J.O.L.T.

Software Requirements Specification Presentation

Client Dr. Darren Lim

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

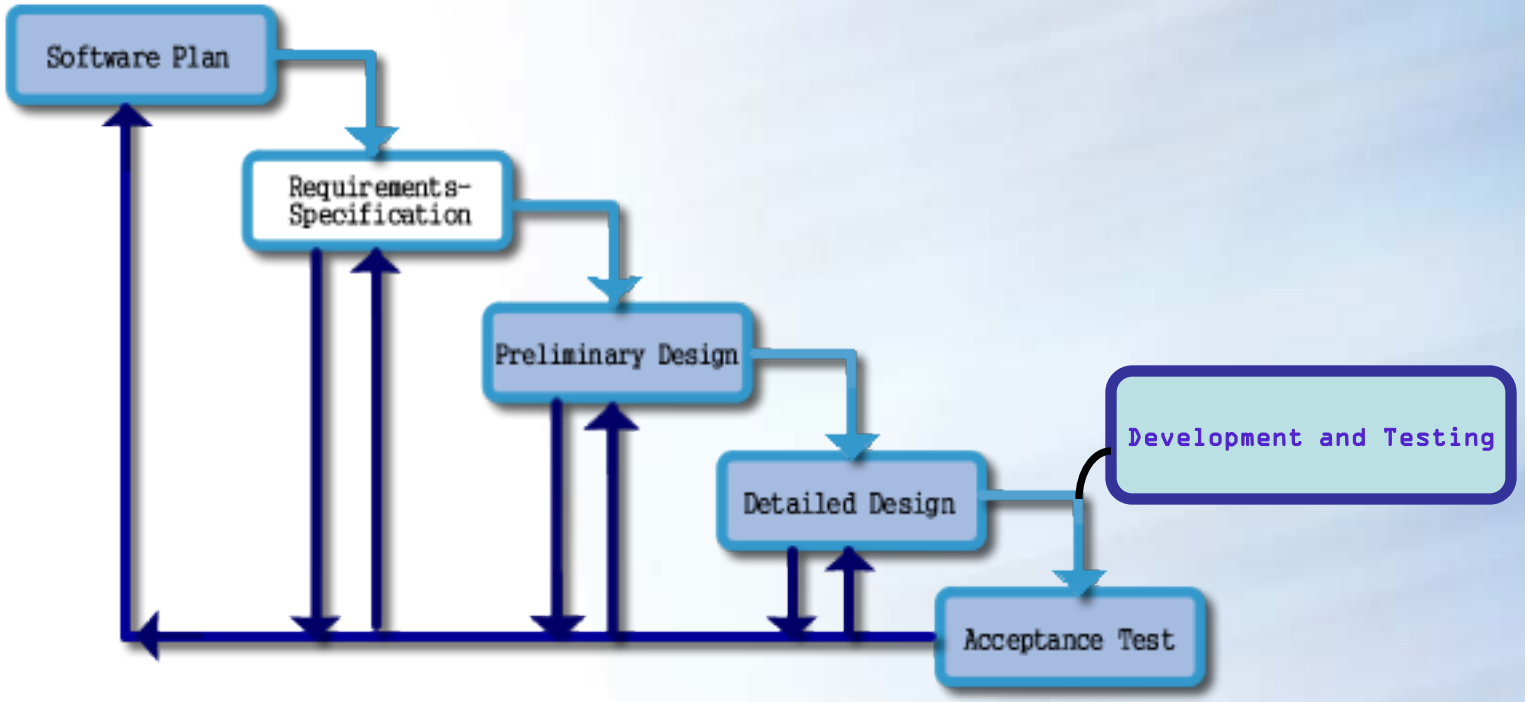
Agenda

- Team Introduction
- Restatement of Problem
- Project Progression
- User Case Narratives and Use Case Diagram
- Data Flow Diagrams
- Activity Diagrams
- Requirements Inventory
- Prototype 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



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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
- View Respective Student User Grades

Course Coordinator
User Case Narrative

Course Coordinator User:

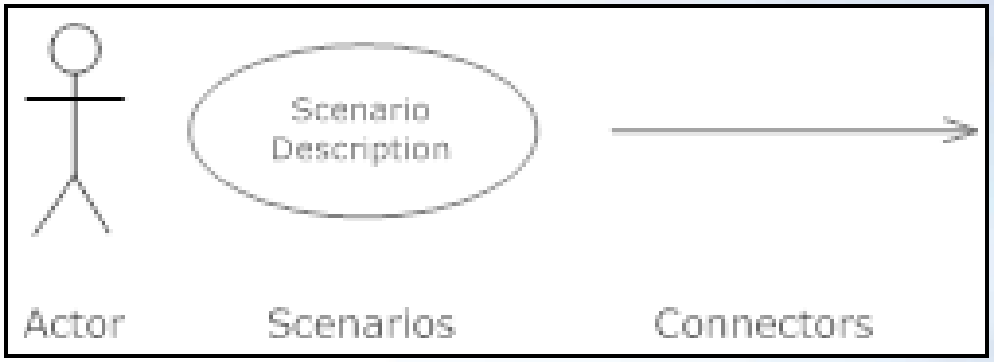
- Create Faculty Accounts
- Manage Courses, Faculty, and Students
- Manage Course Pool
- Submit Problems to Global Pool
- Broadcast Messages

Administrator
User Case Narrative

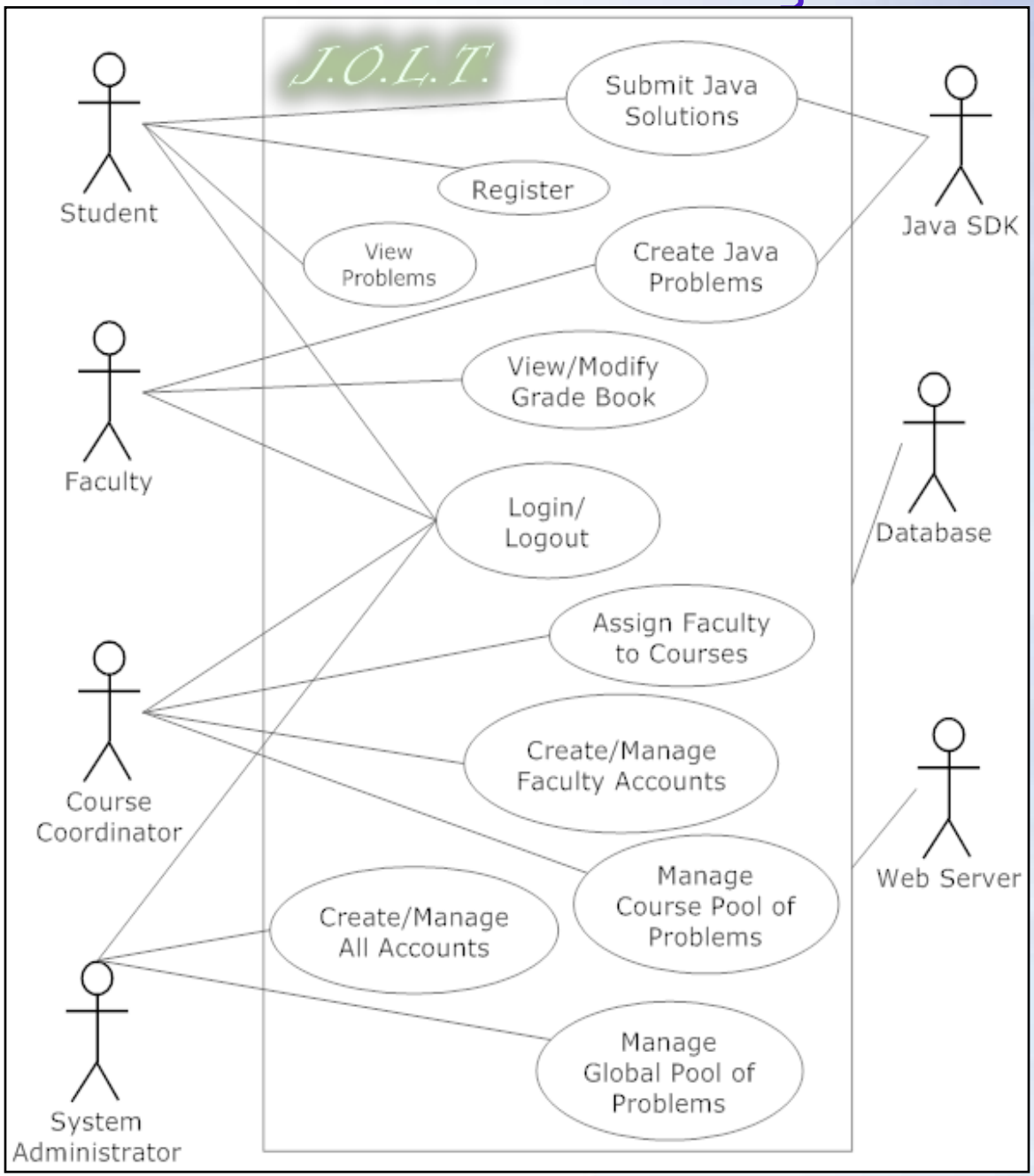
Administrator User:

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

UML Use Case Diagram Key



UML Use Case Diagram



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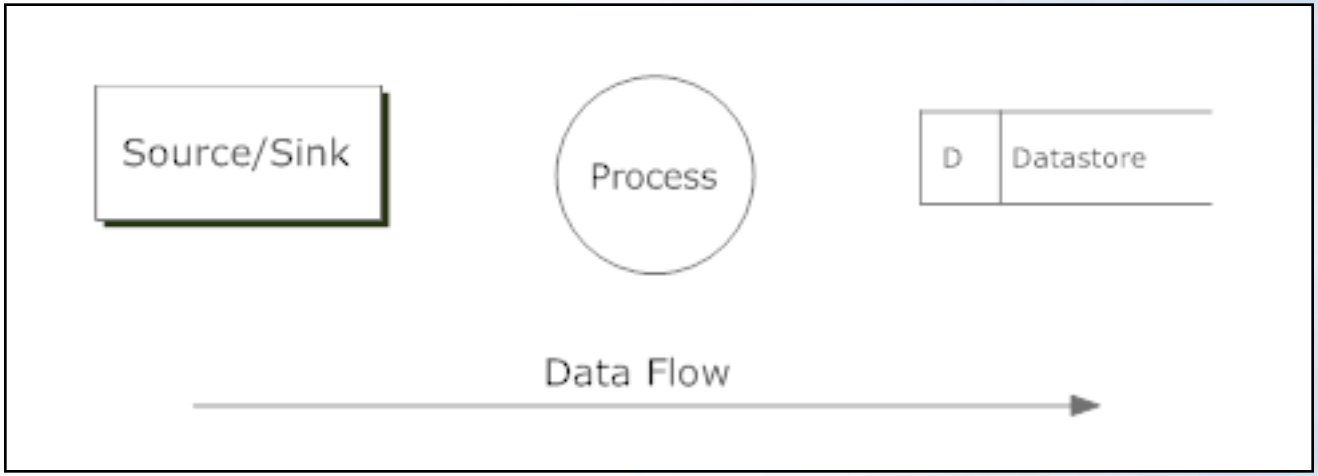
Data Flow Diagrams

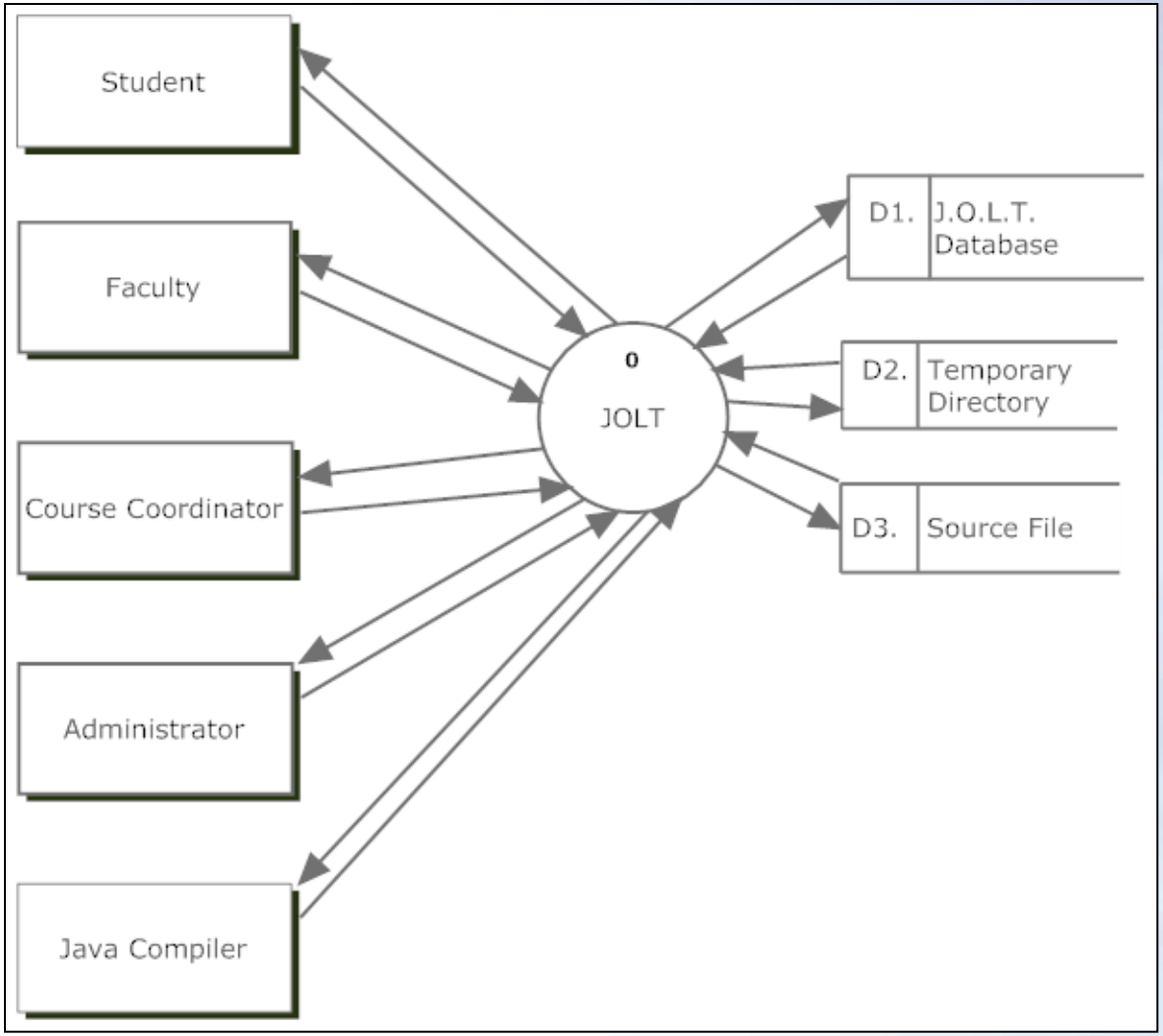
Data flow diagrams provide:

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

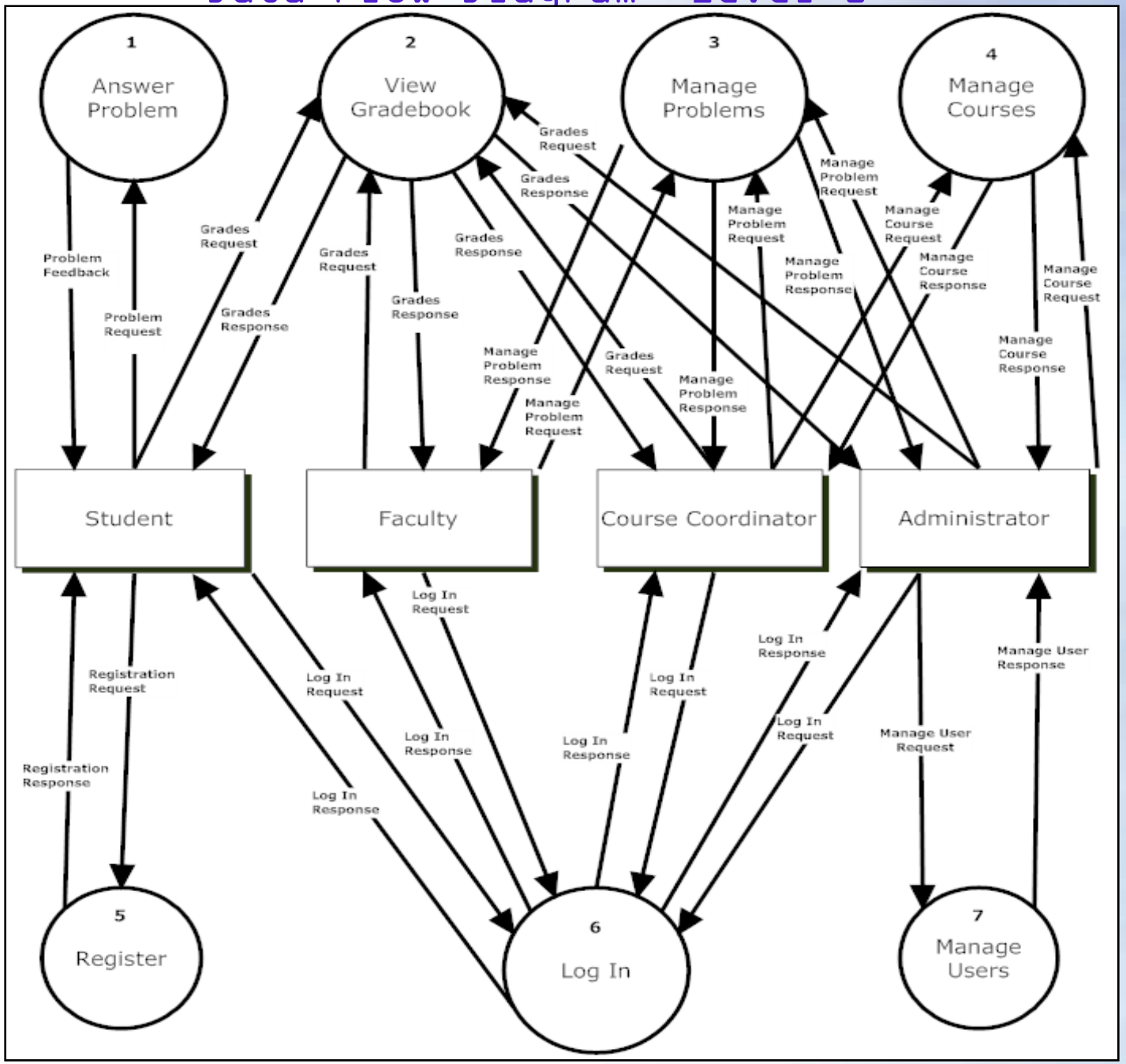
Data Flow Diagram Key



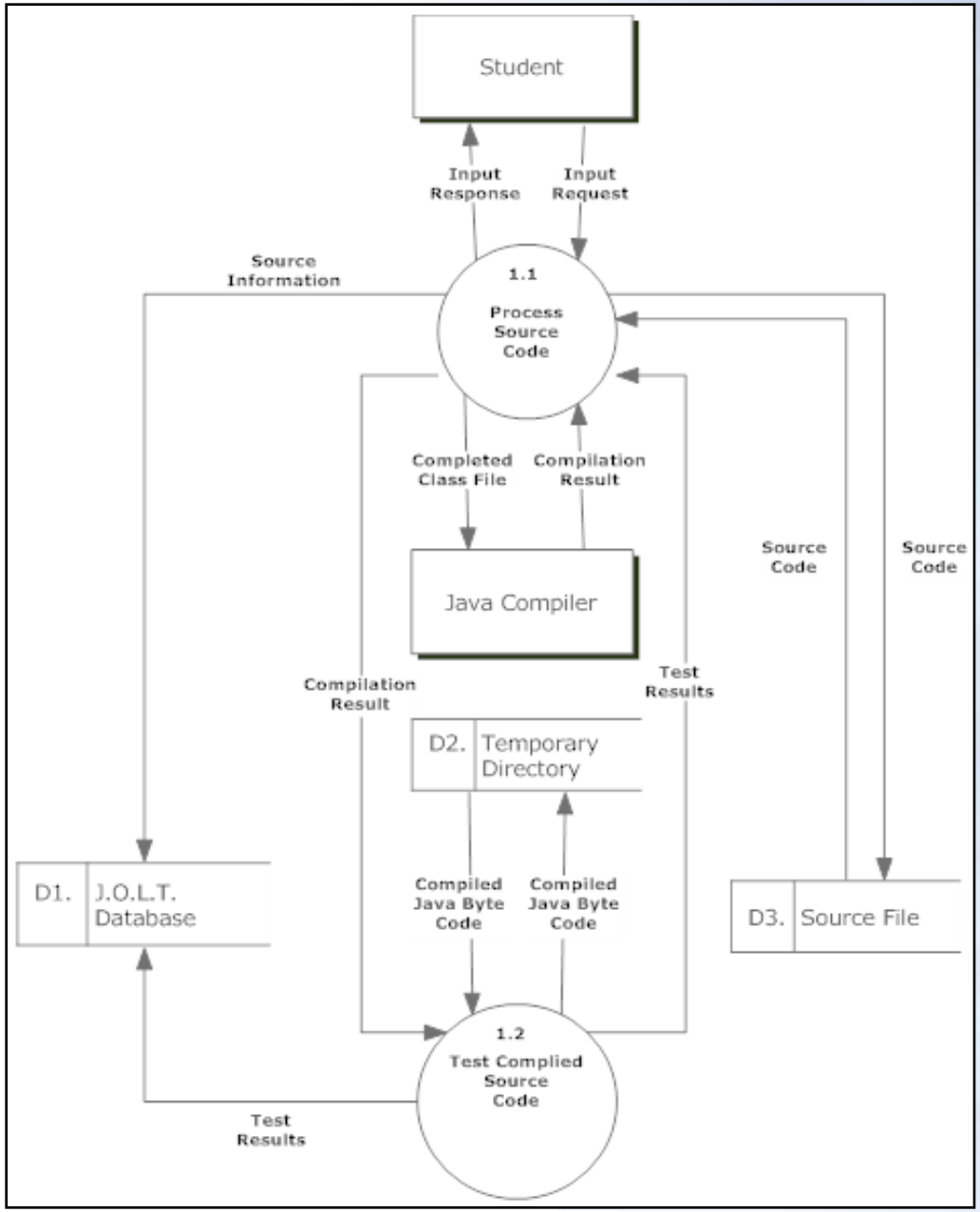
Context Diagram



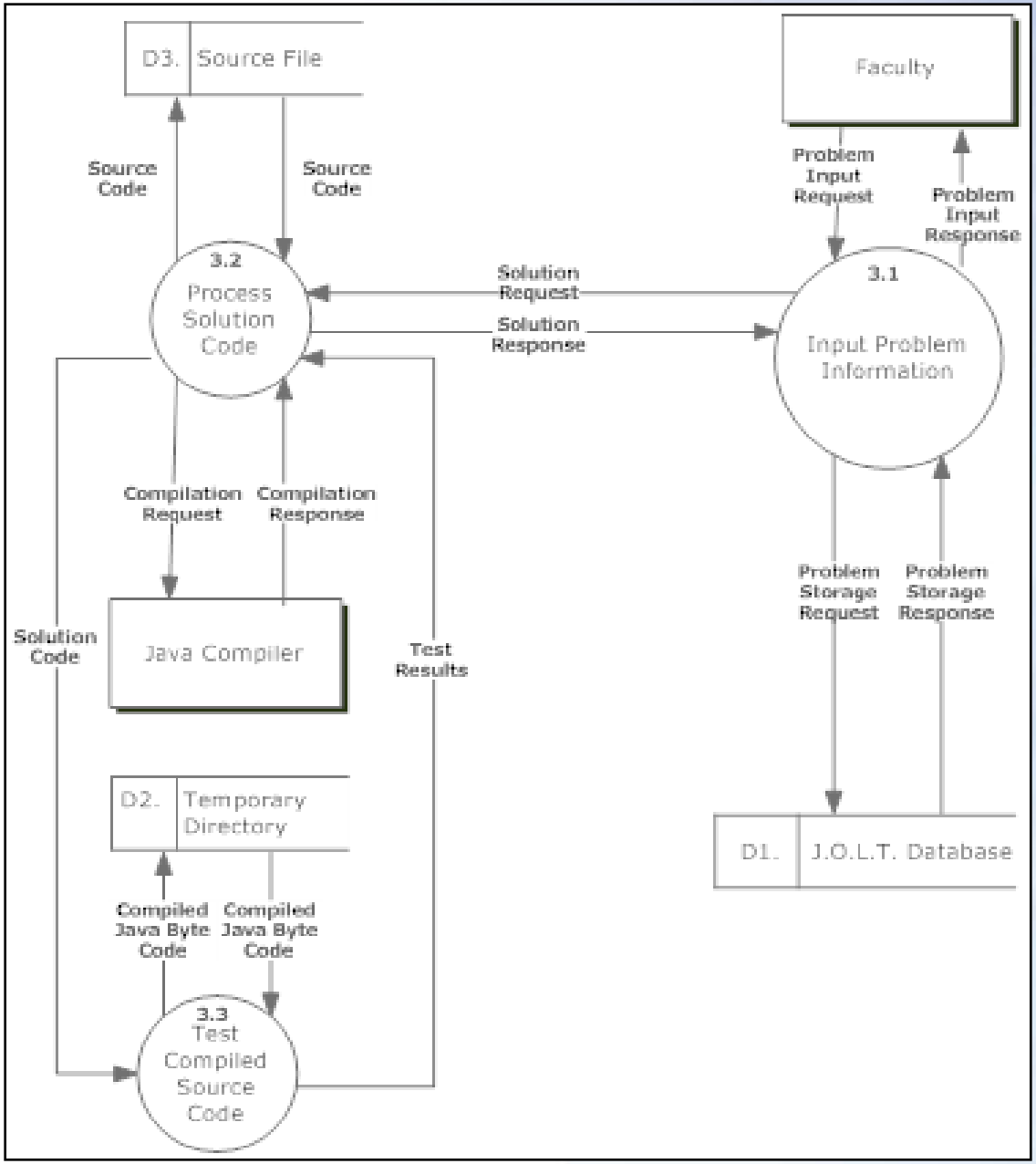
Data Flow Diagram: Level 0



Data Flow Diagram: Level 1
Student Solve Problem



Data Flow Diagram: Level 1
Faculty Create Problem



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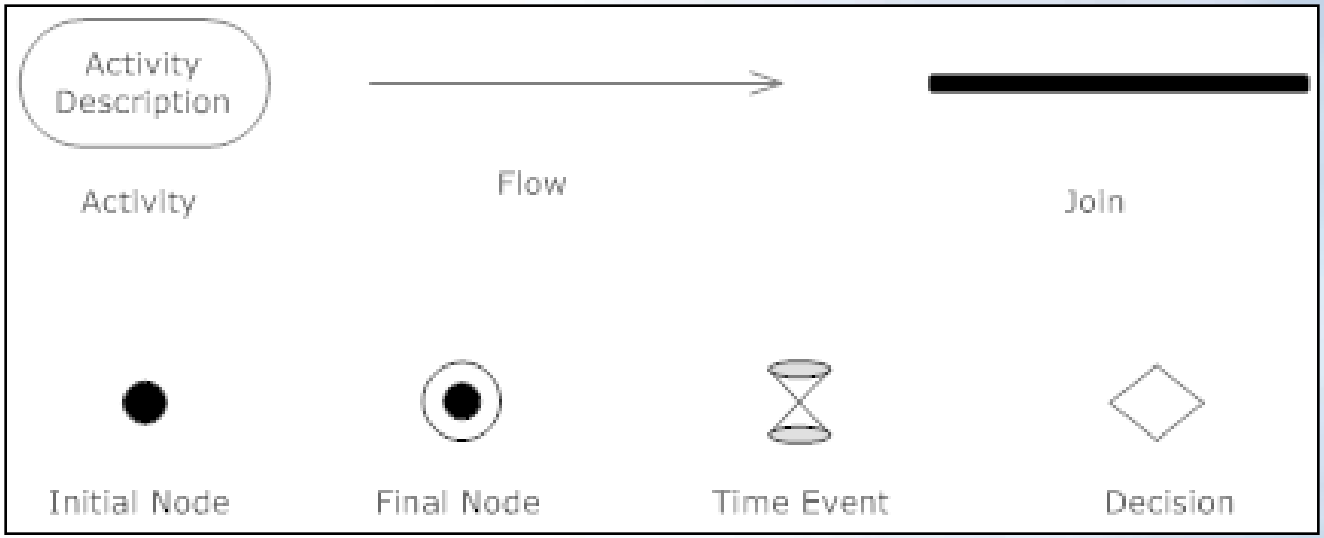
UML Activity Diagrams

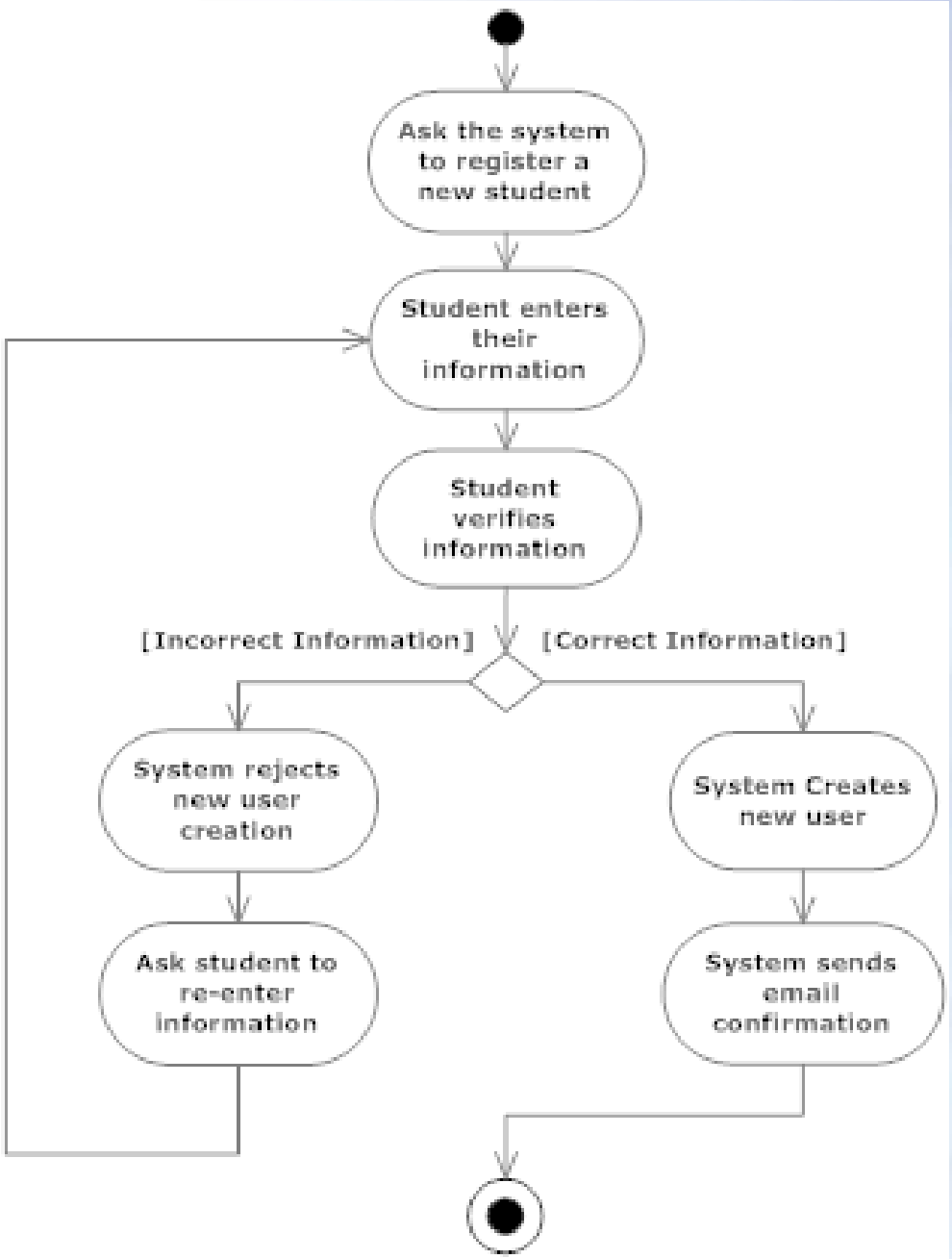
Activity Diagrams Provide:

- Visible Stepwise Progression
- Shows the overall flow of control

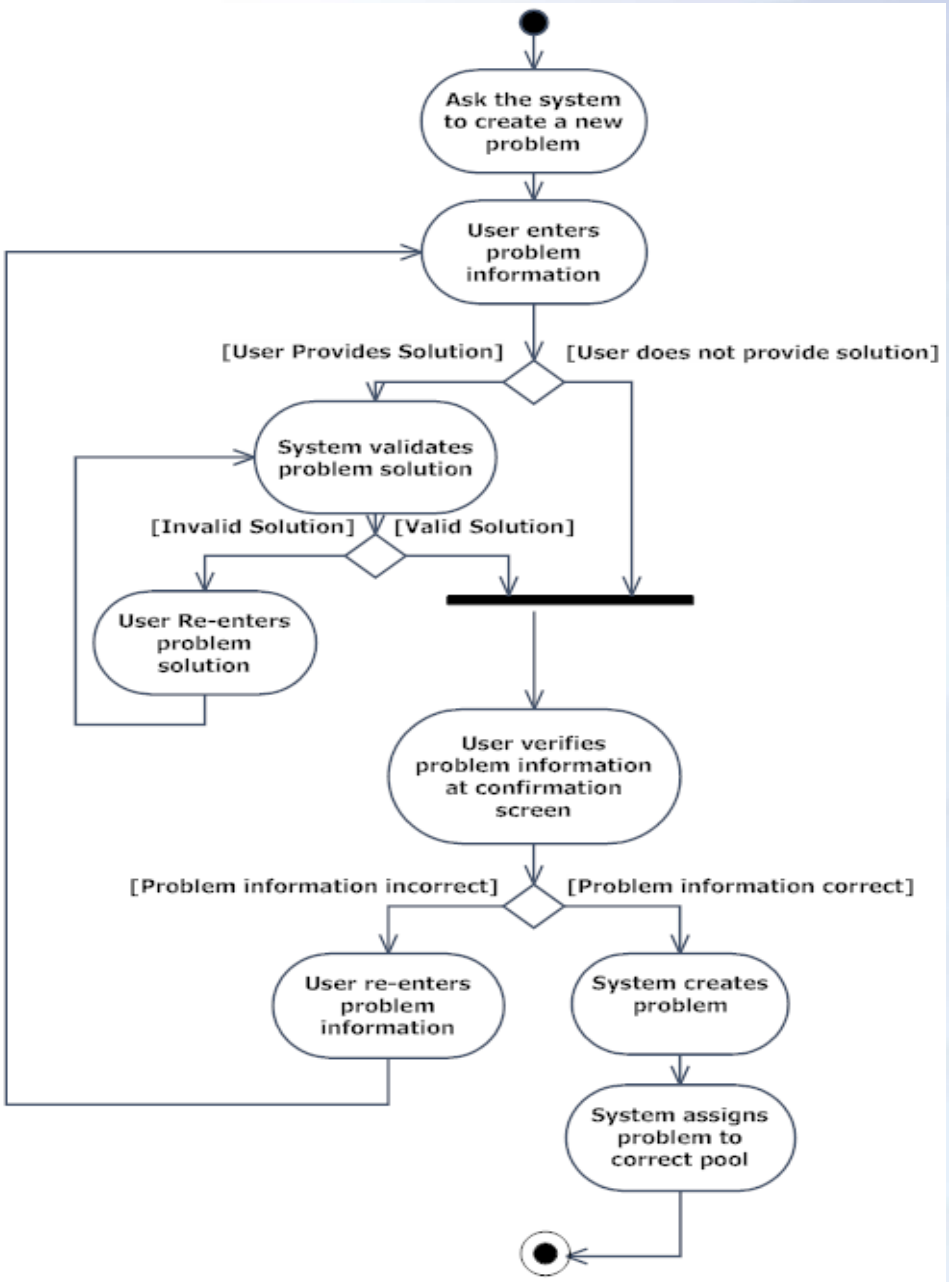
UML Activity Diagram Key



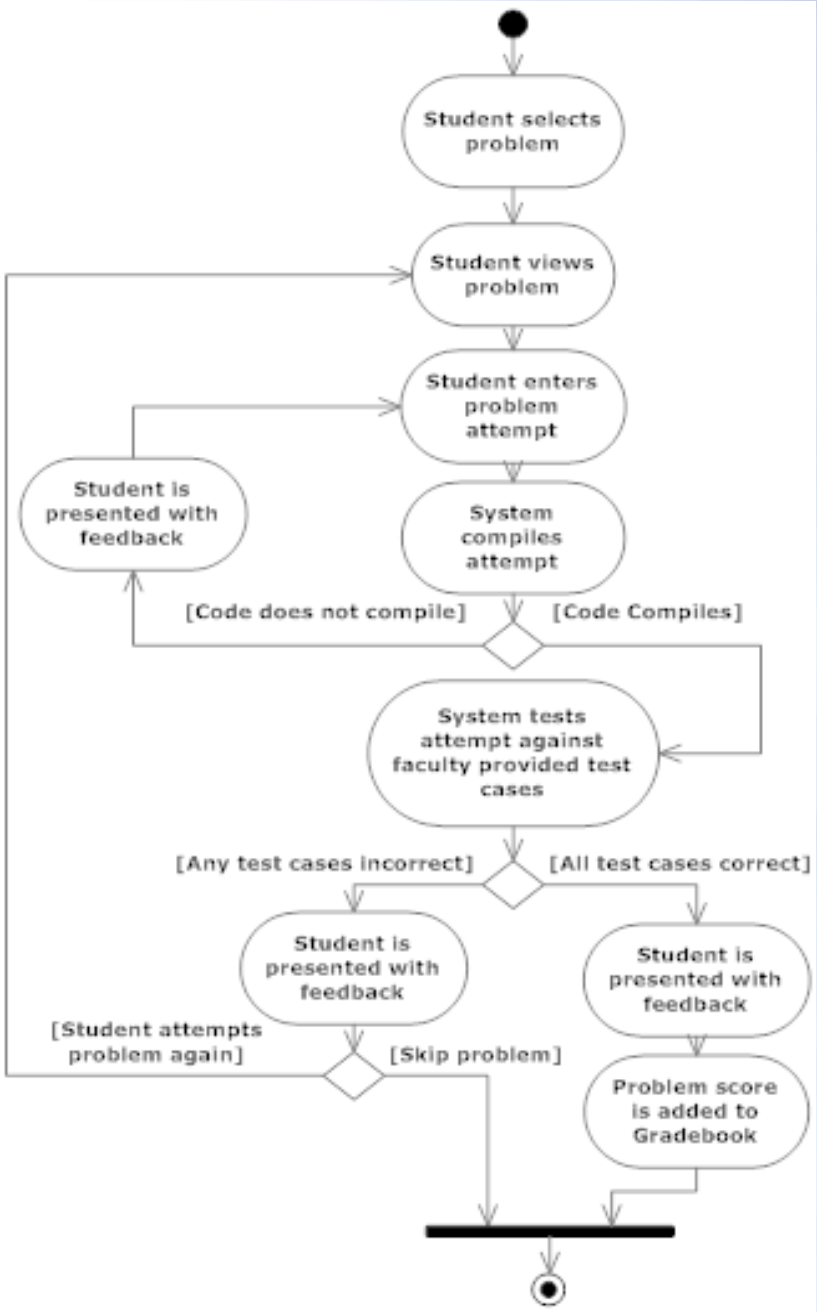
UML Activity Diagram: Student Registration



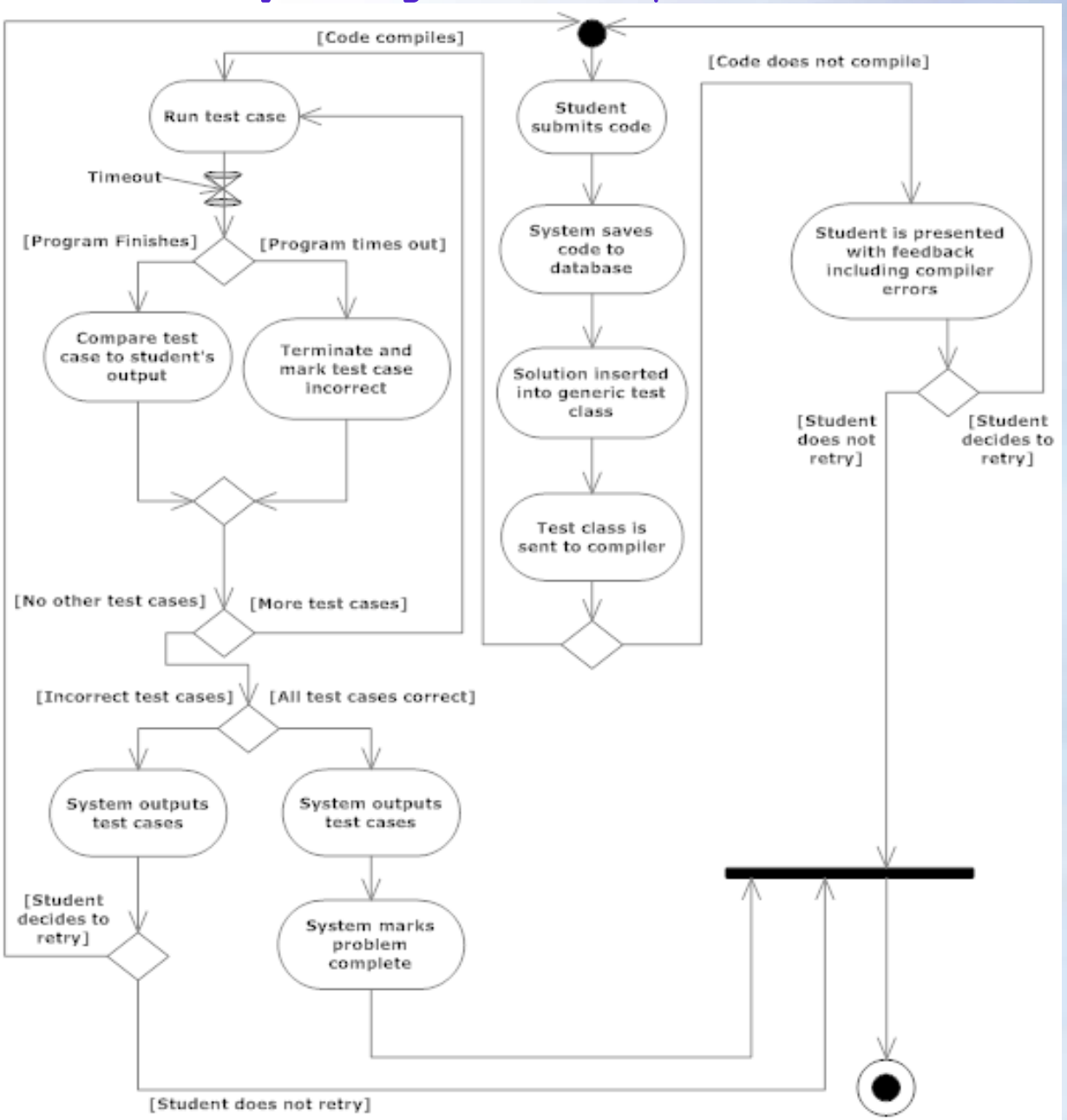
UML Activity Diagram: Faculty Create Problem



UML Activity Diagram: Student Solve Problem



UML Activity Diagram: Compile, Save, Run



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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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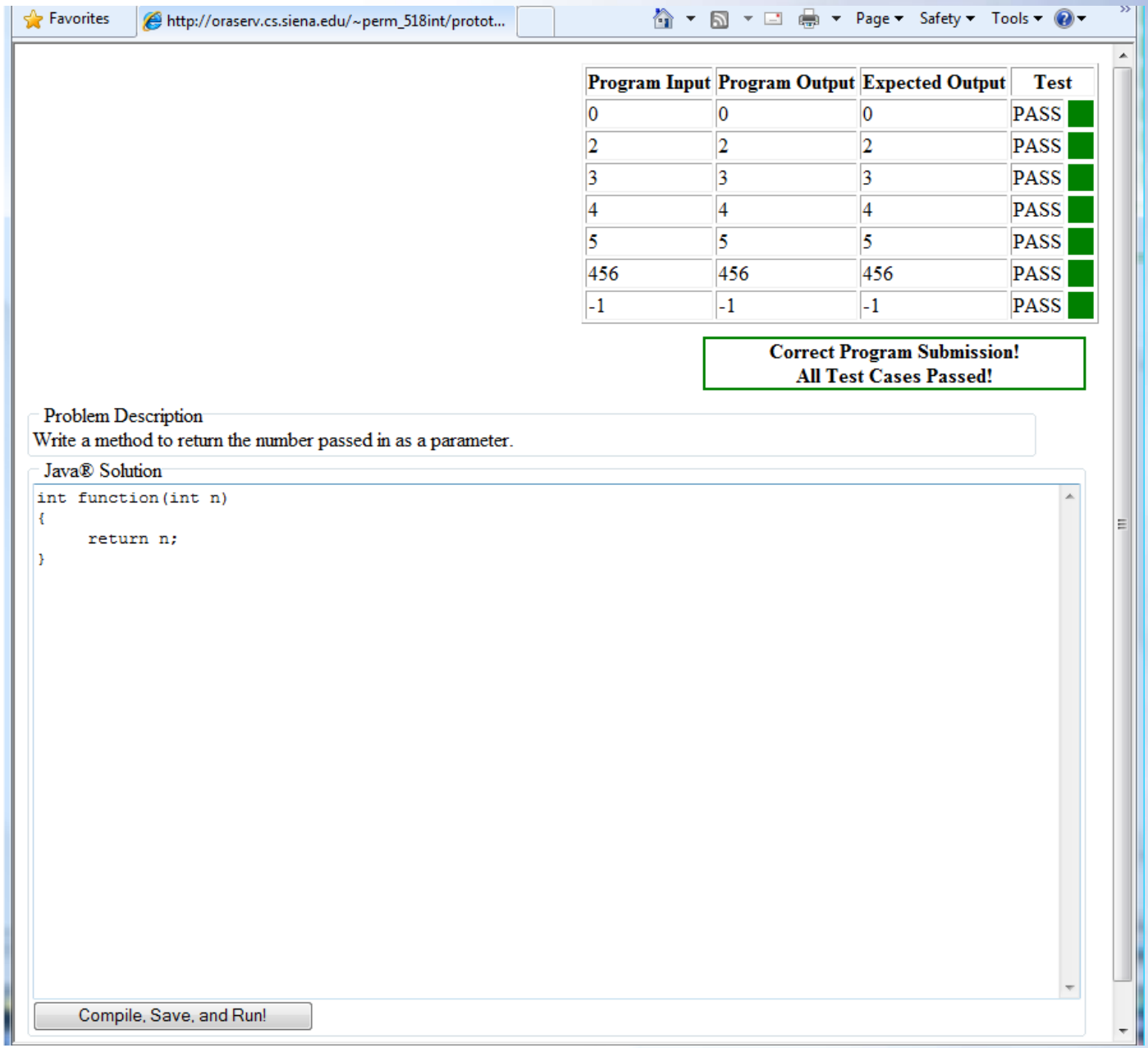
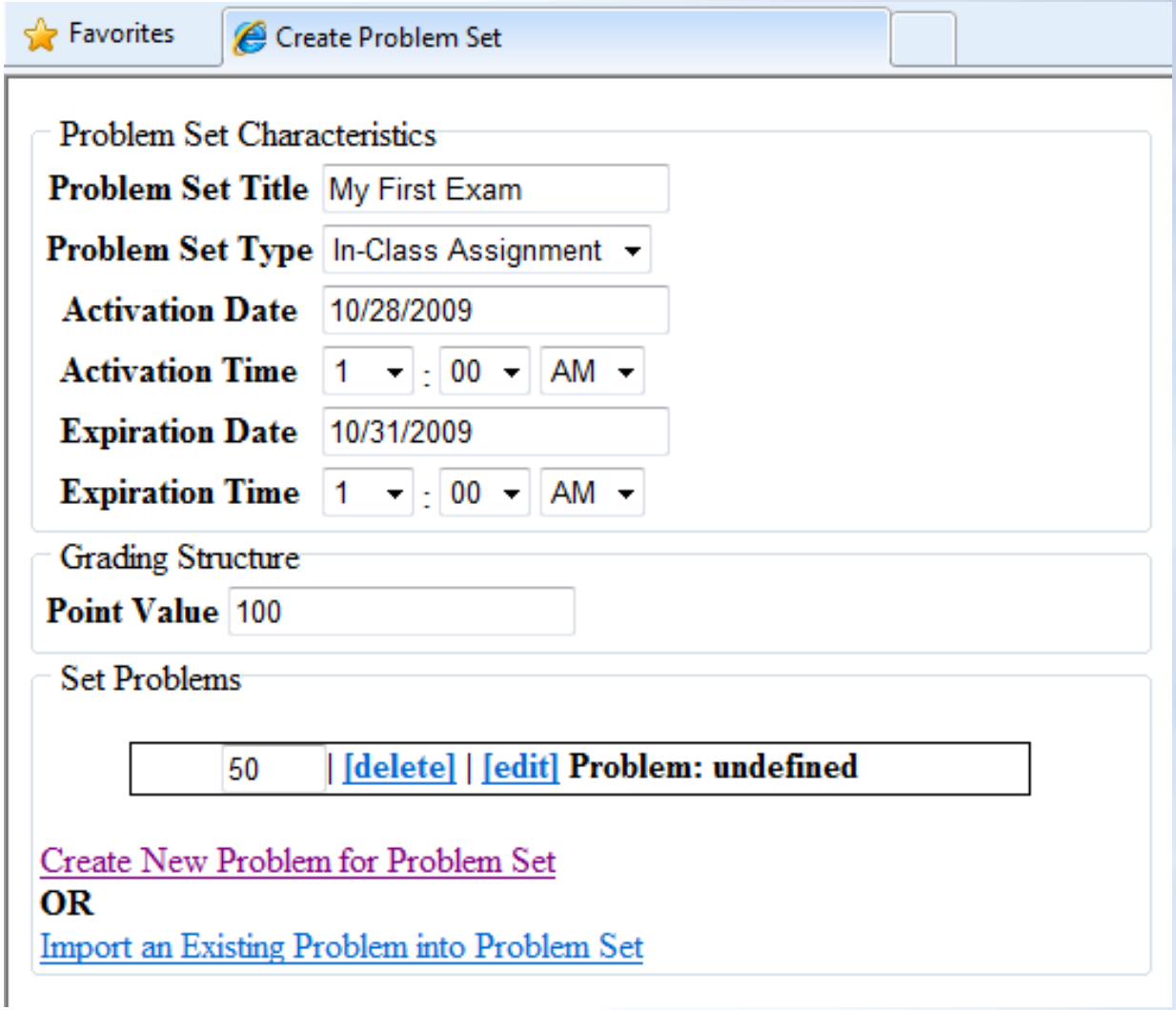
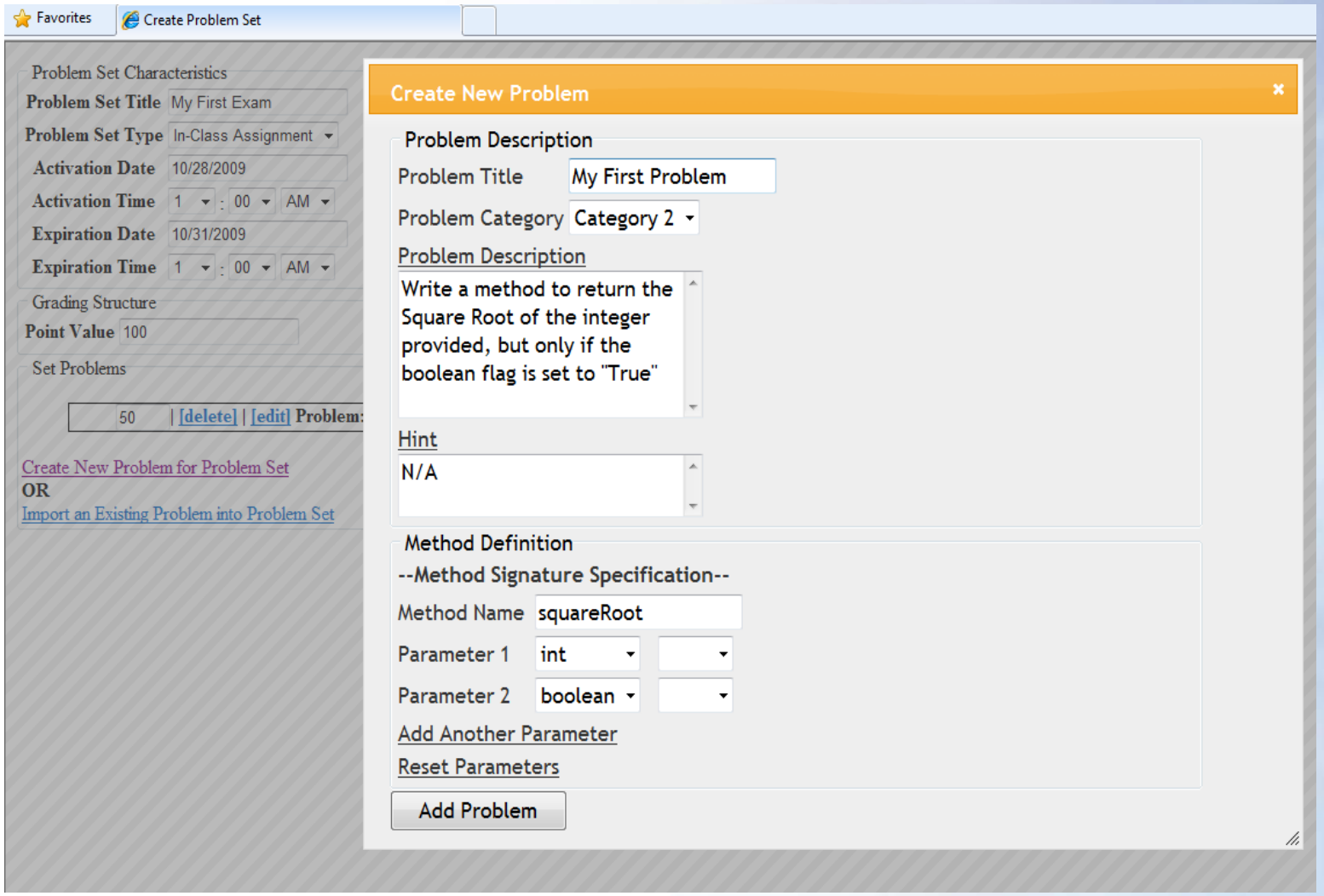
Prototypes


Favorites
http://oraserv.cs.siena.edu/~perm_518int/protot...
Page
Safety
Tools
Program Input | Program Output | Expected Output | Test
0 | 0 | 0 | PASS
2 | 2 | 2 | PASS
3 | 3 | 3 | PASS
4 | 4 | 4 | PASS
5 | 5 | 5 | PASS
456 | 456 | 456 | PASS
-1 | -1 | -1 | PASS
Correct Program Submission!
All Test Cases Passed!
Problem Description
Write a method to return the number passed in as a parameter.
Java® Solution
int function(int n)
{
return n;
}
Compile, Save, and Run!

Prototypes


Favorites
Create Problem Set
Problem Set Characteristics
Problem Set Title
My First Exam
Problem Set Type
In-Class Assignment
Activation Date
10/28/2009
Activation Time
1
00
AM
Expiration Date
10/31/2009
Expiration Time
1
00
AM
Grading Structure
Point Value
100
Set Problems
50
[delete] | [edit] Problem: undefined
Create New Problem for Problem Set
OR
Import an Existing Problem into Problem Set

Prototypes


Favorites
Create Problem Set
Problem Set Characteristics
Problem Set Title My First Exam
Problem Set Type In-Class Assignment
Activation Date 10/28/2009
Activation Time 1 : 00 AM
Expiration Date 10/31/2009
Expiration Time 1 : 00 AM
Grading Structure
Point Value 100
Set Problems
50 | [delete] | [edit] Problem:
Create New Problem for Problem Set
OR
Import an Existing Problem into Problem Set
Create New Problem
Problem Description
Problem Title My First Problem
Problem Category Category 2
Problem Description
Write a method to return the Square Root of the integer provided, but only if the boolean flag is set to "True"
Hint
N/A
Method Definition
--Method Signature Specification--
Method Name squareRoot
Parameter 1 int
Parameter 2 boolean
Add Another Parameter
Reset Parameters
Add Problem

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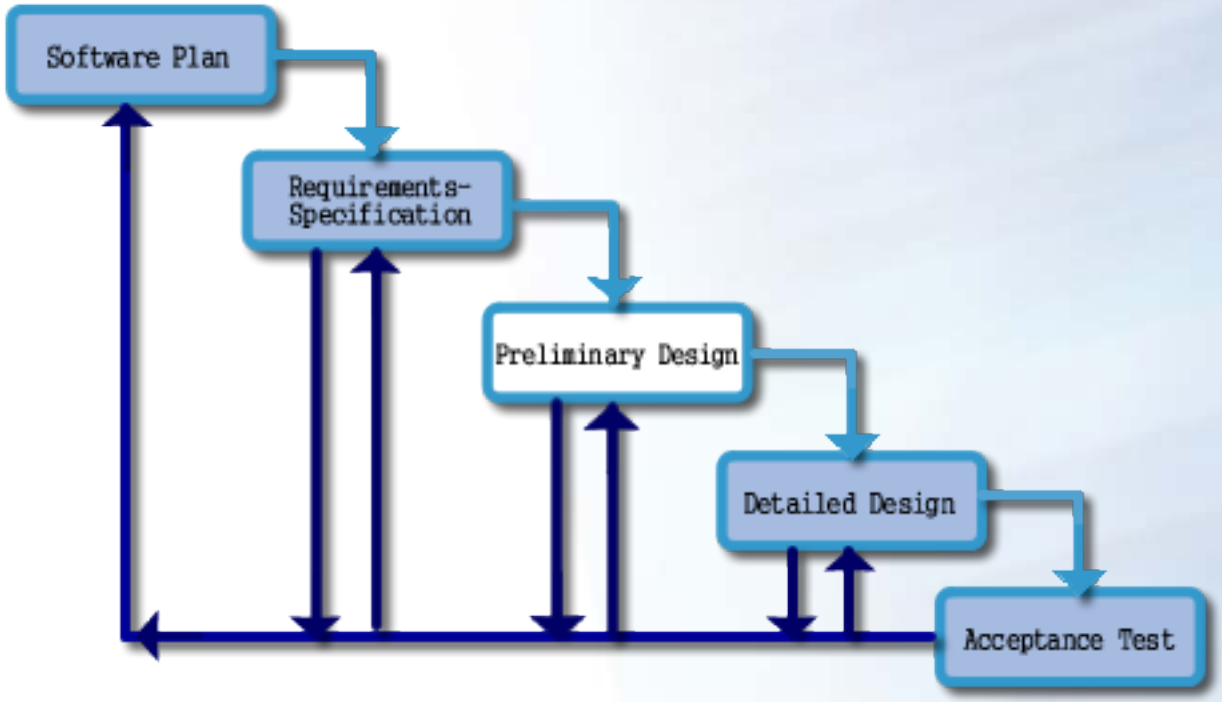
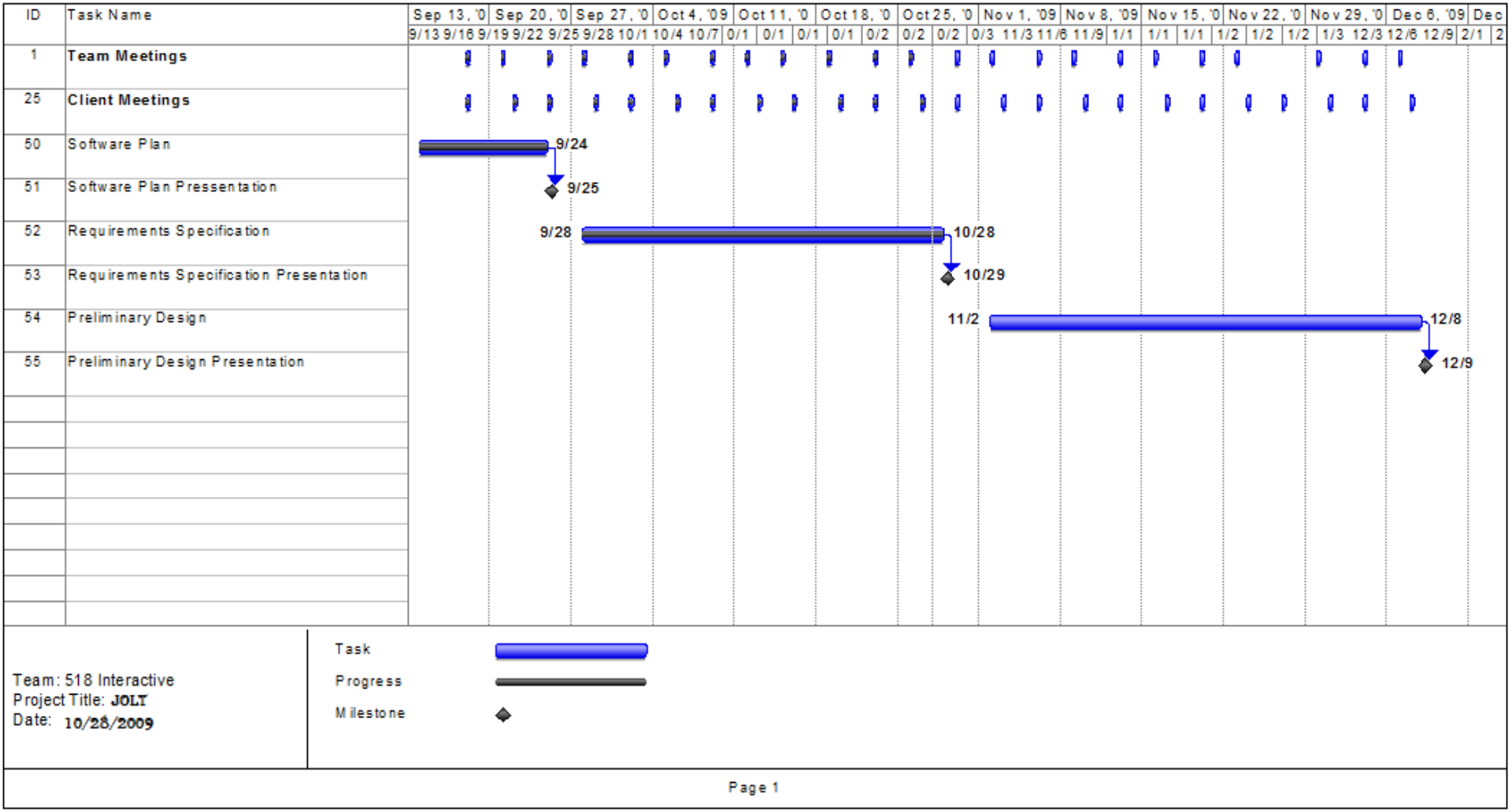
What's next


Software Plan
Requirements-Specification
Preliminary Design
Detailed Design
Acceptance Test

Timeline (Gantt Chart)



J.O.L.I.

Questions?

Thank You For Coming