_of_attempts	YES/NO NUMBER	whether the test case is hidden or not attempts a user has	Chosen at publication of the question set
blished_set	set_id	AUTONUMBER	question set holding	PK
blished_set	late_submission	YES/NO	whether the question set accepts	Foreign Key referencing the Question Set
blished_set	qst_id	AUTONUMBER	question id number	No will be entered into this field.
blished_set	visible	YES/NO	whether a published question set is visible to users after the date and time due	Chosen at publication of the question set. Yes or No will be entered into this field.
blished_set	private_pool_id	AUTONUMBER	private pool id number	Primary Key
blished_set	pool_id	AUTONUMBER	published the private set belongs to	PK Foreign Key referencing user_id from Users
blished_question	publish_qst_id	AUTONUMBER	published question id number	Primary Key
blished_question	course_pool_id	AUTONUMBER	course pool id number	Primary Key
blished_question	qst_id	AUTONUMBER	question in the published question set	Foreign Key referencing set_id from Question
blished_question	course_id	AUTONUMBER	published question set belongs to	Foreign Key referencing course_id from Course
blished_question	publish_id	AUTONUMBER	published set the question belongs to	Foreign Key referencing publish_id from Published
blished_question	private_pool_id	AUTONUMBER	private pool holding the question	Foreign Key referencing private_pool_id from Private Pool
blished_question	point_total	NUMBER	total points a student can receive on a question	
blished_question	qst_id	AUTONUMBER	question in the private pool	PK Foreign Key referencing qst_id from Question
blished_question	private_pool_id	AUTONUMBER	private pool holding the question	PK Foreign Key referencing private_pool_id from Private Pool
blished_question	qst_category	VARCHAR(15)	question category	
blished_question	set_id	AUTONUMBER	question set in the private pool	PK Foreign Key referencing set_id from Question Set
blished_question	signature	TEXT	question signature holding the question	PK Foreign Key referencing course_pool_id from Course Pool
blished_question	solution	TEXT	question solution	
blished_question	qst_id	AUTONUMBER	question in the course pool	PK Foreign Key referencing qst_id from Question
blished_question	recursive	YES/NO	whether the question is recursive or not	
blished_question	global_course_pool_id	BOOLEAN AUTONUMBER	true if in global pool, false if not the question set	PK Foreign Key referencing course_pool_id from Course Pool
blished_question	qst_id	AUTONUMBER	question the hint belongs to	PK Foreign Key referencing qst_id from Question
blished_question	set_id	AUTONUMBER	question in the course pool	PK Foreign Key referencing set_id from Question Set
blished_question	hint_id	AUTONUMBER	hint id number	Primary Key
blished_question	announcement_id	AUTONUMBER	announcement id number	Primary Key
blished_question	announcement	TEXT	announcement text belongs to	PK Foreign Key referencing qst_id from Question

course_bulletin	course_id	AUTONUMBER	course the bulletin belongs to	PK Foreign Key referencing course_id from Course	
course_bulletin	announcement_id	AUTONUMBER	announcement on the course bulletin	PK Foreign Key referencing announcement_id from Bulletin	
section_bulletin	section_id	AUTONUMBER	section the bulletin belongs to	PK Foreign Key referencing section_id from Section	
section_bulletin	announcement_id	AUTONUMBER	announcement on the section bulletin	PK Foreign Key referencing announcement_id from Bulletin	
student_gradebook	submission_id	AUTONUMBER	student grade book	PK Foreign Key referencing submission_id from Student_Submission	
student_gradebook	section_id	AUTONUMBER	section the student receives a grade in	PK Foreign Key referencing section_id from Section	
student_gradebook	assignment_name	VARCHAR(8)	name of assignment the student was graded on		
student_gradebook	grade	PERCENT	grade received on an assignment		
student_gradebook	points_earned	NUMBER	points earned out of the total points		
student_gradebook	point_total	NUMBER	total points a student can receive on an assignment		
student_gradebook	category	VARCHAR(15)	category of the assignment		
student_gradebook	weight	PERCENT	weight of the assignment		
student_gradebook	late	YES/NO	whether the assignment was submitted late		
student_submission	submission_id	AUTONUMBER	student submission id number	Primary Key	
student_submission	std_id	VARCHAR(8)	student that answered the question	Foreign Key referencing std_id from Student	
student_submission	publish_qst_id	AUTONUMBER	published question that is being answered	Foreign Key referencing publish_qst_id from Published Question	
student_submission	submission	TEXT	question answer text		
student_submission	points_earned	NUMBER	number of points earned for the student on the question		
system_globals	semester	VARCHAR(15)	current system semester		
system_globals	year	NUMBER	current system year		

Architectural Design Specification

Section 5: Structure diagram

Structure Diagram - The Structure Diagram is used to provide a road map of how the application is built by using the data flow diagram as a template.



Section 6: Data Flow Diagrams

See attached Data Flow Diagram Document.

Testing Requirements

Section 7: Functional Requirements Inventory

Functional Requirements Inventory

The following list outlines the required functionality to be included in the final solution. The requirements are listed according to user case and then by screens the user will view.

Requirements Inventory

Functional Requirements

Requirements grouped according to Use Case.

System Administrator:

There is only one System Administrator.

Once logged in, a System Administrator has three views available:

- Student
- Instructor
- Administrator

The System Administrator can perform different tasks based on which view is currently be used:

Student View

- Registration
 - The System Administrator views the system as a Student that is registered in all possible courses.
 - The System Administrator is not seen as registered for any course by any user.
 - The System Administrator does not need to log out to switch between courses.
- Questions/Question Sets
 - The System Administrator is able to attempt any question set, including all homework, quiz, test, and practice sets for any section of any course by having the same functionality a student would have in attempting a question set.
 - The System Administrator is able to save code to a database.
 - Once code is compiled and executed, the System Administrator will receive feedback on it.
 - The feedback received by the System Administrator is identical to that of a Student; however, it is not viewable by any Instructor.

- The System Administrator's grades are not counted in any reports, including reports run by an Administrator.
- The System Administrator should be aware when the maximum number of attempts (if specified) has been reached on a question, but should not be restricted by it as a Student would be.
- The System Administrator has the ability to click any links (if provided and enabled) on any question.
- The System Administrator can view all files posted by all Instructors.

Instructor View

- Registration
 - The System Administrator views the system as an Instructor that is instructing all possible courses.
 - The System Administrator is not seen as an Instructor of any course by any user.
 - The System Administrator does not need to log out to switch between courses.
- Questions/Question Sets
 - The System Administrator can create, edit, delete, and distribute all questions and question sets.
 - The System Administrator can set a time and date for any question set to become available.
 - The System Administrator can set a time and date for any questions set to be due.
 - The System Administrator can assign point totals to any question set.
- Instructor Privileges
 - The System Administrator can see all Students' last submissions and submission information for every (attempted) question in every question set.
 - The System Administrator can see all Students' statistics (including login information) and all statistics for every question in every question set.
 - Statistics will be provided in a report that can be requested by the System Administrator.

Administrator View

- The System Administrator can create, edit, and delete the following types of accounts:
 - Program Administrator
 - Instructor
 - Student
- Editing an account consist of changing a user's account type, e-mail, password and courses taught or enrolled in.

- The System Administrator can add questions/question sets to the global pool.
- The System Administrator may logout in any view.

Program Administrator:

A Program Administrator coordinates one more sections/courses.

There may be multiple Program Administrators.

Program Administrators do not register.

A Program Administrator's account is created by the System Administrator.

Once logged in, a System Administrator has three views available:

- Student
- Instructor
- Administrator

A Program Administrator can perform different tasks based on which view is currently be used:

Student View

- Registration
 - A Program Administrator views the system as a Student that is registered in all courses specified by the System Administrator.
 - A Program Administrator is not seen as registered for any course by any user except by the System Administrator.
 - A Program Administrator does not need to log out to switch between courses.
- Questions/Question Sets
 - A Program Administrator is able to attempt any of the question sets specified by the System Administrator, including homework, quiz, test, and practice sets.
 - A Program Administrator is able to save code to a database.
 - Once code is compiled and executed, A Program Administrator will receive feedback on it.
 - The feedback received by a Program Administrator is identical to that of a Student; however, it cannot be viewed by any Instructor.
 - A Program Administrator's grades are not counted in any reports, including reports run by an Administrator.
 - A Program Administrator should be aware when the maximum number of attempts (if specified) has been reached on a question, but should not be restricted by it as a Student would be.
 - A Program Administrator has the ability to click any links (if provided and enabled) on any question specified by the System Administrator.
 - A Program Administrator can view all files posted by Instructors specified by the System Administrator.

Instructor View

- Registration
 - A Program Administrator views the system as an Instructor that is instructing all courses specified by the System Administrator.
 - A Program Administrator is not seen as an Instructor of any course by any user.
 - A Program Administrator does not need to log out to switch between courses.
- Questions/Question Sets
 - A Program Administrator can create, edit, delete, and distribute course-specific questions and question sets.
 - A Program Administrator can set a time and date for any question set specified by the System Administrator to become available.
 - A Program Administrator can set a time and date for any questions set specified by the System Administrator to be due.
 - A Program Administrator can assign point totals to any question set specified by the System Administrator.
- Instructor Privileges
 - A Program Administrator can see all Students' (specified by the System Administrator) last submissions and submission information for every (attempted) question in every question set.
 - A Program Administrator can see all Students' (specified by the System Administrator) statistics (including login information) and all statistics for every question in every question set (also specified by the System Administrator).

Administrator View

- A Program Administrator can create, edit, and delete the following types of accounts:
 - Instructor
 - Student
- The Program Administrator can add question/question sets to any of the course-specific pools specified by the System Administrator.
- The Program Administrator may logout in any view.

Instructor:

An Instructor does not register.

An Instructor's account is created by a Program Administrator or the System Administrator.

Once logged in, an Instructor has two views available:

- Student
- Instructor

An Instructor can perform different tasks based on which view is currently be used:

Student View

- Registration
 - An Instructor views the system as a Student that is registered in all courses specified by the Program Administrator.
 - An Instructor is not seen as registered for any course by any user.
 - An Instructor does not need to log out to switch between courses.
- Questions/Question Sets
 - An Instructor is able to attempt any of the question sets specified by the Program Administrator, including homework, quiz, test, and practice sets.
 - An Instructor is able to save code to a database.
 - Once code is compiled and executed, an Instructor will receive feedback on it.
 - The feedback received by an Instructor is identical to that of a Student. No one else can view this feedback.
 - An Instructor's grades are not counted in any reports, even reports run by an Administrator.
 - An Instructor should be aware when the maximum number of attempts (if specified) has been reached on a question, but should not be restricted by it as a Student would be.
 - An Instructor has the ability to click any links (if provided and enabled) on any question specified by the Program Administrator.
 - An Instructor can view all files posted by themselves or other Instructors specified by the Program Administrator.

Instructor View

- Registration
 - An Instructor can view all courses specified by a Program Administrator.
 - An Instructor is seen as the Instructor for all courses specified by the Program Administrator.

- An Instructor does not need to log out to switch between courses.
- If an Instructor wishes to teach a new course, the new course may be added by inputting the Course ID into the appropriate location. A Course ID is provided by the Program Administrator or System Administrator.
- Questions/Question Sets
 - An Instructor has the ability to create, edit, and delete java questions in the Instructor's own private pool.
 - An Instructor can upload a question or enter it into a text box.
 - An Instructor may provide links to aid a Student.
 - An Instructor has the ability to create, edit and delete question sets in the Instructor's own private pool.
 - An Instructor can use questions from the Instructor's private pool, the course-specific pool, or the global pool when creating question sets.
 - When creating a question set, an Instructor can set point totals and a maximum number of attempts allowed for each question.
 - An Instructor can set a time and date for a question set to become available and unavailable.
 - If an Instructor wishes to add a question or question set to the course-specific pool, it must be submitted to the Program Administrator.
 - If an Instructor wishes to add a question or question set to global pool, it must be submitted to the System Administrator.
- Instructor Privileges
 - An Instructor can see all Students' (registered in the Instructor's course) last submissions and submission information for every (attempted) question in every question set.
 - An Instructor can see all Students' (registered in the Instructor's course) statistics (including login information) and all statistics for every question in every question set (also in the Instructor's course).
 - These statistics (which include grade information) can be generated into reports and exported to a tab delimited or .pdf file.
 - An Instructor may edit a Student's grade as seen fit.
 - An Instructor may deny a student access to a course.
 - An Instructor may post files that can be viewed by Students in the Instructor's course.

An Instructor can log out in either view.

Student:

A Student has only one view.

- Registration

- A Student must register in a specific course by entering a Course ID in the appropriate location.
- A Course ID is provided by the Instructor of that course.
- A Student may be registered in multiple courses under the same username and password.
- A Student does not need to log out in order to change which course is currently being worked in.
- Question Sets
 - A Student has the ability to view and attempt any question set provided by the Instructor.
 - When a Student submits code, feedback is returned indicating the code's degree of correctness.
 - A Student can retry a question until the number of attempts (if specified) has run out.
 - A Student may see only their own grades and statistics.
- Additional Privileges/Restrictions
 - A Student may view any link or file provided by the Instructor (if enabled).
 - A Student may not click out of the testing window during a test or the test will be terminated.
 - A Student may log out as desired.

Non-Functional Requirements Inventory

- The system should be quick and smooth, using fast servers and databases.
- The system should also be aesthetically pleasing.
- The system should be user-friendly.

Section 8: Acceptance Test

See attached Test Plan Document.

Section 9: Unit Tests

See attached Test Plan Document.

Section 10: Subprogram Interface Specifications

Generation Java is comprised of four modules (users) which are the Student, Instructor, Program Administrator, and System Administrator. These users are independent of one another and this is represented in the database but, the users also share some data in the database. Each user is allowed to perform specific tasks that will allow the system to perform its desired functionality.

Section 11: Appendix

11.1 Glossary of Terms

CSS – Cascading Style Sheets – These are used to describe a specific style for a web page or set of pages, a website.

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

Data Flow Diagram – A representation of the functional decomposition of a system.

Gantt Chart - A chart that depicts progress of jobs in relation to time. It is often used in planning and tracking a project.

Hypertext Markup Language (HTML) – Predominant markup language used for the creation of web pages.

Internet - A vast computer network linking smaller computer networks worldwide. The Internet includes commercial, educational, governmental, and other networks, all of which use the same set of communications protocols.

Internet Explorer(IE) – Microsoft based program used for browsing the Internet.

Linear Sequential Model / Classic Waterfall Model – A systematic, sequential approach to software development that begins at the system level and progresses through analysis, design, coding, testing, and support.

MySQL – A Multithreaded, multi-user Relational Database Management System.

OS X - The latest operating system for Macintosh computers, based on the Linux kernel but with a more user-friendly graphic interface. It includes networking capabilities.

PHP – PHP Hypertext Preprocessor – An open source (free) programming language that is used for dynamic pages and is a high-level scripting language.

XHTML – Extensible HyperText Markup Language – has same capabilities of HTML but is more restricted to allow for conformity among multiple platforms.

11.2 Packaging Specifications

ID-10t Consultants will install all the necessary files of Generation java on Oraserve. A CD containing a full copy of ID-10t's website including all folders, files, images, etc., as well as a full copy of all files that comprise Generation Java.