J.O.L.T.

Java.Online.Learning.Tutor

Preliminary Design Presentation

Client Dr. Darren Lim

Preliminary Design Presentation

Welcome

Client:
Dr. Darren Lim
Assistant Professor
Siena College

Instructor:
Dr. Timoth C. Lederman
Our Professor
Siena College

Special Guests

The Team

- Lawrence Gregory - Team Leader
- Erik Stegmann - Lead Graphics and Interfaces Designer
- Christopher Hughto - Webmaster
- Jedidiah Turnbull - Systems Administrator
- Connor Vander Bogart - Organizational Information Manager

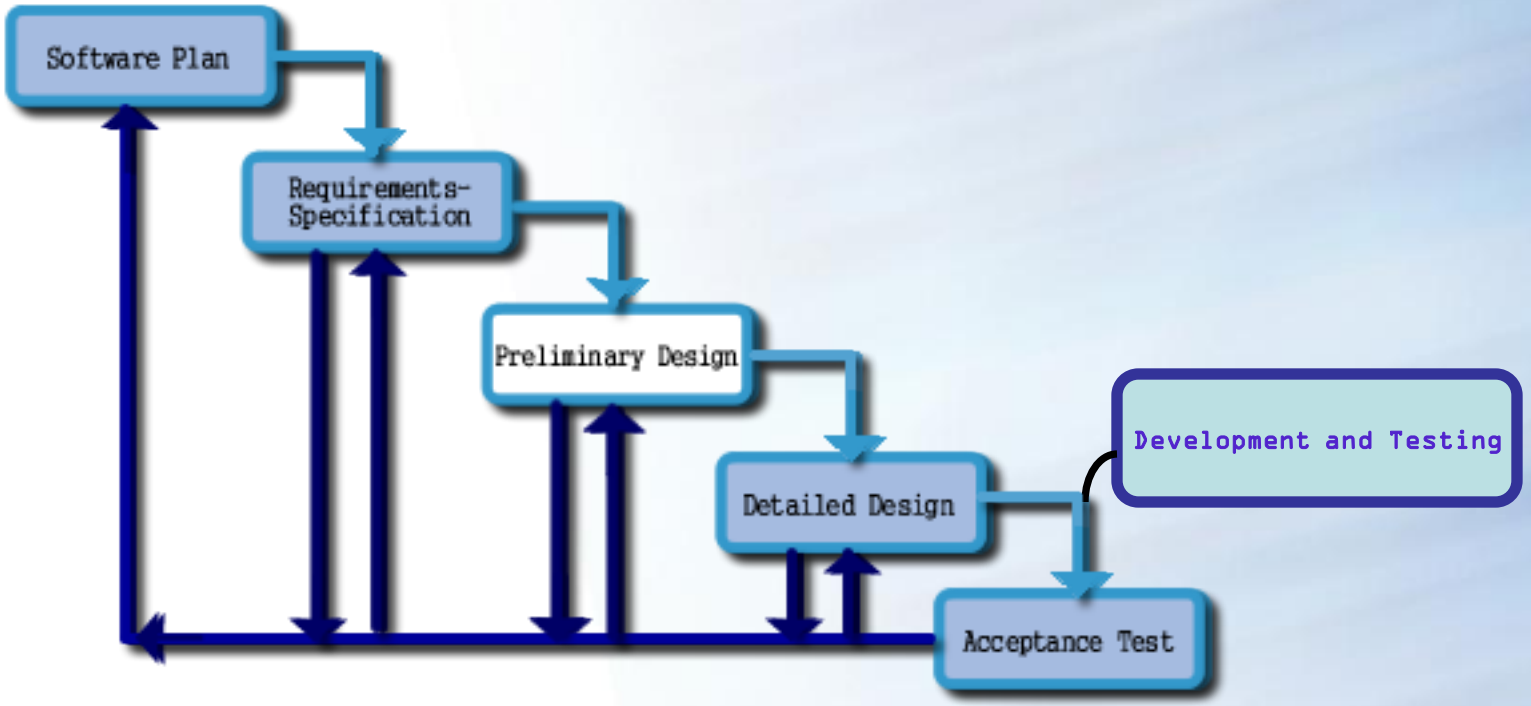
Agenda

- Team Introduction
- Restatement of Problem
- Project Progression
- User Case Narratives
- Data Flow Diagrams
- Requirements Inventory
- Data Design and Dictionary
- Testing
- Student Screens
- Faculty Screens
- Course Coordinator Screens
- Administrator Screens
- What's Next?
- Questions

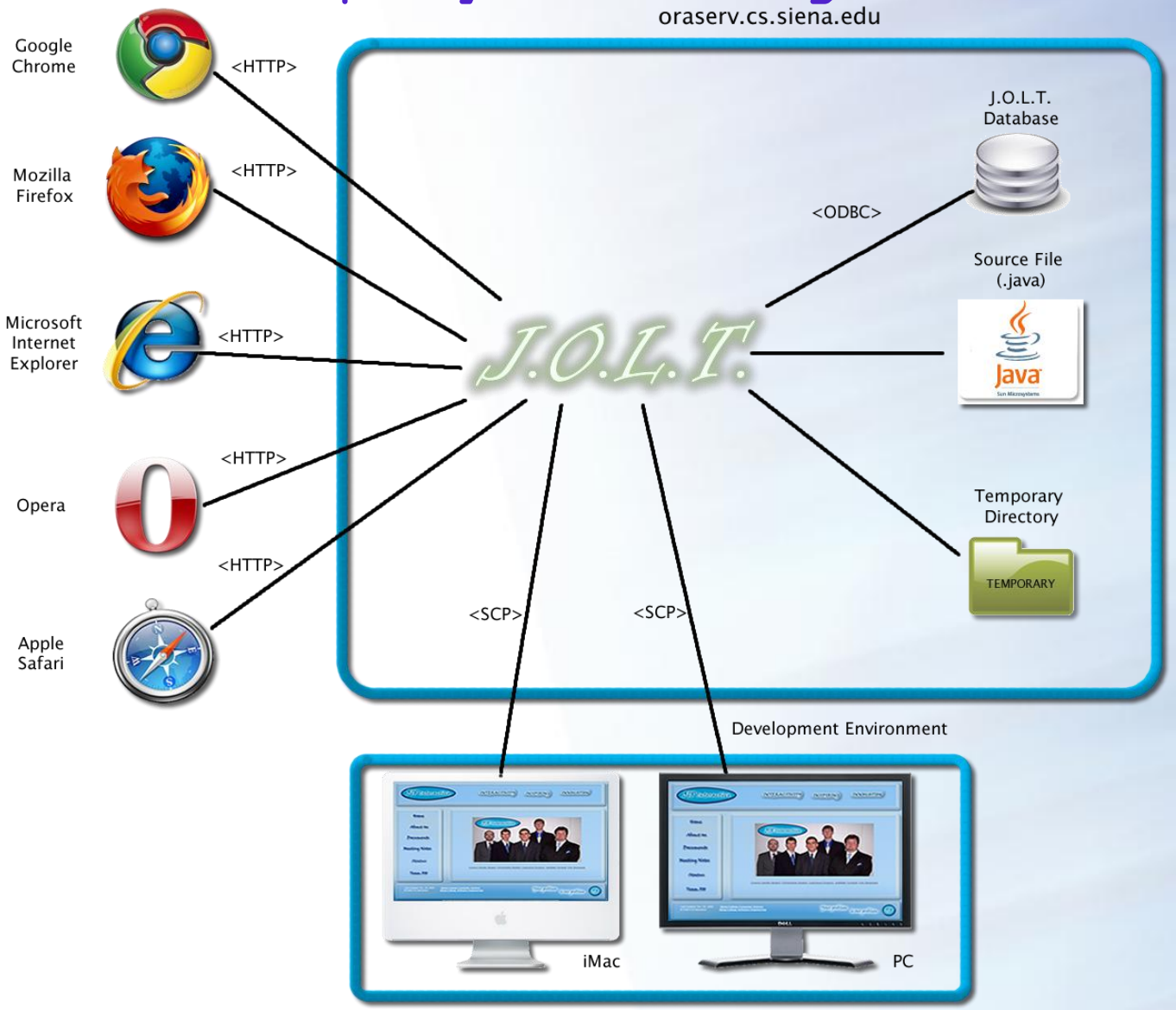
Restatement of Problem

- Dr. Darren Lim, an Assistant Professor at Siena College, has a busy schedule.
- Programming projects are time consuming to grade.
- Manual testing and grading is inefficient for both students and faculty.

Where we are in Development



Deployment Diagram



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User Case Narratives

User Case Narratives provide:

Description of user interaction with the system

Description of a specific user's goals when interacting with the system

Student User Case Narrative

Student User:

- Register
- Authenticate
- View Problems
- Solve Problem Sets
- View Grades

Faculty User Case Narrative

Faculty User:

- Manage Problems
- Manage Problem Sets
- Manage Respective Student User Grades

Course Coordinator User Case Narrative

Course Coordinator User:

- Create Faculty Accounts
- Manage Courses, Faculty, and Students
- Manage Course Pool
- Submit Problems to Global Pool
- Broadcast Messages

Administrator
User Case Narrative

Administrator User:

- Manage all types of Users
- Manage Global Pool
- All abilities of a Course Coordinator

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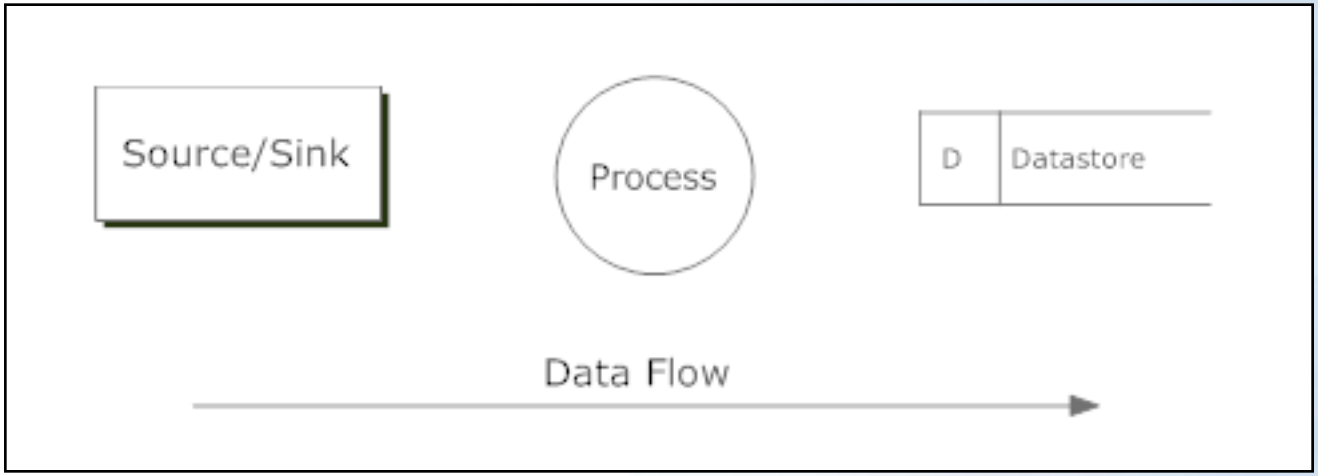
Data Flow Diagrams

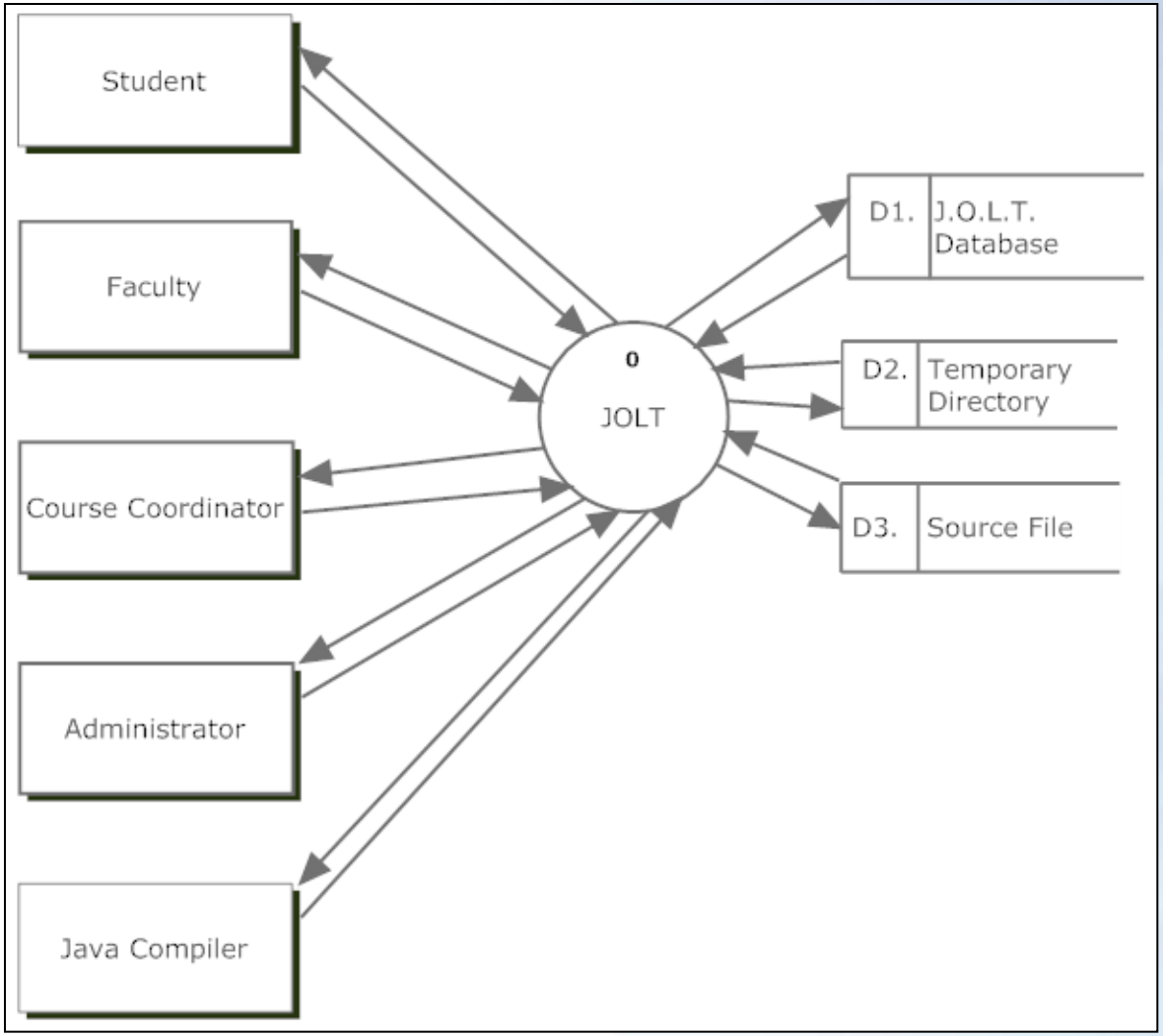
Data flow diagrams provide:

- System Decomposition
- Graphical representation of data “flow”
- Graphical representation of data manipulation
- Top down view of the system

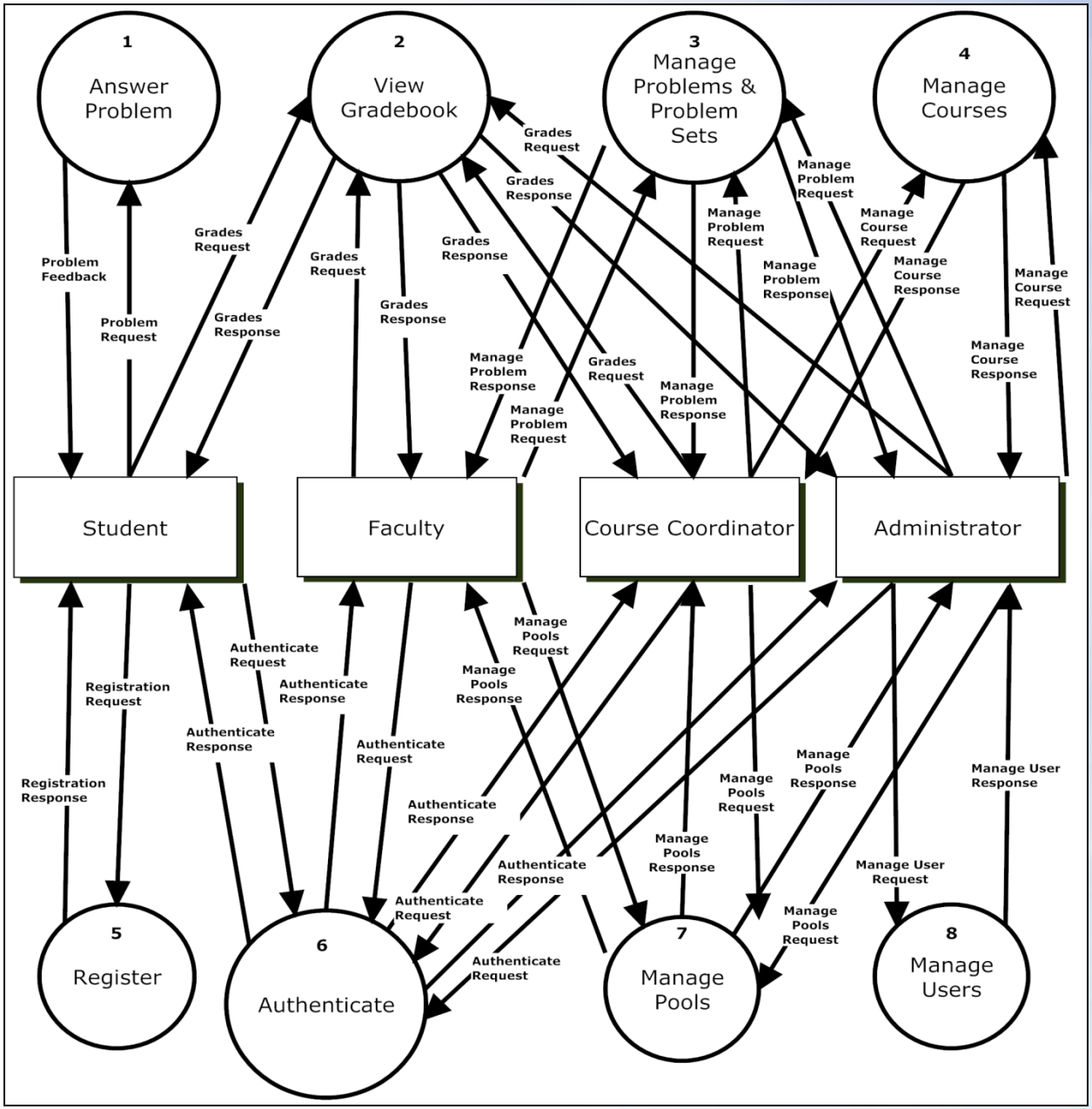
Data Flow Diagram Key



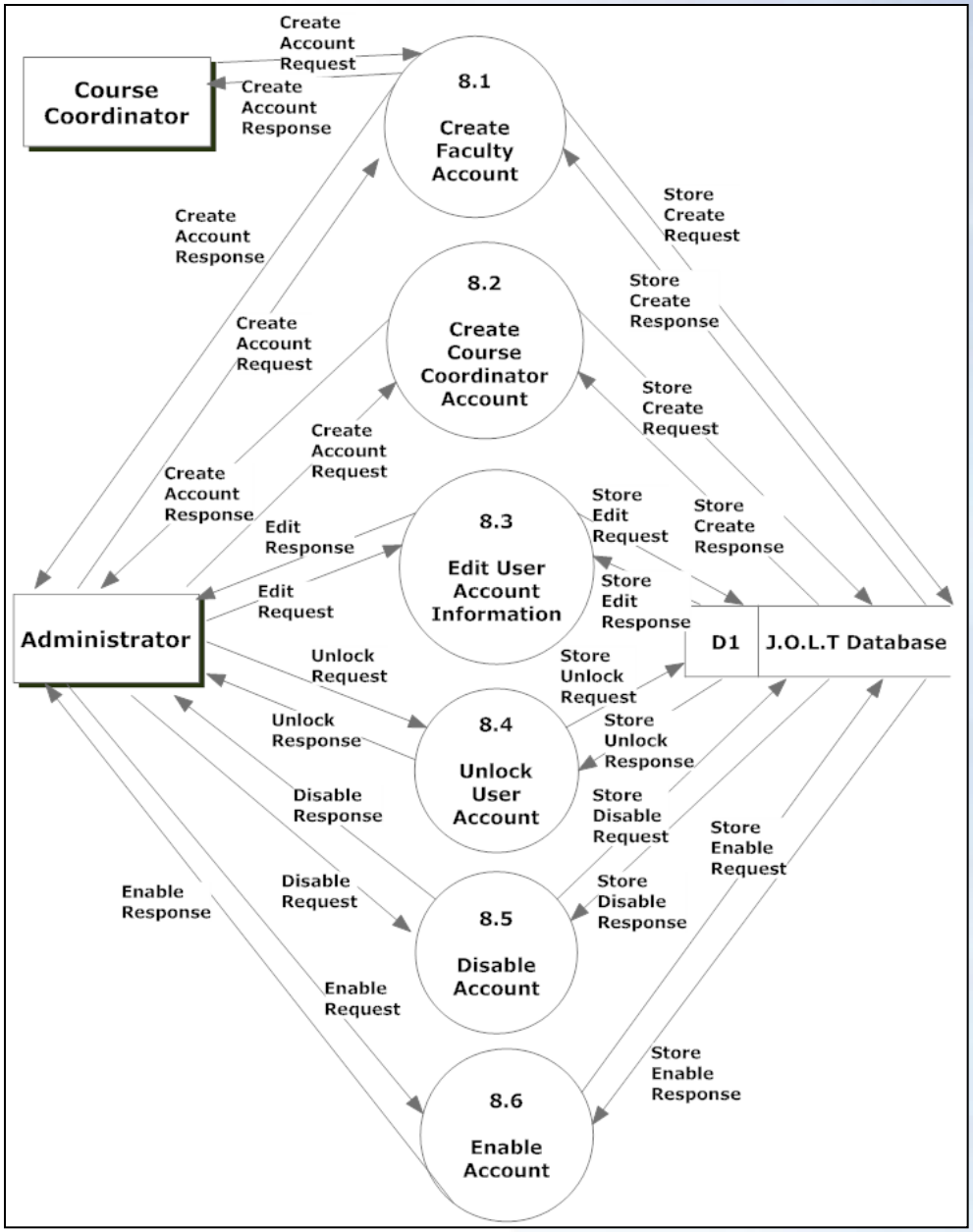
Context Diagram



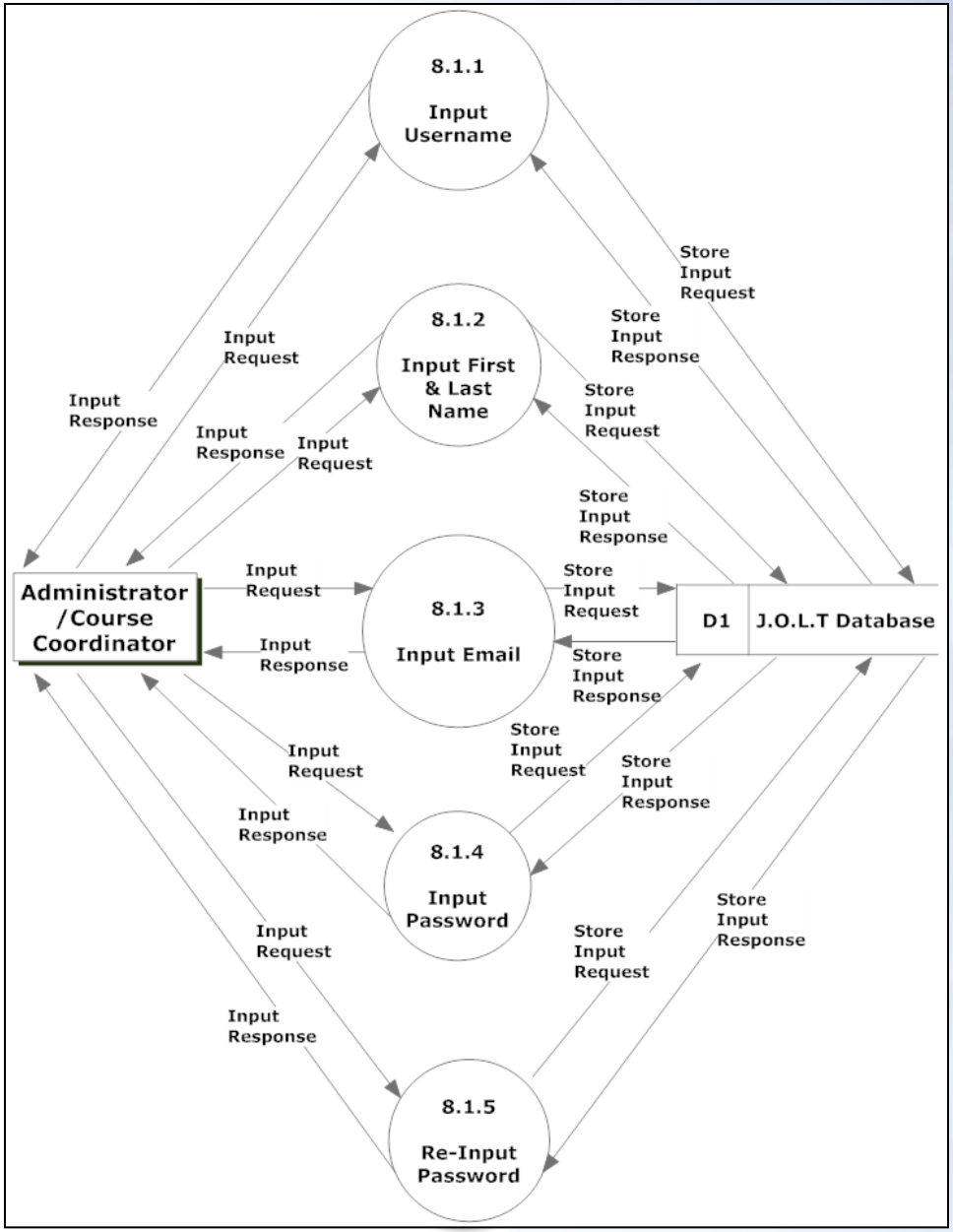
Data Flow Diagram: Level 0



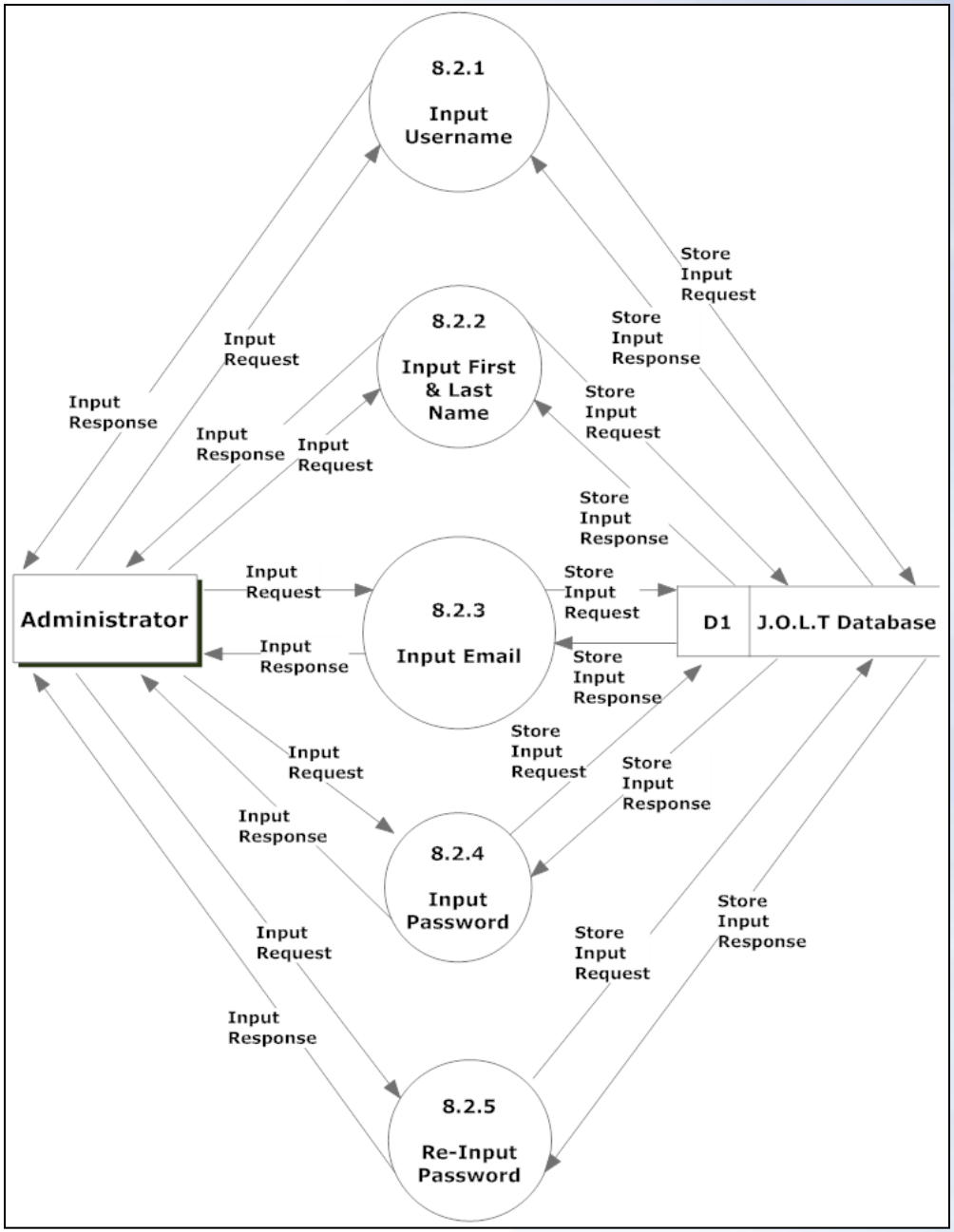
Data Flow Diagram: Process 8 Level 1
Manage Users



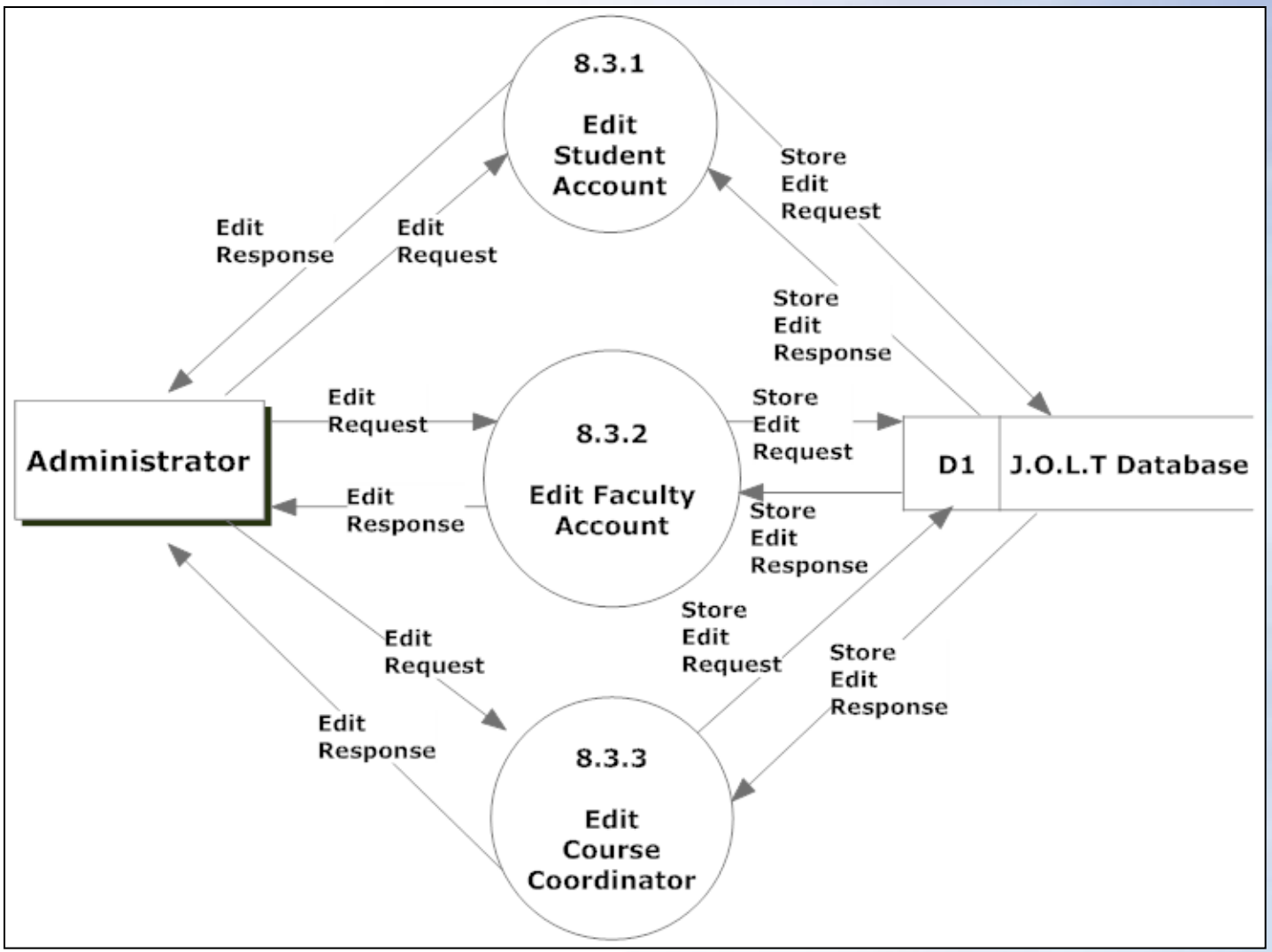
Data Flow Diagram: Process 8.1 Level 2
Create Faculty Account



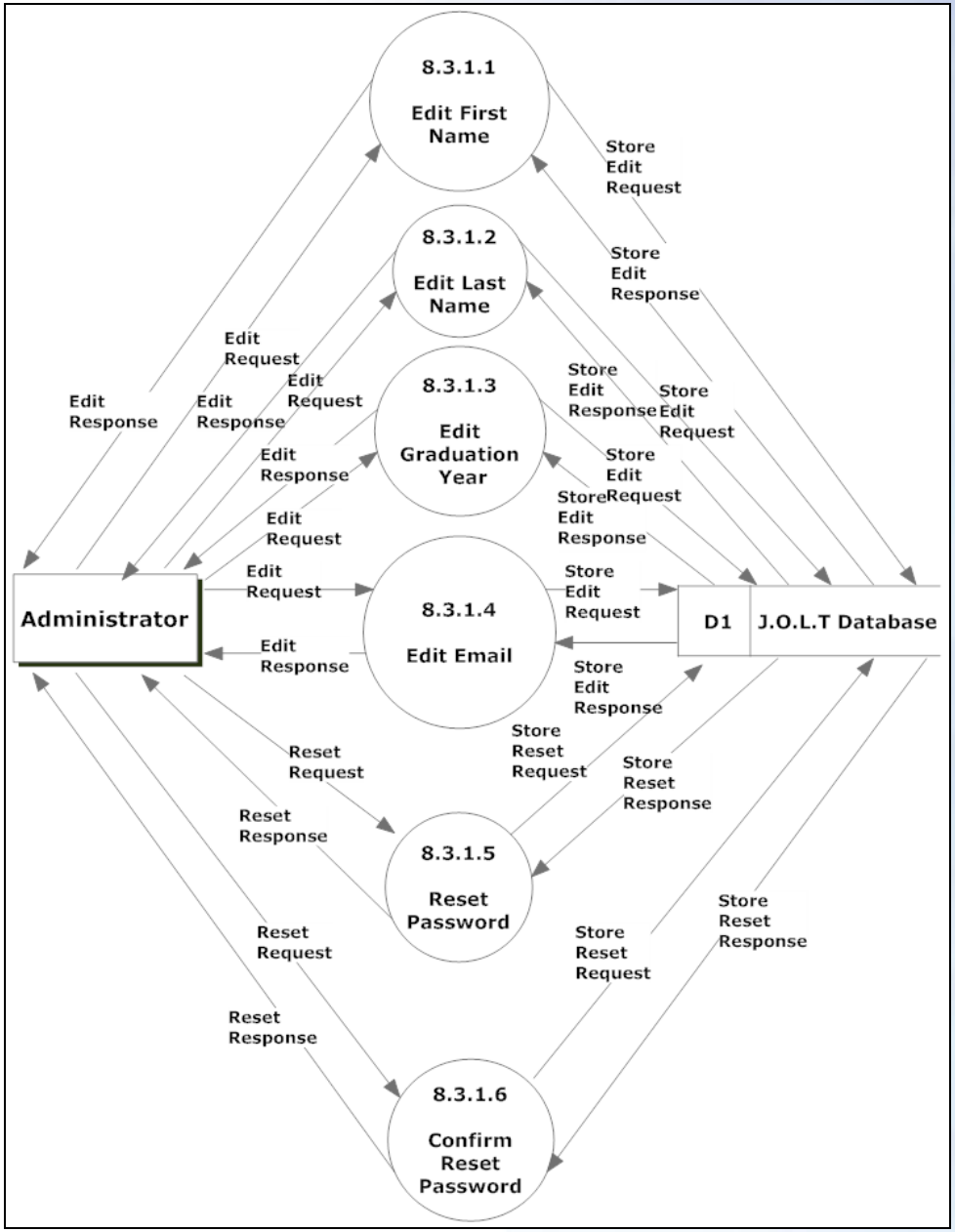
Data Flow Diagram: Process 8.2 Level 2
Create Course Coordinator Account



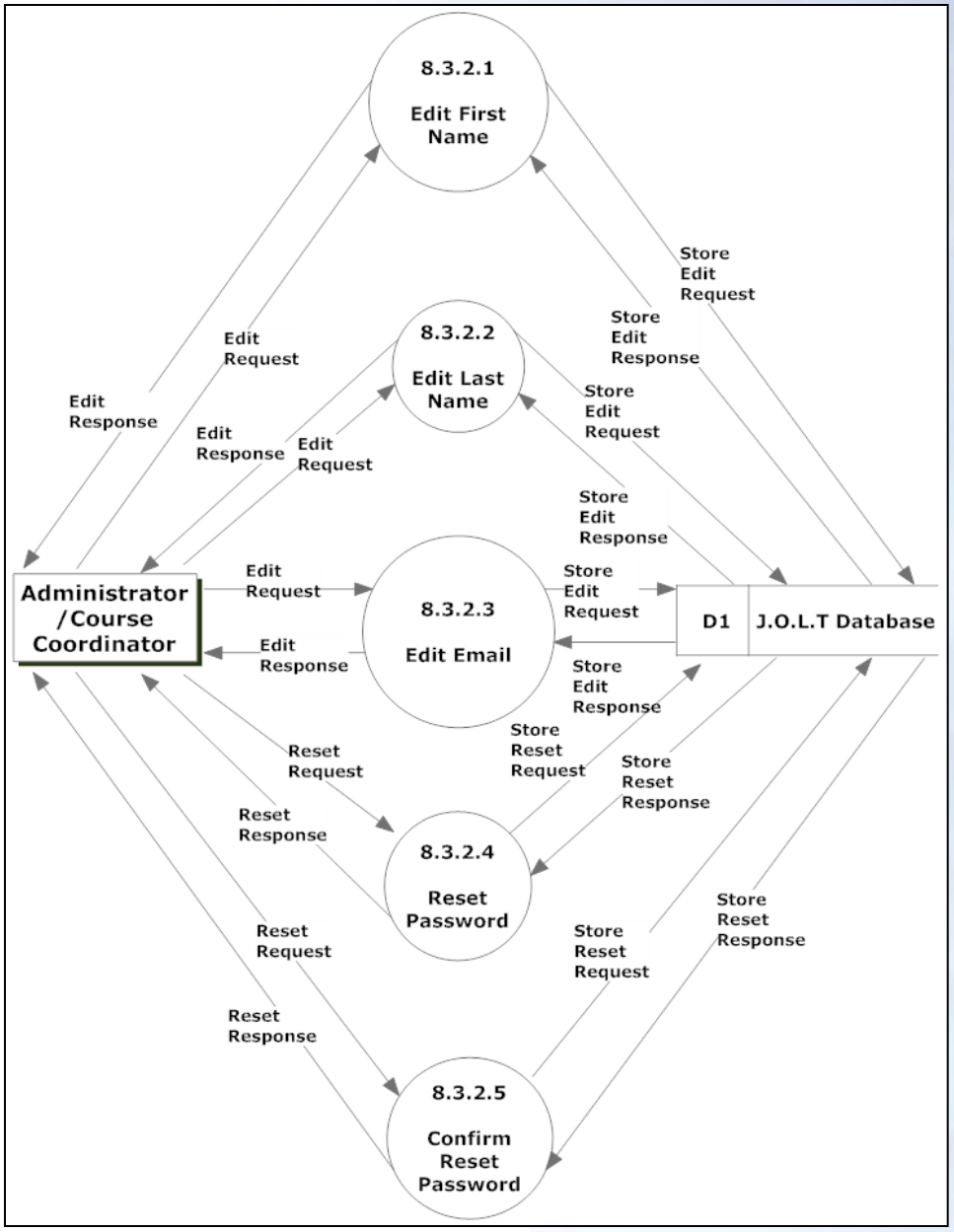
Data Flow Diagram: Process 8.3 Level 2
Edit User Account Information



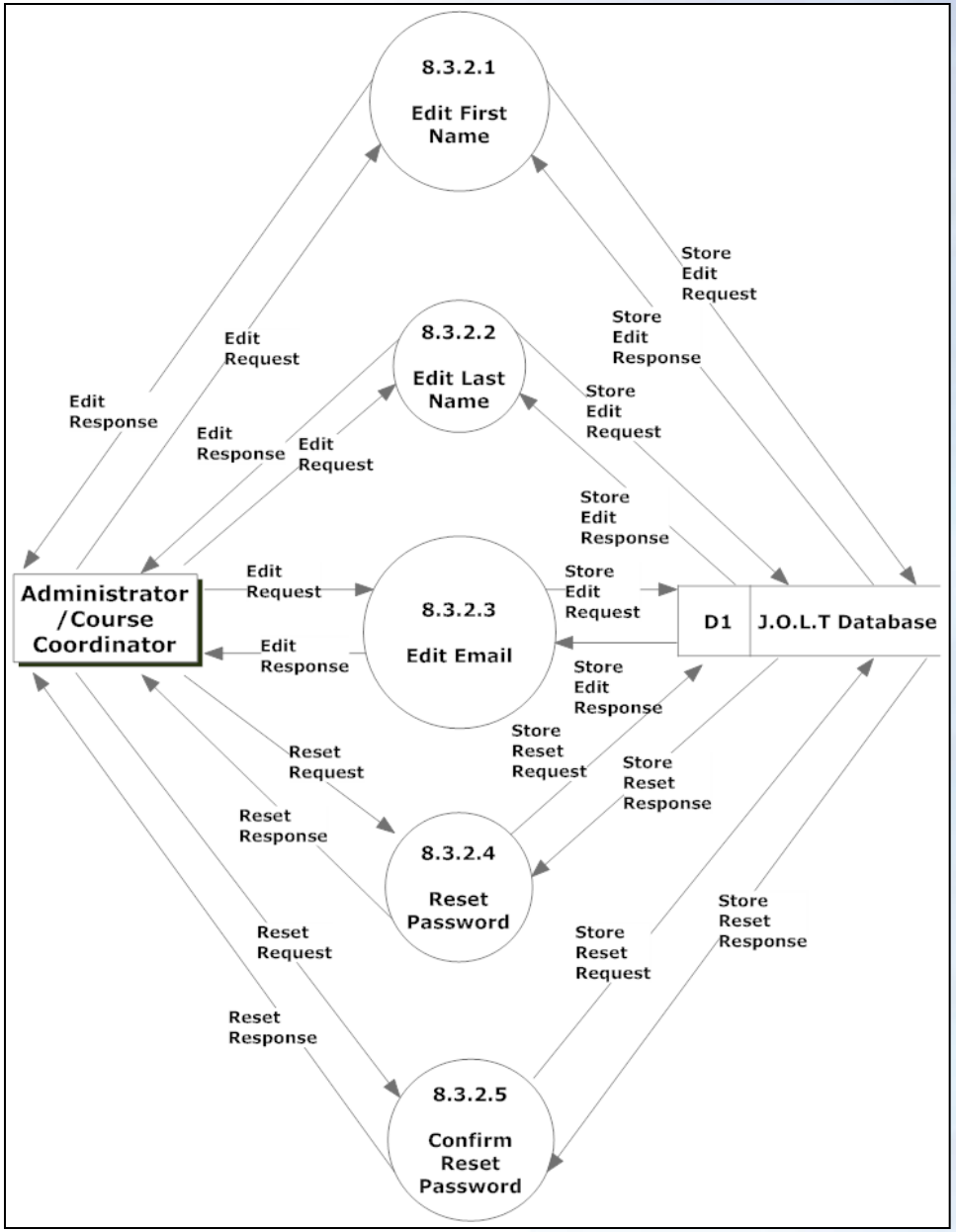
Data Flow Diagram: Process 8.3.1 Level 3
Edit Student Account Information



Data Flow Diagram: Process 8.3.2 Level 3
Edit Faculty Account Information



Data Flow Diagram: Process 8.3.3 Level 3
Edit Course Coordinator Account Information



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General Functional Requirements Inventory

- Web based
- All major web browsers supported
- Index page with common Authentication display
- All other pages have “Log Out” Functionality
- All users must authenticate

Student Requirements Inventory

- Only Self-Registering user
- Enroll in courses
- View Messages sent to the Student
- View problem sets from enrolled courses
- Solve problems
- Save problem progress
- View Grades and previously submitted solutions

Faculty Requirements Inventory

- Create individual problems and problem sets
- Submit problems to their course pool
- Search the global pool for problems
- View and Modify "Gradebooks" for their courses
- Ability to interact with J.O.L.T. as a "Student" user

Course Coordinator Requirements Inventory

- Create Faculty accounts
- Assign Faculty to courses
- Create reports and statistics
- Manage their respective course pool
- Submit problems to the global pool
- Manage grades for students of the courses they coordinate

Administrator Requirements Inventory

- Manage all accounts
- Create course Coordinator and Faculty Accounts
- Manage the Global pool
- Broadcast Messages
- Assign courses to course coordinators
- Have all other abilities of a course coordinator

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Data Design And Dictionary

- Data Name
- Applicable To
- Data Type
- Data Size
- Description
- Acceptable Input:
- Good Example of Input
- Notes

- Definition of a Data Dictionary: a "centralized repository of information about data such as meaning, relationships to other data, origin, usage, and format." - IBM Dictionary of Computing

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Testing

- Overall Testing
- Unit Test
- Test Cases
- Acceptance Test

Unit Test

Test Result		Unit Number	Unit Test Name
P	**F**	1	Registration
P	**F**	2	Log on
P	**F**	3	Answer Problem

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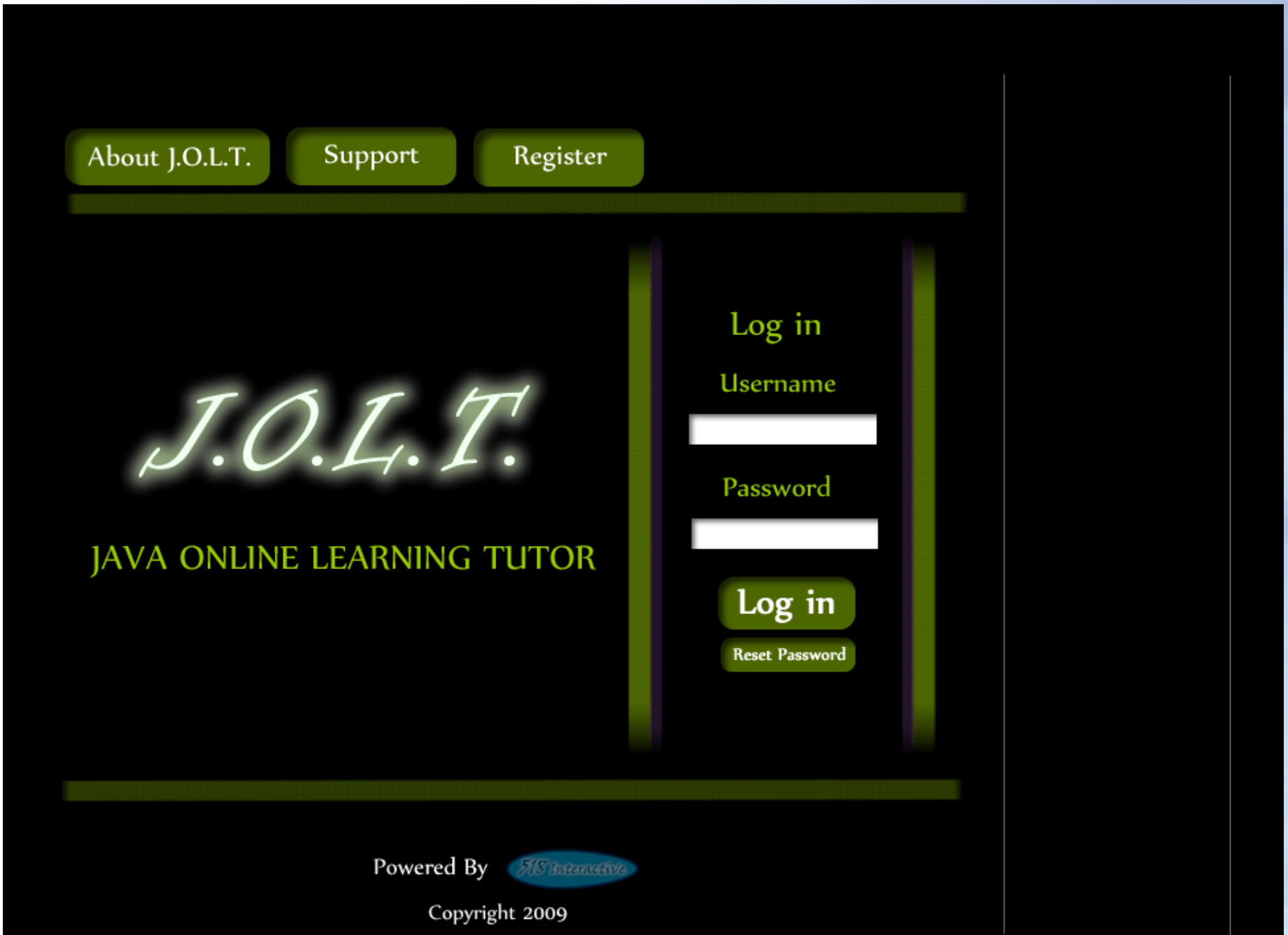
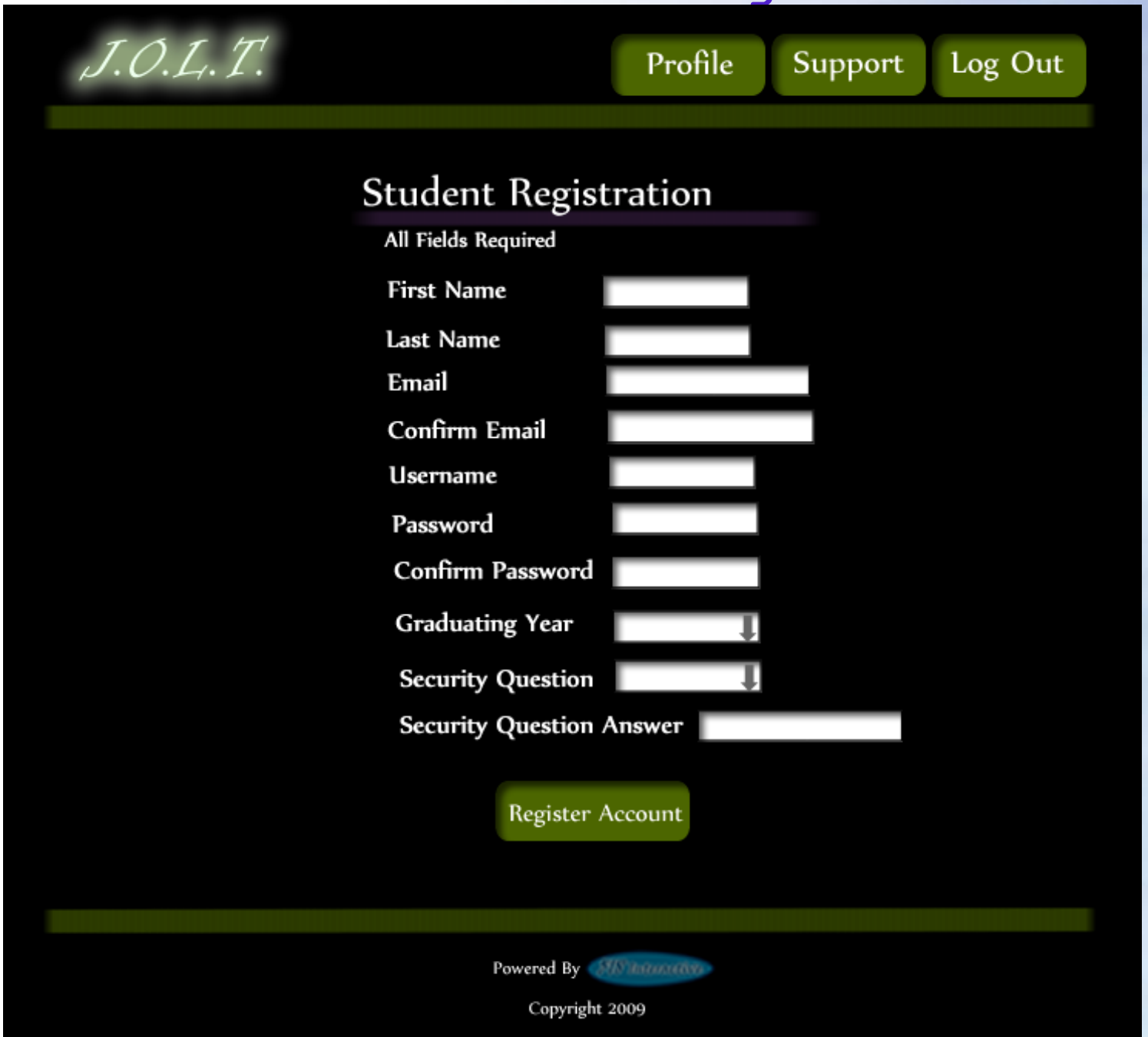
Student Screen: Welcome Screen

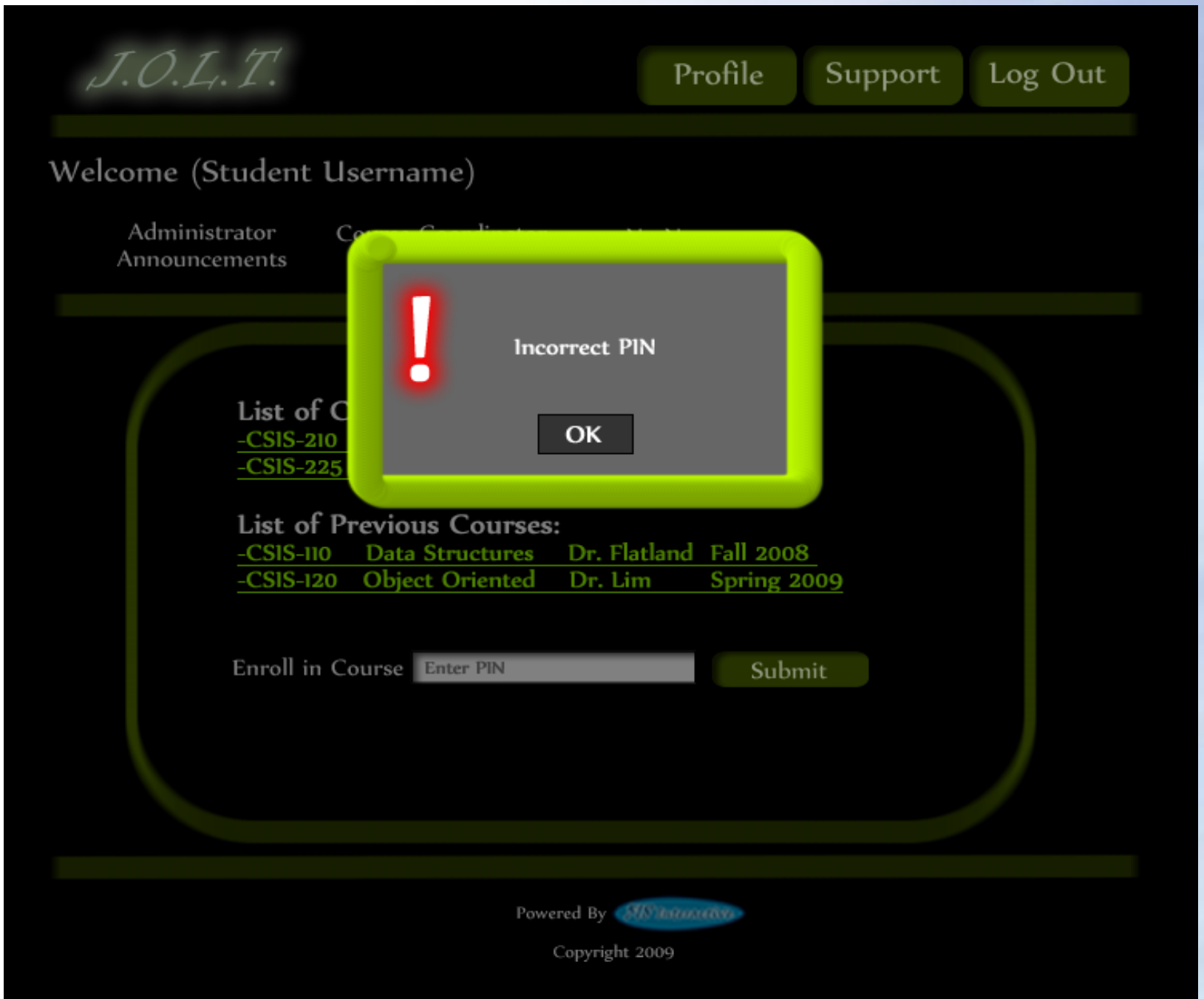


Student Screen: Registration



Student Screen: Student Home

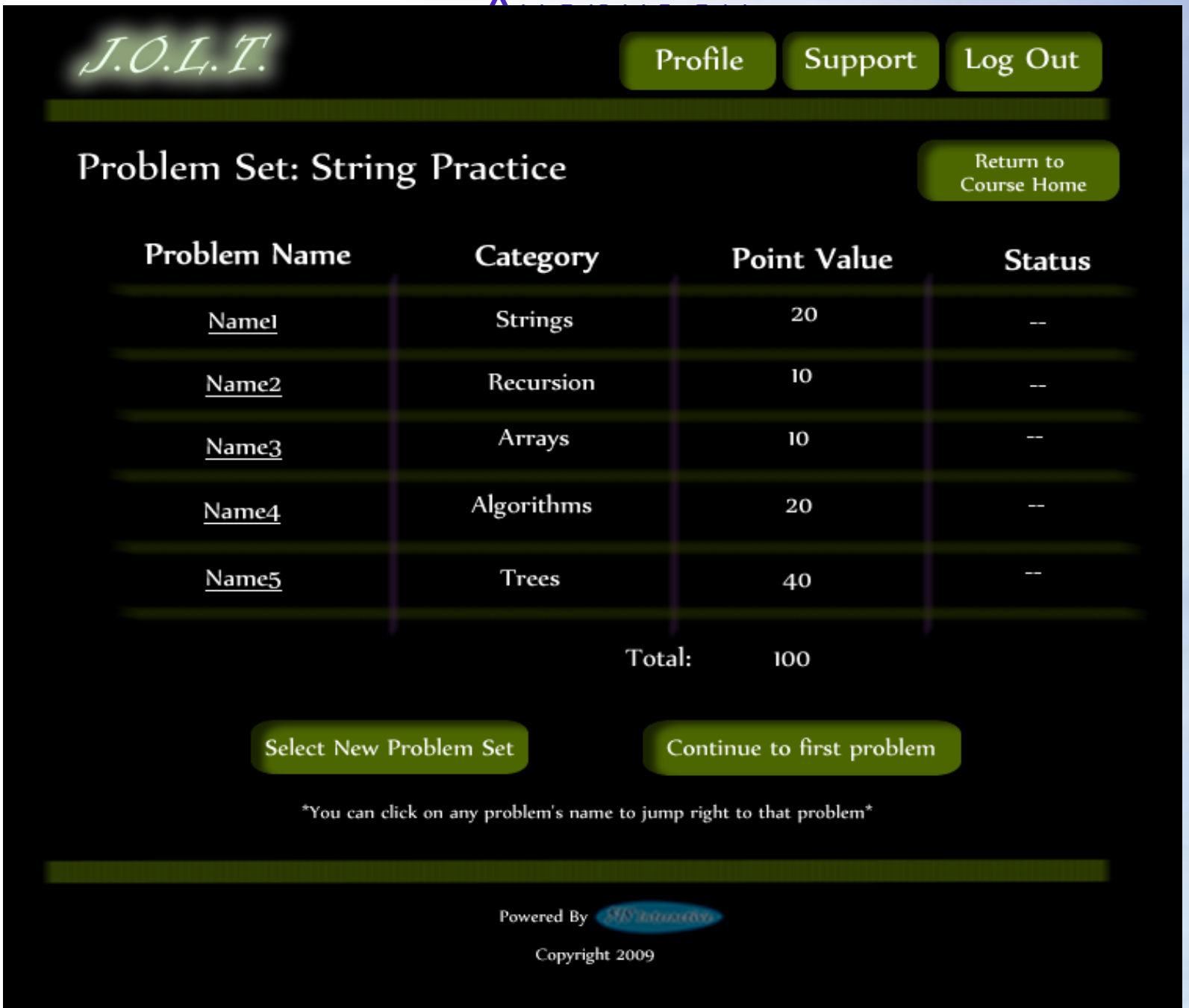
Student Screen: Enroll Error



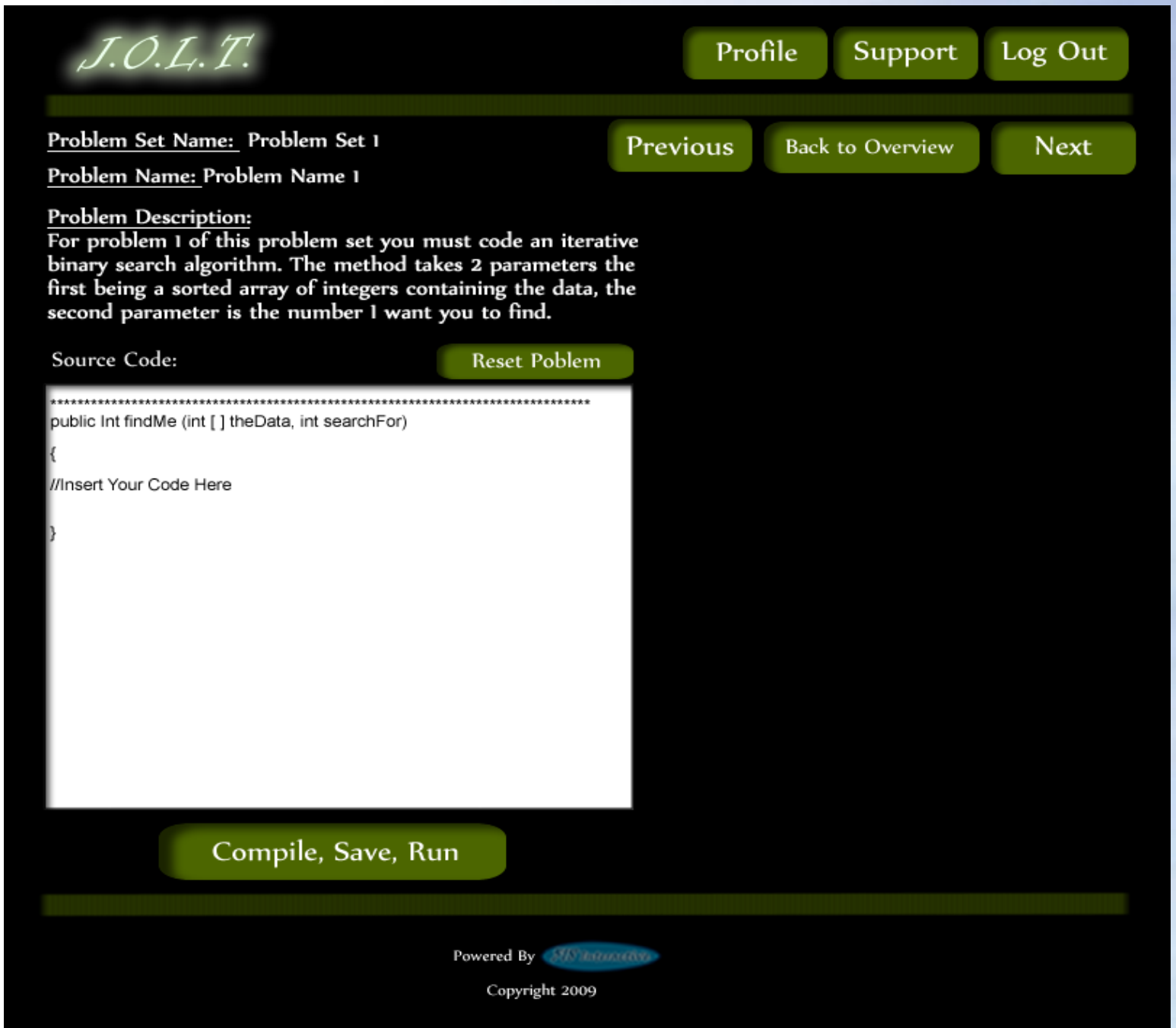
Student Screen: Section Homepage

Student Screen: Active Assignments

Student Screen: Problem Set Overview

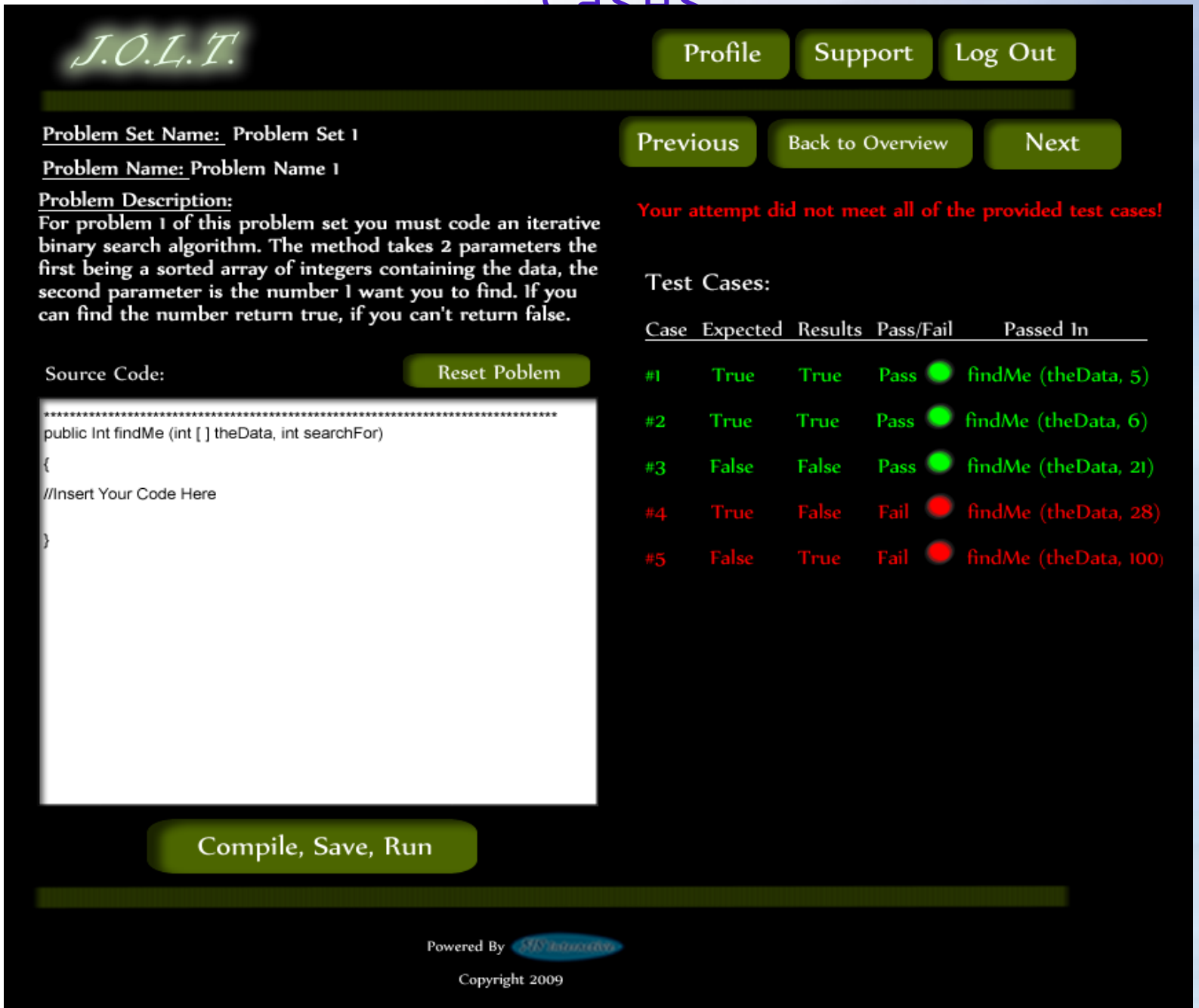


Student Screen: Answer Problem



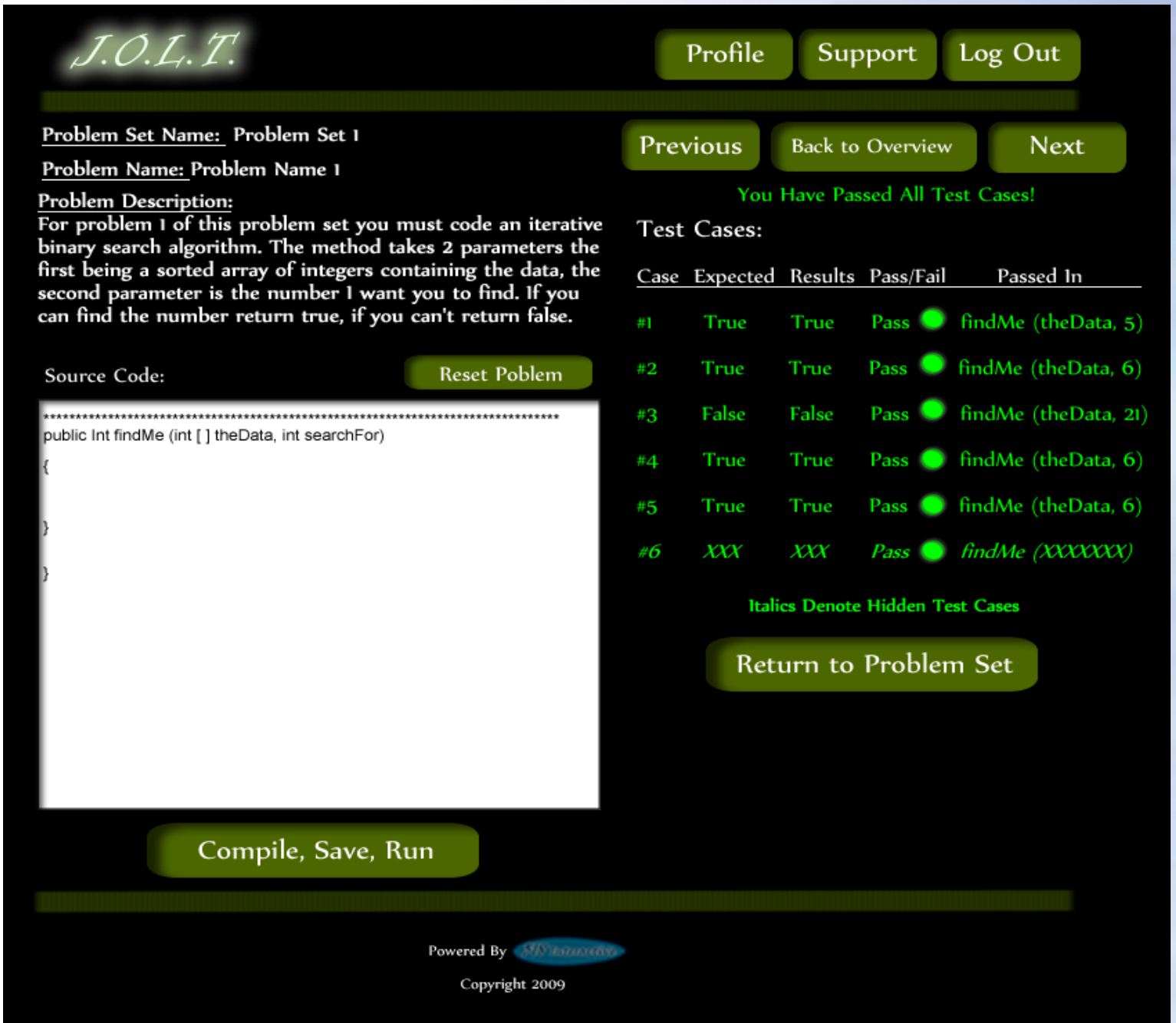
Student Screen: Compiler Error

Student Screen: Incorrect Test Cases



Student Screen: Timeout Error

Student Screen: Correct Attempt



Student Screen: Section Gradebook

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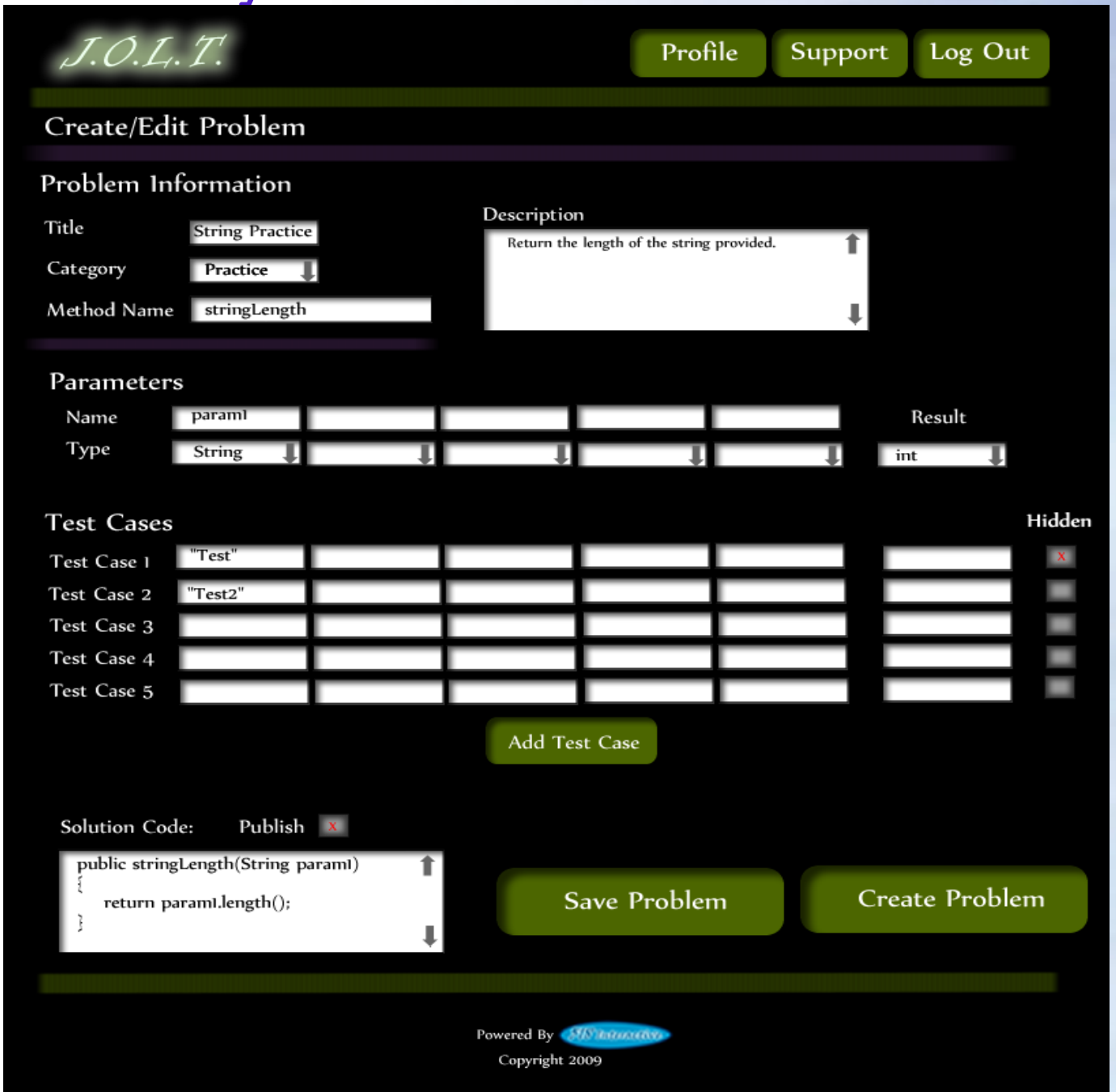
Faculty Screen: Log In

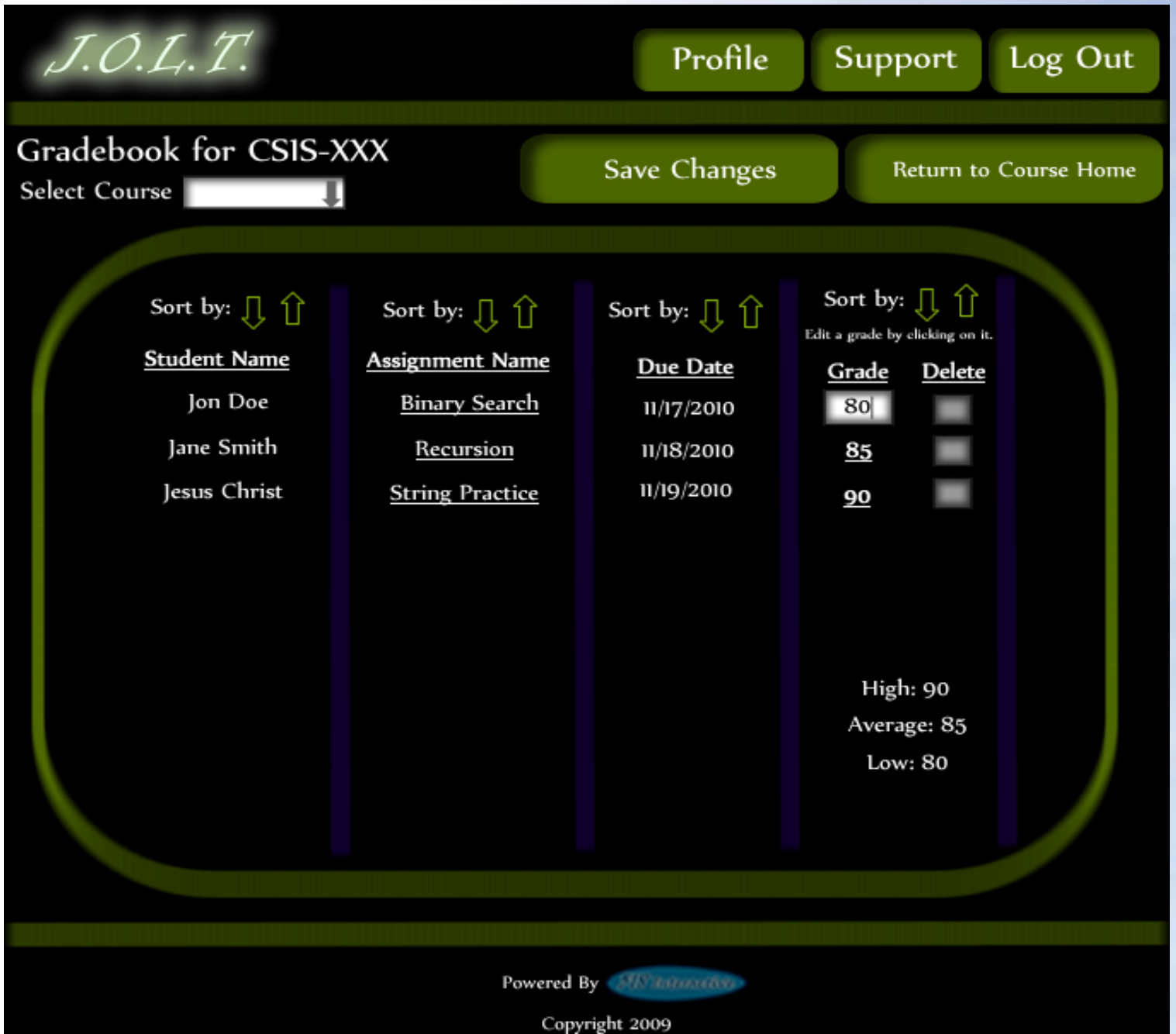
Faculty Screen: Faculty Home

Faculty Screen: Create Problem

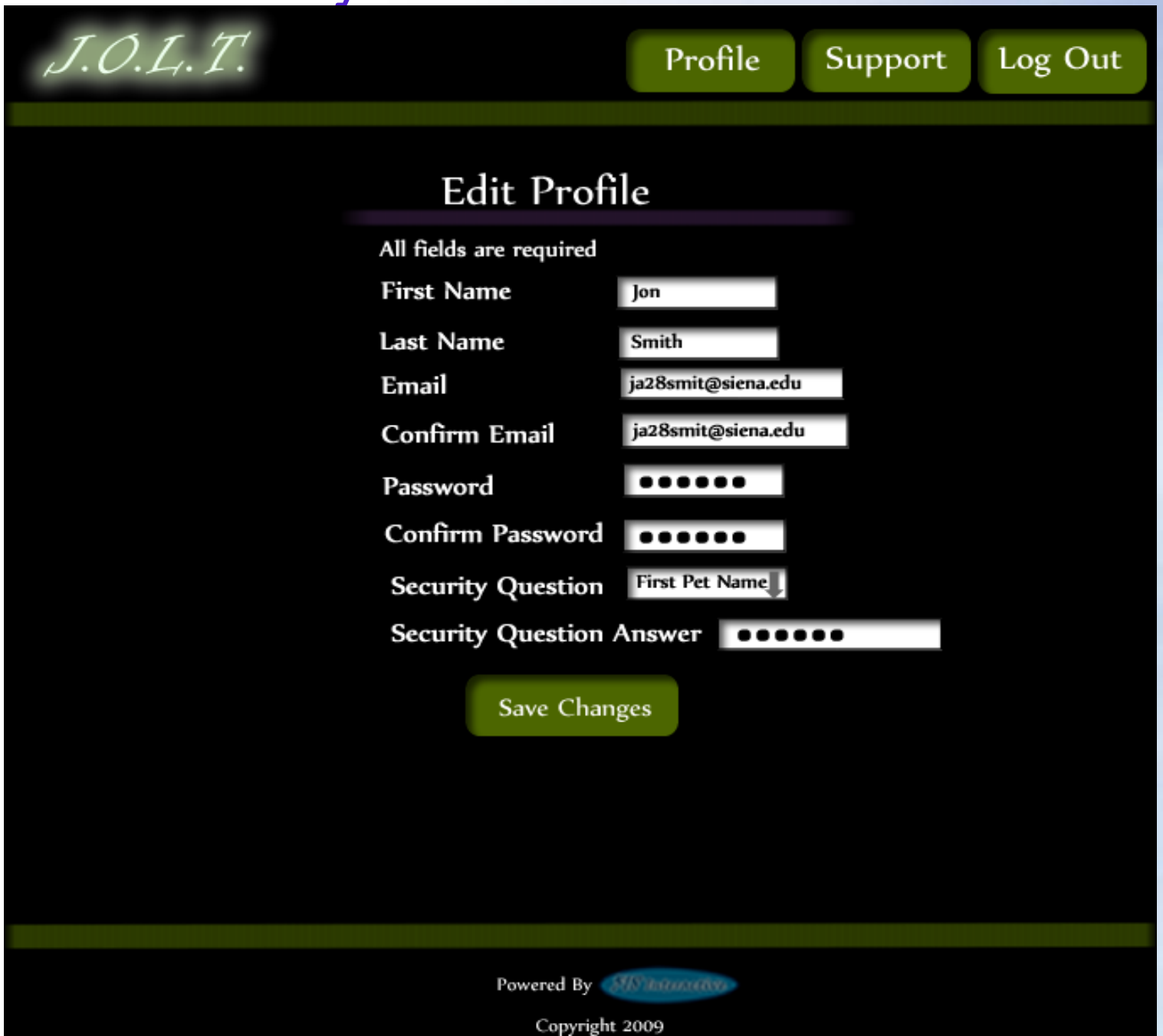


Faculty Screen: Create Problem Set

Faculty Screen: Gradebook



Faculty Screen: Edit Profile



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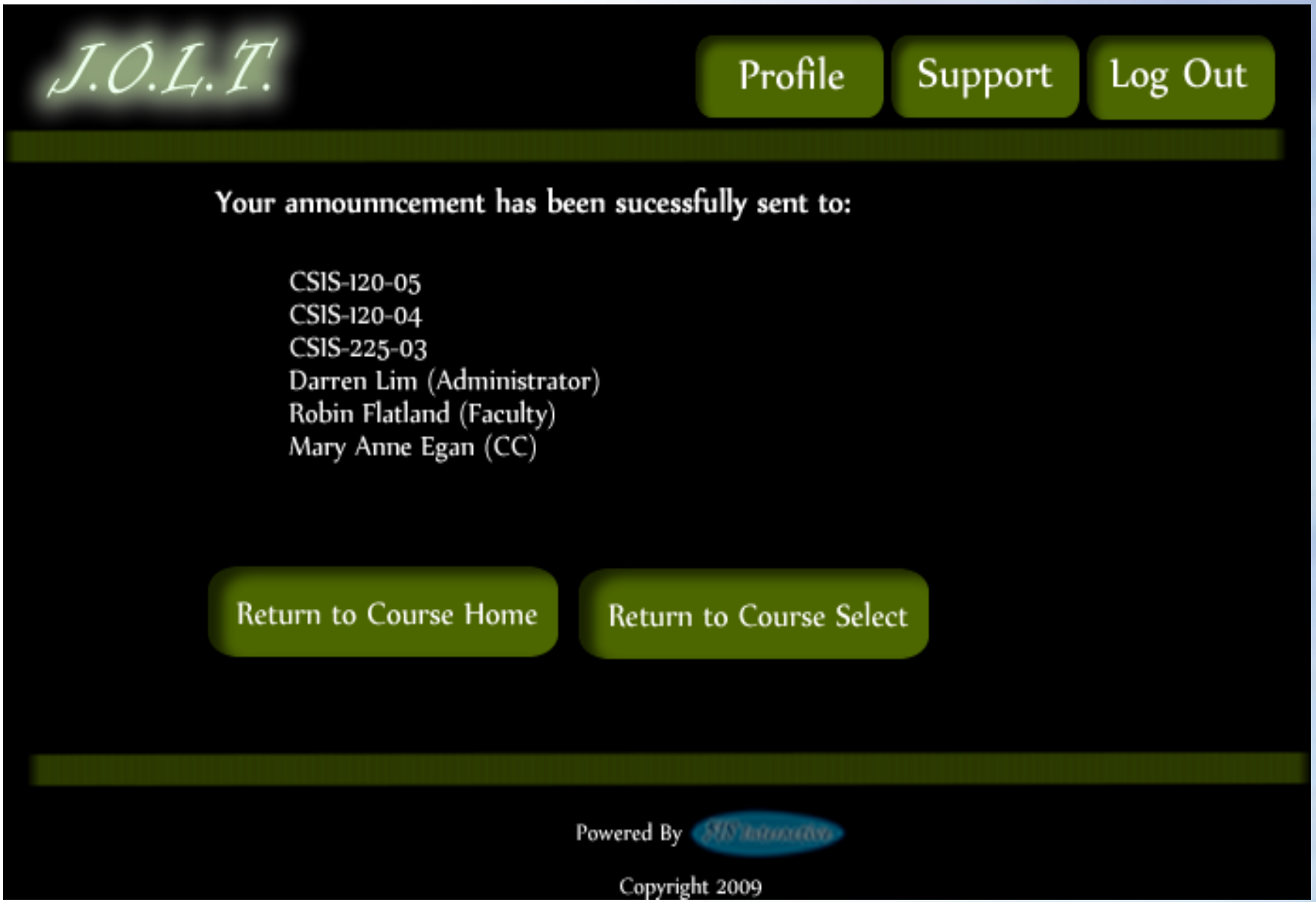
Course Coordinator Screen: Log In

Course Coordinator Screen: C.C. Home

Course Coordinator Screen: Create Announcement

Course Coordinator Screen: Announcement Created



Course Coordinator Screen: Create Faculty

Course Coordinator Screen: Edit Section

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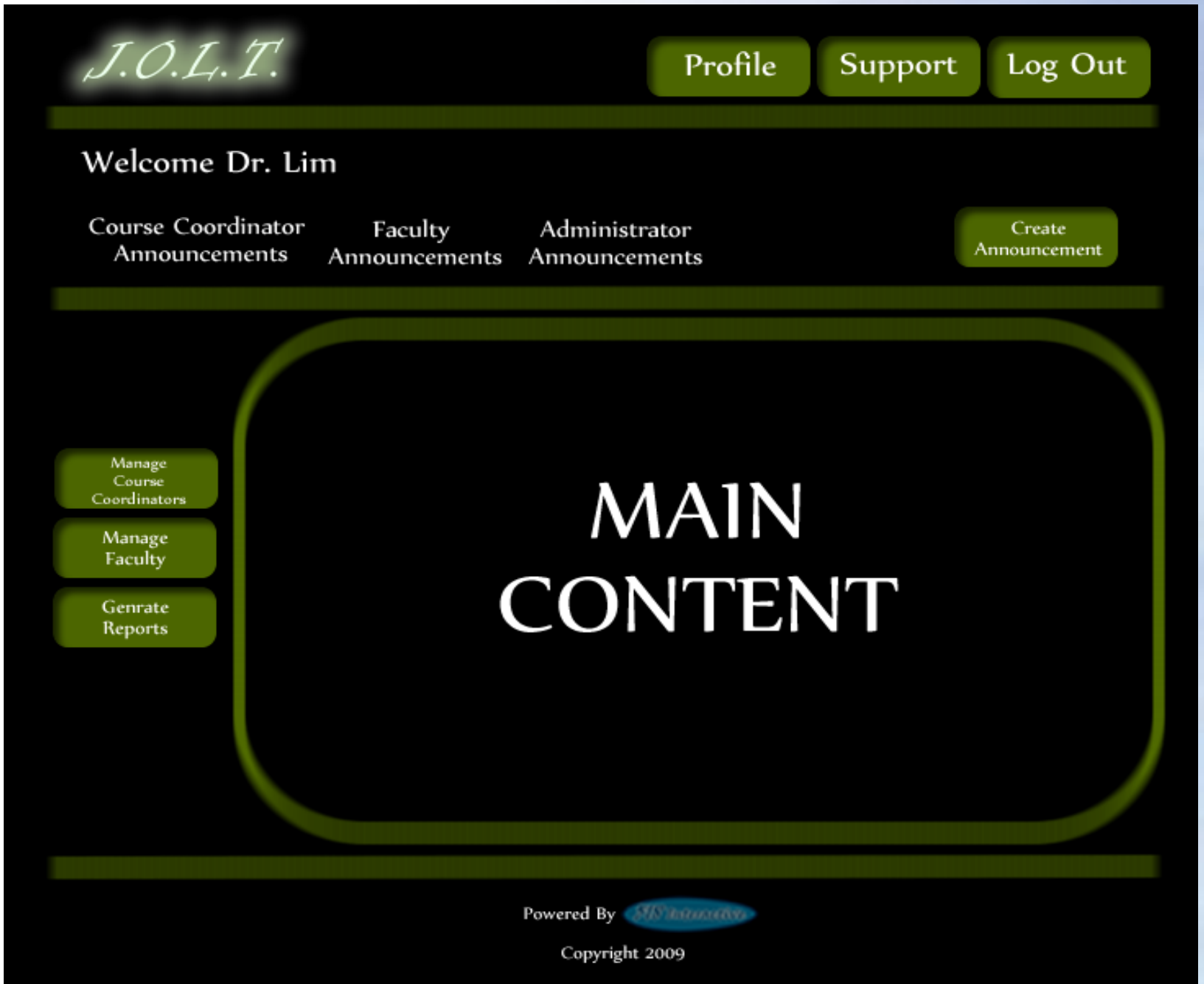
Administrator Log In

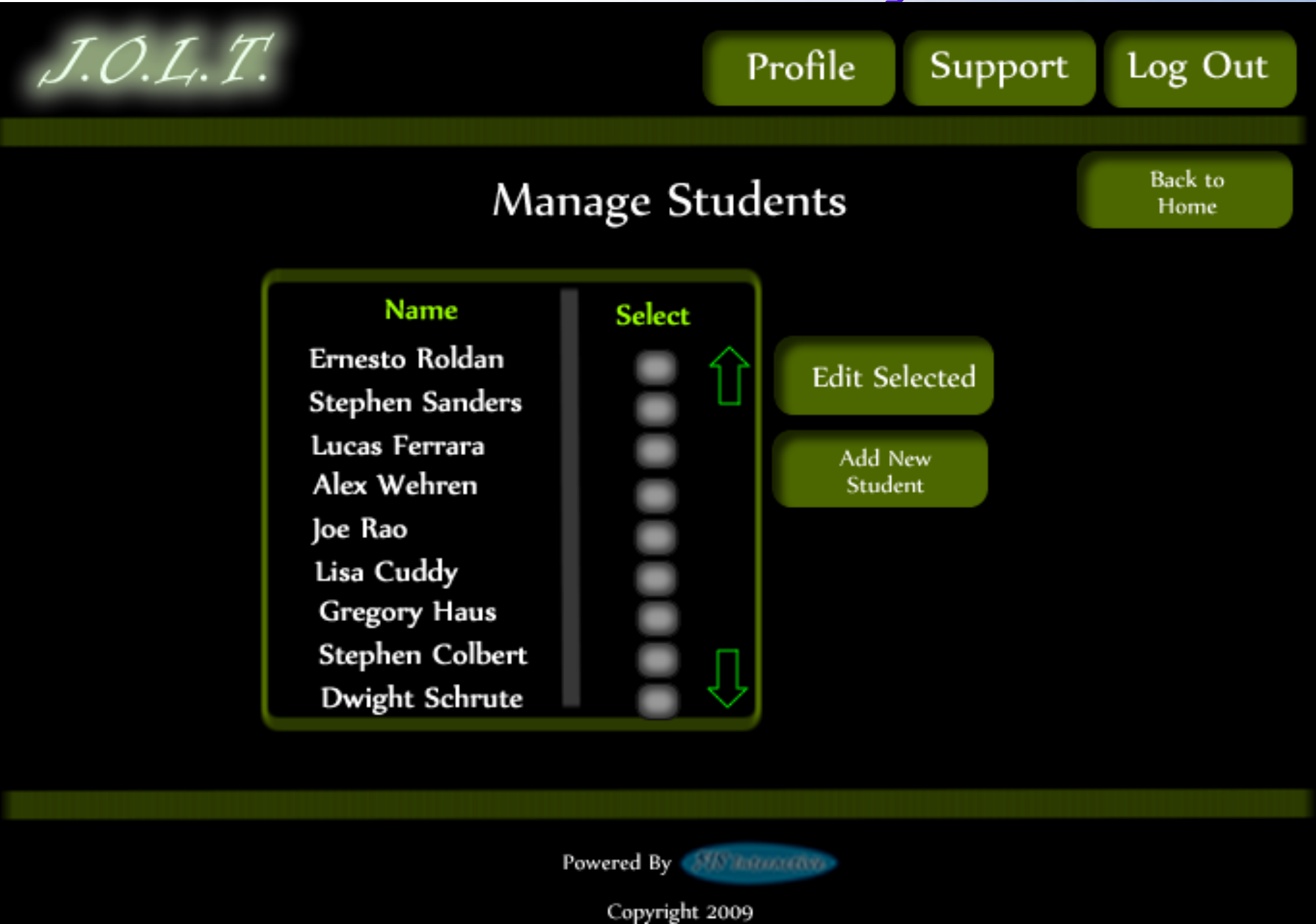
Administrator Screen: Admin Home



Administrator Screen: Create Course Coord.

Administrator Screen: Create Course

Administrator Screen: Manage Students



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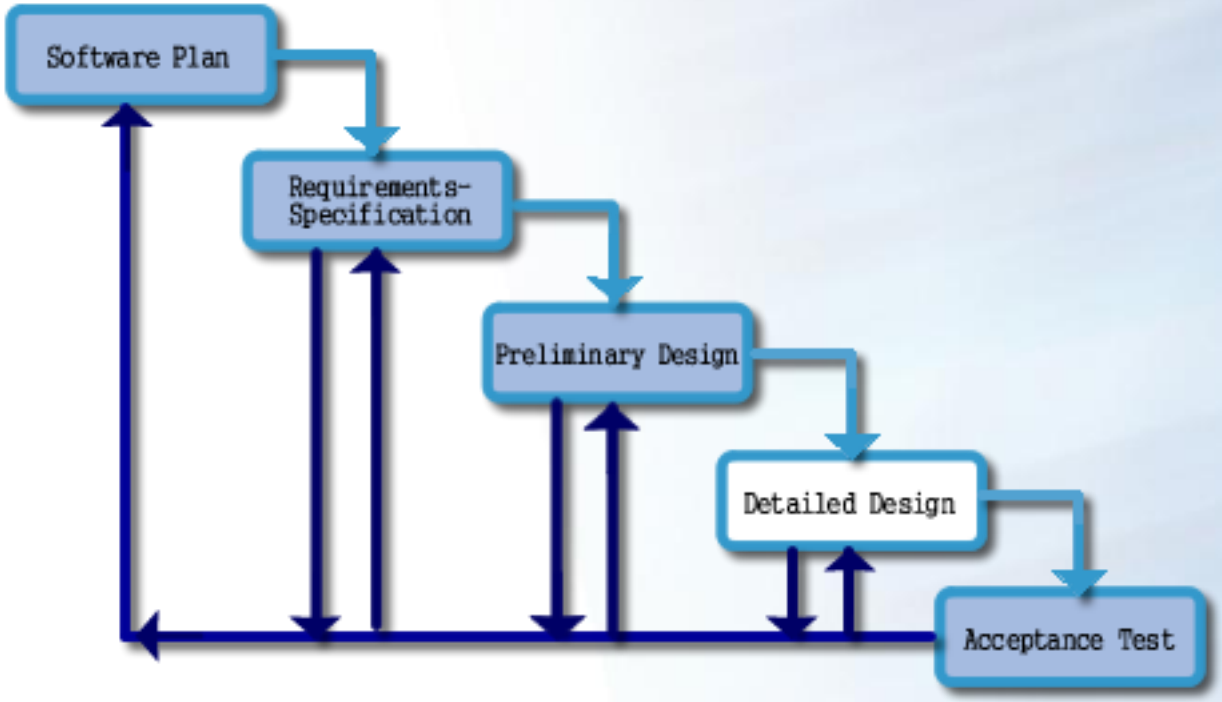
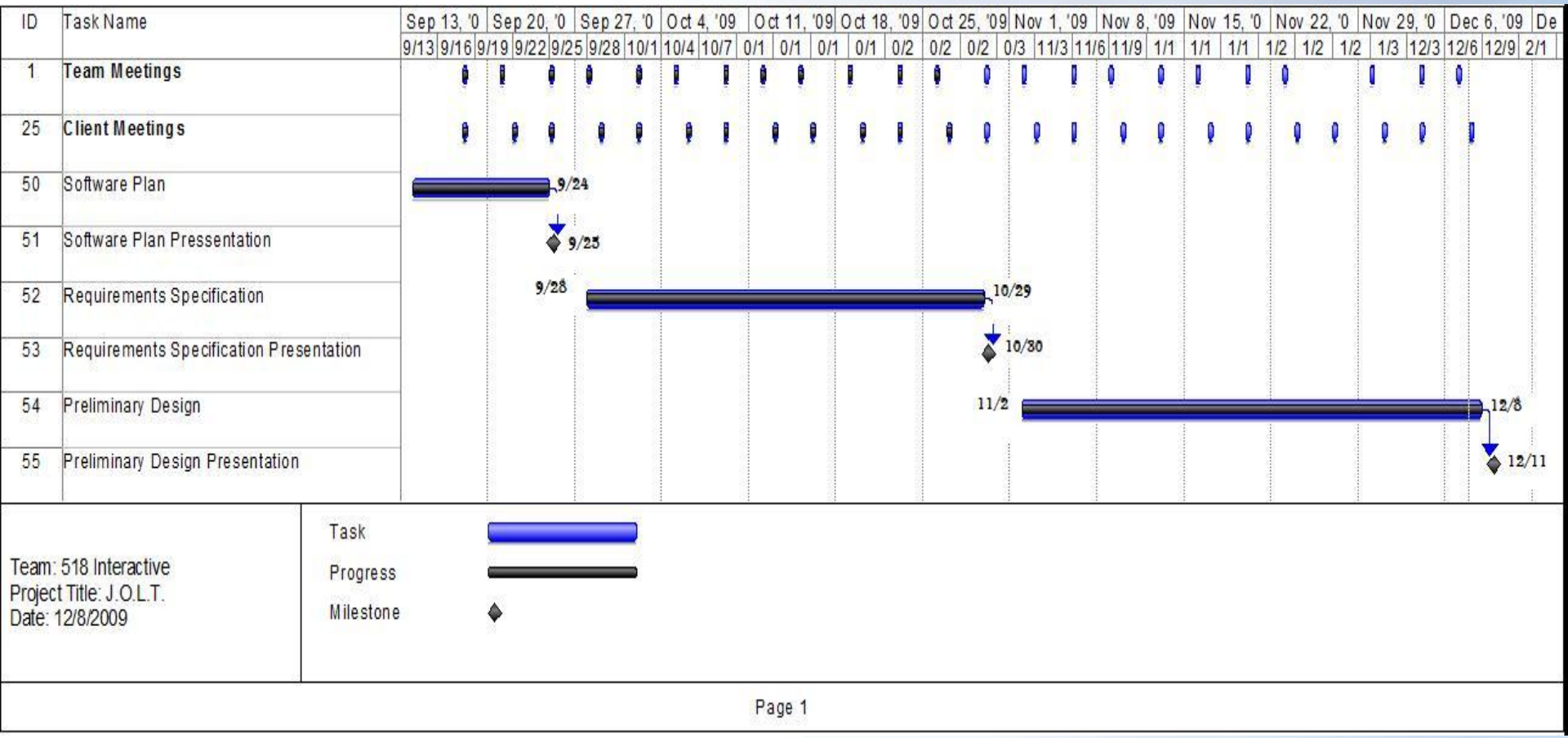
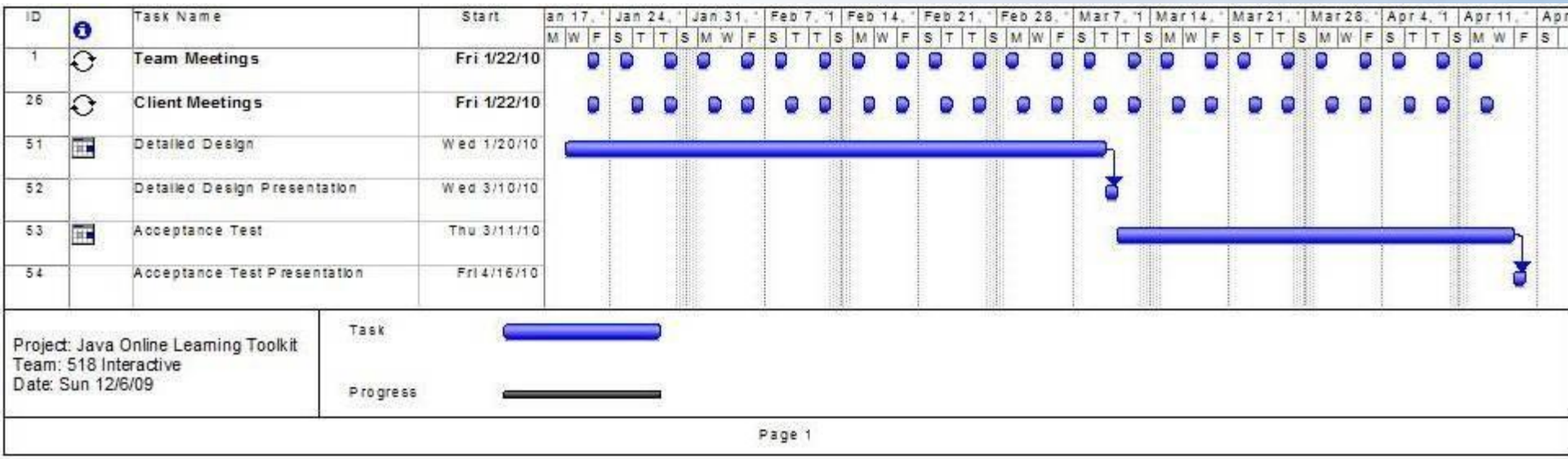
What's Next


Software Plan
Requirements-Specification
Preliminary Design
Detailed Design
Acceptance Test

Timeline This Semester



Timeline Next Semester



ID	Task Name	Start
1	Team Meetings	Fri 1/22/10
26	Client Meetings	Fri 1/22/10
51	Detailed Design	Wed 1/20/10
52	Detailed Design Presentation	Wed 3/10/10
53	Acceptance Test	Thu 3/11/10
54	Acceptance Test Presentation	Fri 4/16/10

J.O.L.T.

Questions?

Thank You For Coming