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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

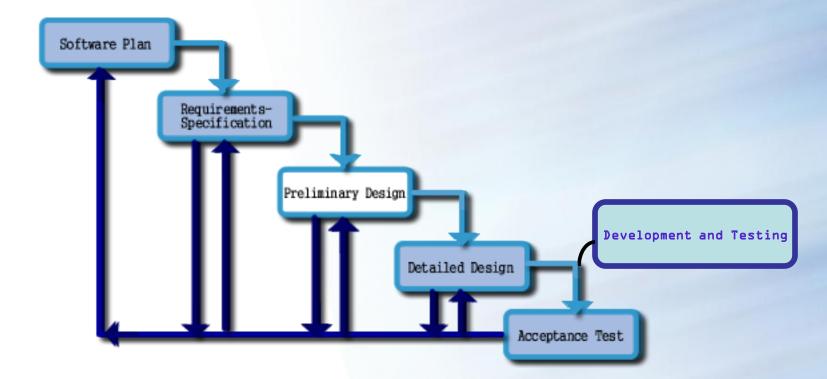


Restatement of Problem

- 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.

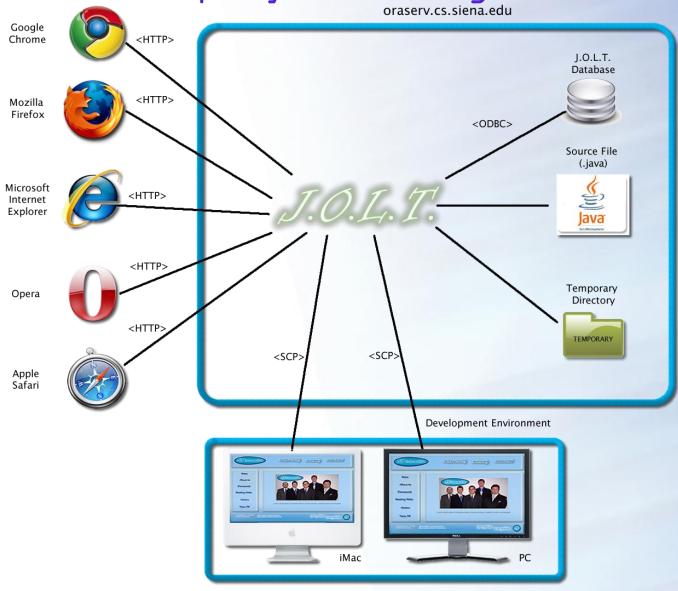


Where we are in Development





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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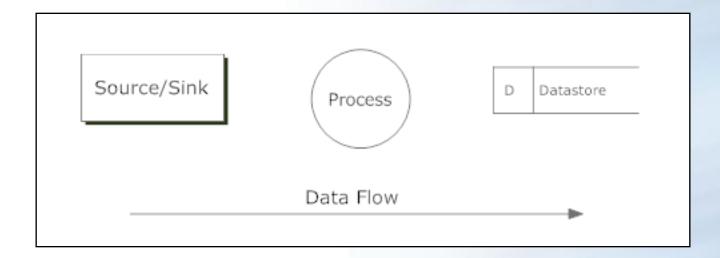
Data Flow Diagrams

Data flow diagrams provide:

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

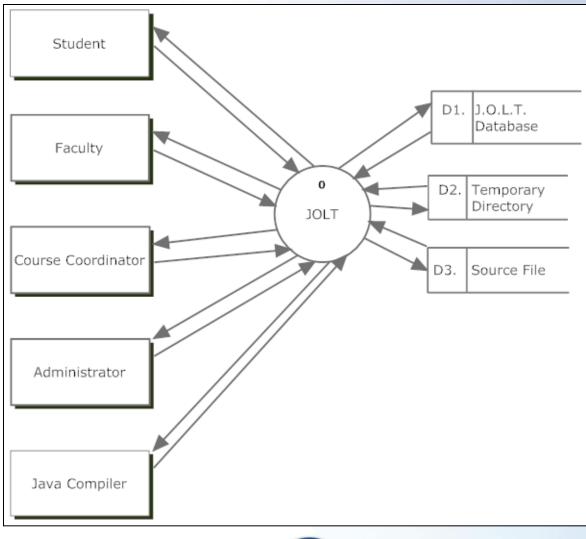


Data Flow Diagram Key



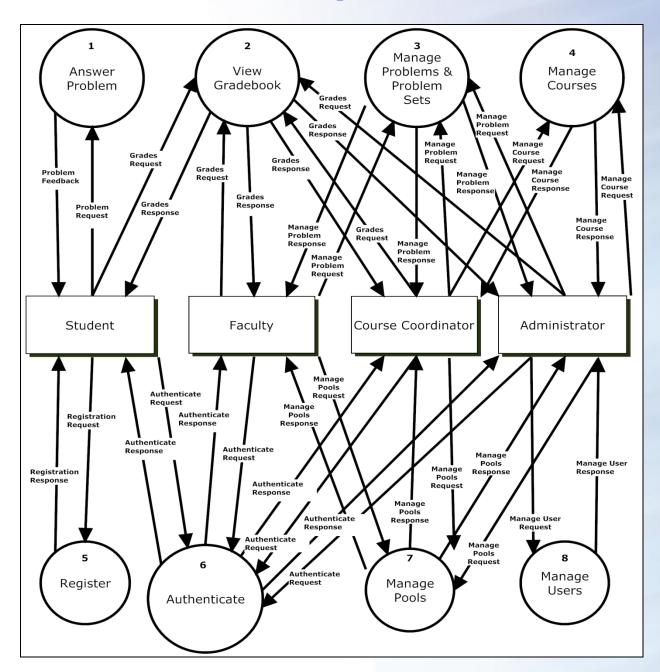


Context Diagram

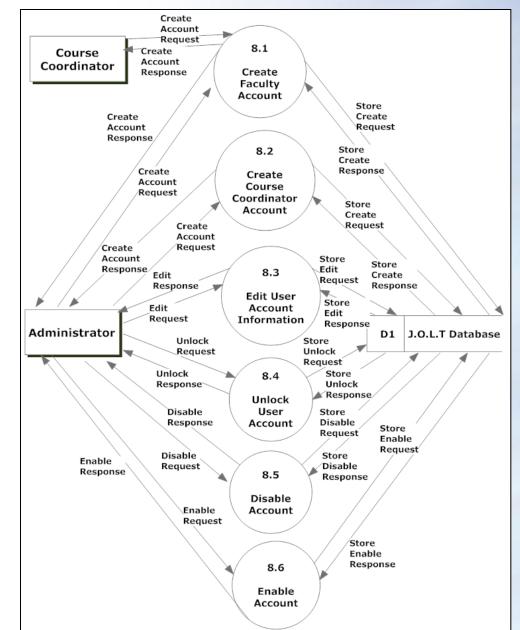




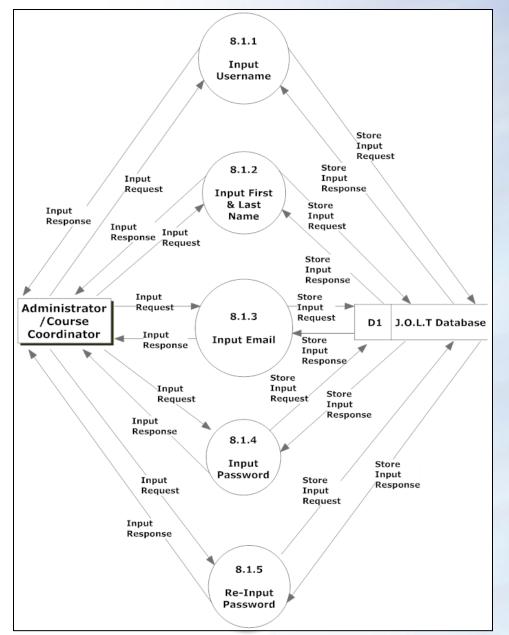
Data Flow Diagram: Level O

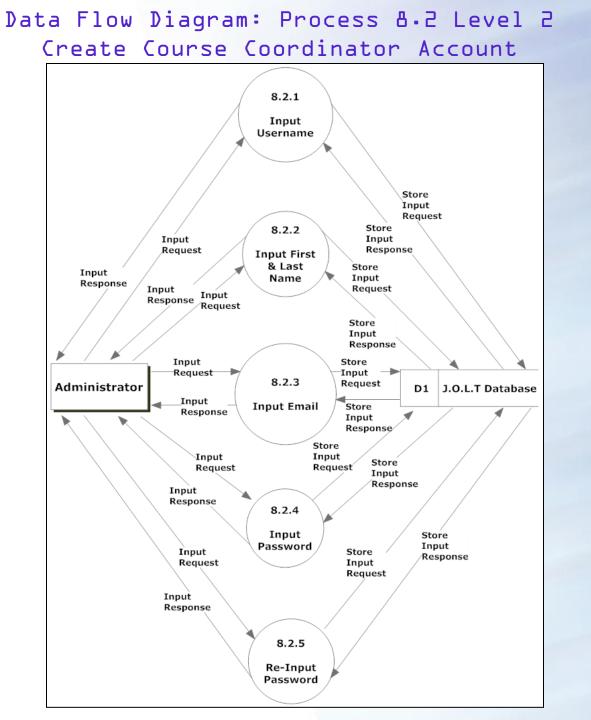


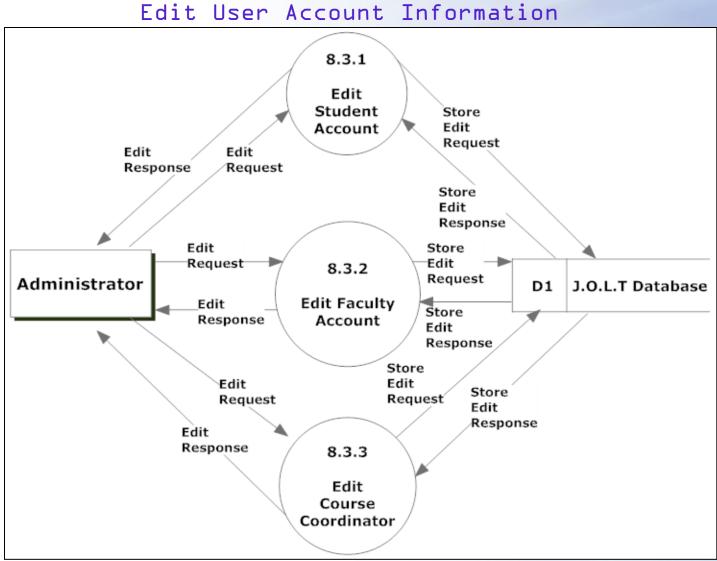
Data Flow Diagram: Process & Level L Manage Users



Data Flow Diagram: Process 8.1 Level 2 Create Faculty Account



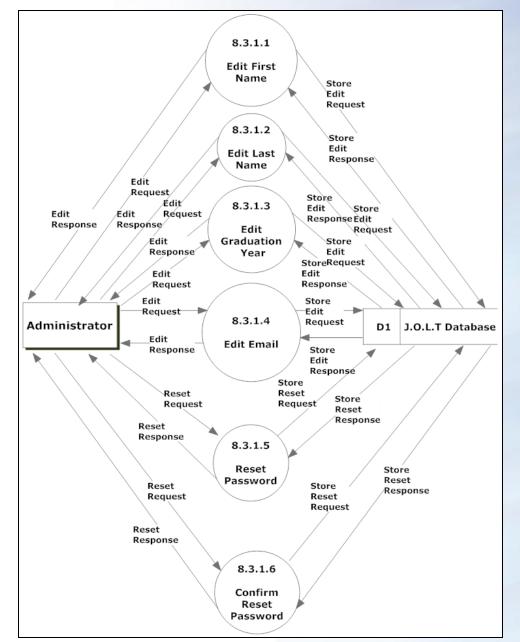




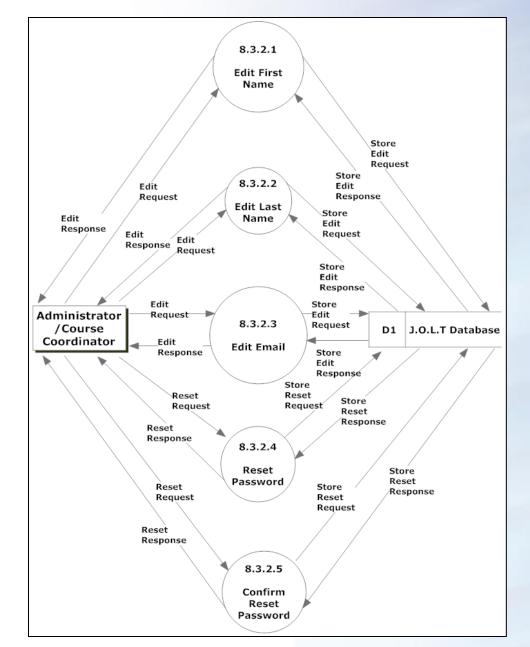




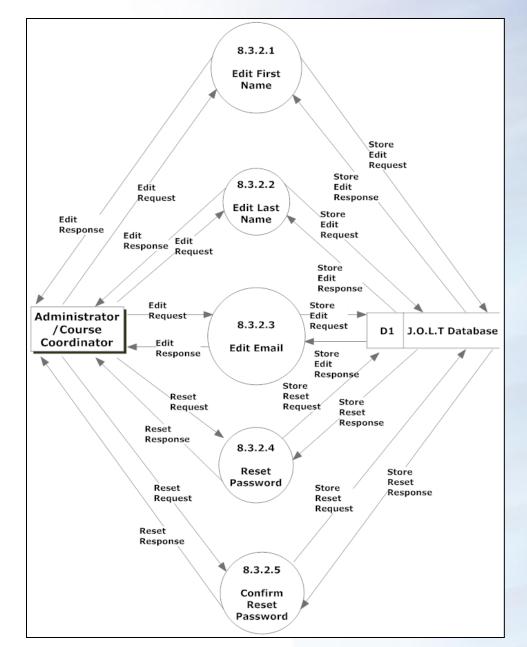
Data Flow Diagram: Process 8.3.1 Level 3 Edit Student Account Information



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
Р	F	1	Registration
Р	F	2	Log on
Р	F	3	Answer Problem

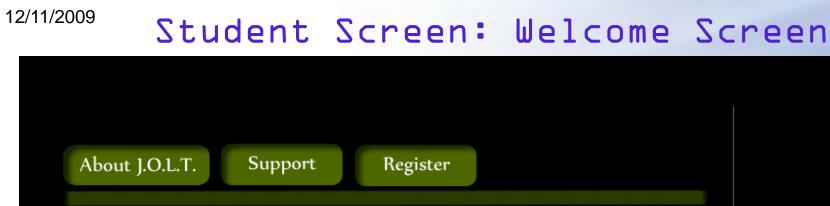


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J.O.L.T.

JAVA ONLINE LEARNING TUTOR

Log in	
Username	
Password	
Log in	
Reset Password	

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Student Screen: Registration

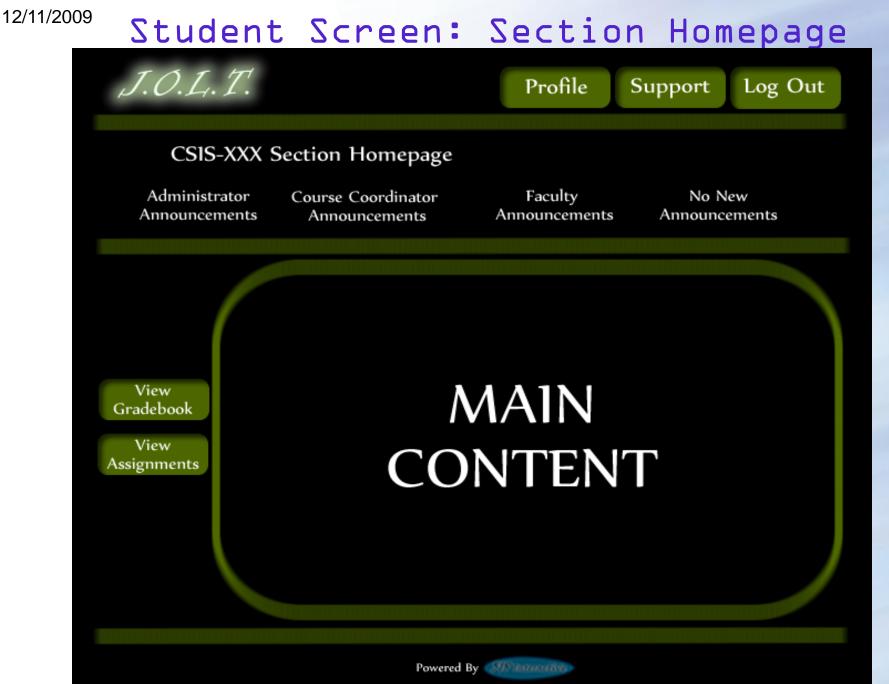
J.O.L.T.		Profile	Support	Log Out
	Eudent Regist All Fields Required First Name Last Name Email Confirm Email Username Password Confirm Password Graduating Year Security Question Security Question Security Question	Answer		
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Student Screen: Student Home

J.O.L.T.	Profile	Support	Log Out
Welcome (Student Username)			
Administrator Course Coordinator Announcements Announcements Ann	No New nouncements		
-CSIS-225 Object Oriented Dr. List of Previous Courses:	flatland Fall 200	2009	
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Copyrigi			

Student Screen: Enroll Error

	Pr	rofile Support Log Out
Welcome (Student Usern	ame)	
Administrator Co Announcements	Incorrect PIN	
List of C -CSIS-210 -CSIS-225 List of Previo	OK ous Courses:	
	a Structures Dr. Flatland ect Oriented Dr. Lim Enter PIN	Fall 2008 Spring 2009 Submit
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^{12/11/2009} Student Screen: Active Assignments



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Student Screen: Problem Set

		A		
J.O.	L.T.		Profile Support	Log Out
Proble	em Set: Strin	g Practice		Return to Course Home
Pr	oblem Name	Category	Point Value	Status
	Namel	Strings	20	
	Name2	Recursion	10	
	Name3	Arrays	10	
	<u>Name4</u>	Algorithms	20	
	<u>Name5</u>	Trees	40	
		То	tal: 100	
	Select New Problem Set Continue to first problem			m
You can click on any problem's name to jump right to that problem				
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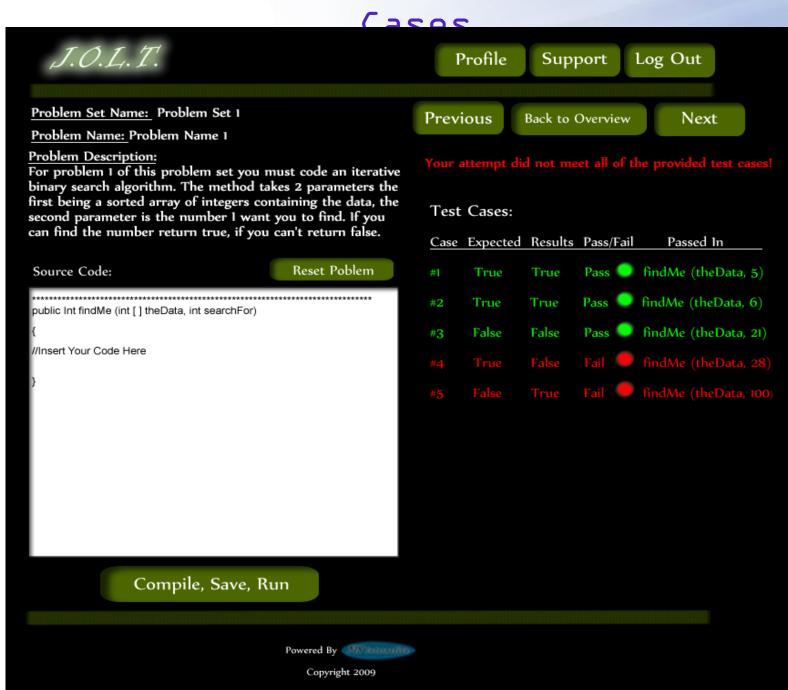
Student Screen: Answer Problem

J.O.L.T.		Profile	Support	Log Out
Problem Set Name: Problem Set 1	Previou	s Back	to Overview	Next
Problem Name: Problem Name 1				
<u>Problem Description:</u> For problem 1 of this problem set you must code an i binary search algorithm. The method takes 2 paramet first being a sorted array of integers containing the d second parameter is the number 1 want you to find.	ters the			
Source Code: Reset Pob	blem			
*************	****			
public Int findMe (int [] theData, int searchFor)				
{ //Insert Your Code Here				
}				
Compile, Save, Run				
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Student Screen: Compiler Error

J.O.L.T.		Profile	Support	Log Out
Problem Set Name: Problem Set 1		Previous	Back to Overview	Next
Problem Name: Problem Name 1				
Problem Description: For problem 1 of this problem set you m	unt on la an itanativa	Your a	nttempt failed to	compile !
or problem for this problem set you in binary search algorithm. The method tal irst being a sorted array of integers con econd parameter is the number 1 want can find the number return true, if you	kes 2 parameters the ntaining the data, the you to find. If you		Compilation Error Main.java:81: ';' expecte- return n	d
Source Code:	Reset Poblem			
public Int findMe (int [] theData, int searchFor)	******			
return n				
Compile, Save, Ru	ın			
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Student Screen: Incorrect Test



Student Screen: Timeout Error

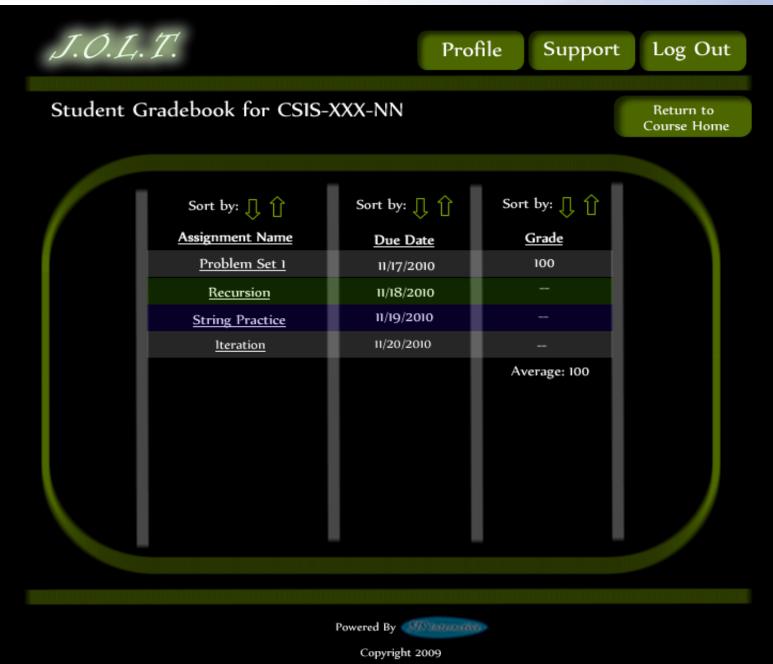
J.O.L.T.		Profile	Supp	ort Log	g Out	
Problem Set Name: Problem Set 1	Pre	vious	Back to O	verview	Next	
Problem Name: Problem Name 1 Problem Description: For problem 1 of this problem set you must code an iterative pinary search algorithm. The method takes 2 parameters the		One or more of your test cases have timed out!				
first being a sorted array of integers containing the data, the second parameter is the number 1 want you to find. If you can find the number return true, if you can't return false.		Cases: Expected	Results	Pass/Fail	Passed In	
Source Code: Reset Poblem		True	Timeout		findMe (theData, 12	
public Int findMe (int [] theData, int searchFor)	#2	True False	Timeout	Fail 🛑 Fail 🛑	findMe (theData, 24	
while(true){		False	Timeout Timeout		findMe (theData, 16 findMe (theData, 30	
	#5	False	Timeout		findMe (theData, 10	
Compile, Save, Run						
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Student Screen: Correct Attempt

J.O.L.T.			Profile	Sup	oport	Log	Out
Problem Set Name: Problem Set 1		Prev	vious	Back to	Overviev	N	Next
blem Name: Problem Name 1					1.411.00		
Problem Description: For problem 1 of this problem set you must code an iterative binary search algorithm. The method takes 2 parameters the		Test	You Cases:	Have Pas	ssed All T	est Case	281
rst being a sorted array of integers con	st being a sorted array of integers containing the data, the		Expected	Results	Pass/Fai	l Pa	issed In
econd parameter is the number 1 want you to find. If you an find the number return true, if you can't return false.		#1	True	True	Pass 🦲	findM	e (theData
Source Code:	Reset Poblem	#2	True	True	Pass 🦲	findMe	e (theData,
oublic Int findMe (int [] theData, int searchFor)	*****	#3	False	False	Pass 🦲		e (theData
		#4	True	True	Pass 🌔	findM	e (theData
		#5	True	True	Pass 🦲	findMe	e (theData,
		#6	XXX	XXX	Pass 🦲	findM	e (XXXXXX
			Itali	cs Denote	Hidden T	est Cases	
			Ret	urn to	Proble	m Set	
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Student Screen: Section Gradebook

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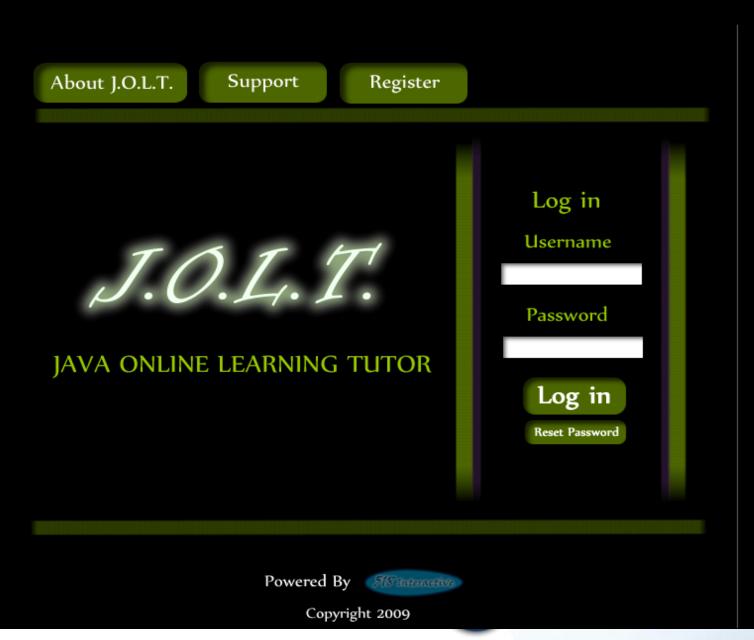
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Faculty Screen: Log In



Faculty Screen: Faculty Home



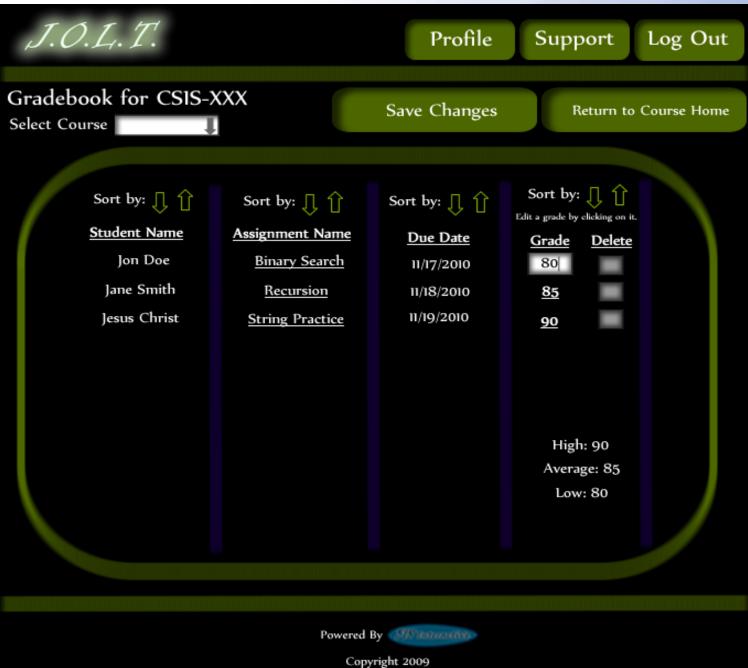
Faculty Screen: Create Problem

J.O.L	. <i>T</i> .			Profile	Support	Log Out	
Create/Edi	it Problem						
Problem In	formation						
Title	String Practice		Description	ength of the string provided.	*		
Category	Practice		Keturn the	engul of the string provided.	•		
Method Name	stringLength				I.		
					Ŧ		
Parameters	S						
Name	paraml					Result	
Туре	String	Ţ	Ţ	Ţ	Į i	nt 📕	
Test Cases Test Case 1	"Test"						Hidden X
Test Case 2	"Test2"						
Test Case 3							
Test Case 4							
Test Case 5							
			Add Test	t Case			
Solution Cod							
ŧ	;Length(String pa aram1.length();	araml) 🕇	Sa	ave Problem	Crea	ate Problen	n
			Powered By 🐠 Copyright 20				

Faculty Screen: Create Problem Set



Faculty Screen: Gradebook



Faculty Screen: Edit Profile

J.O.L.T.		Profile	Support	Log Out
	Edit Profi	le		
	All fields are required First Name	Jon		
	Last Name Email	Smith ja28smit@siena.edu		
	Confirm Email	ja28smit@siena.edu		
	Password Confirm Password	•••••		
	Security Question	First Pet Name		
	Security Question			
	Save Chan	ges		
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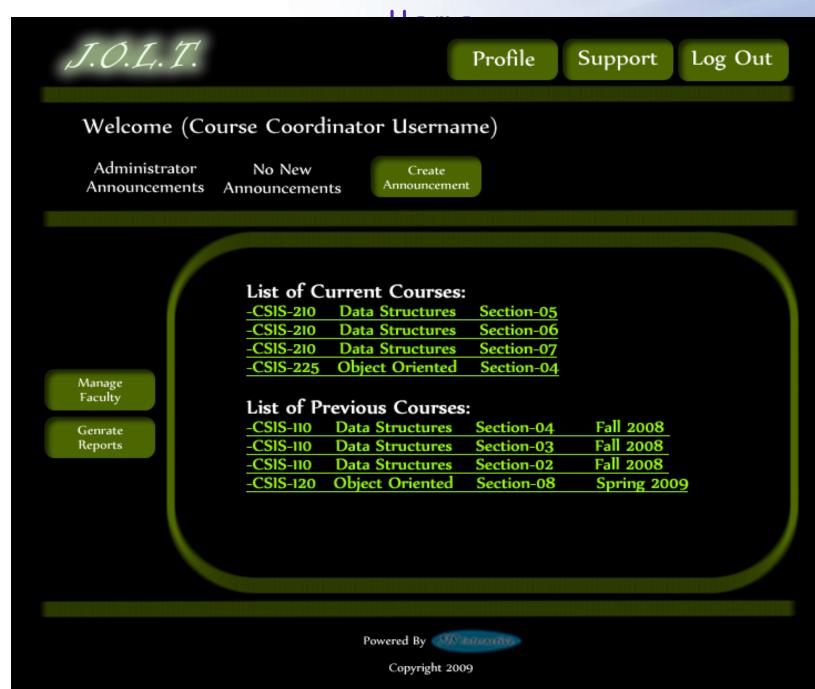


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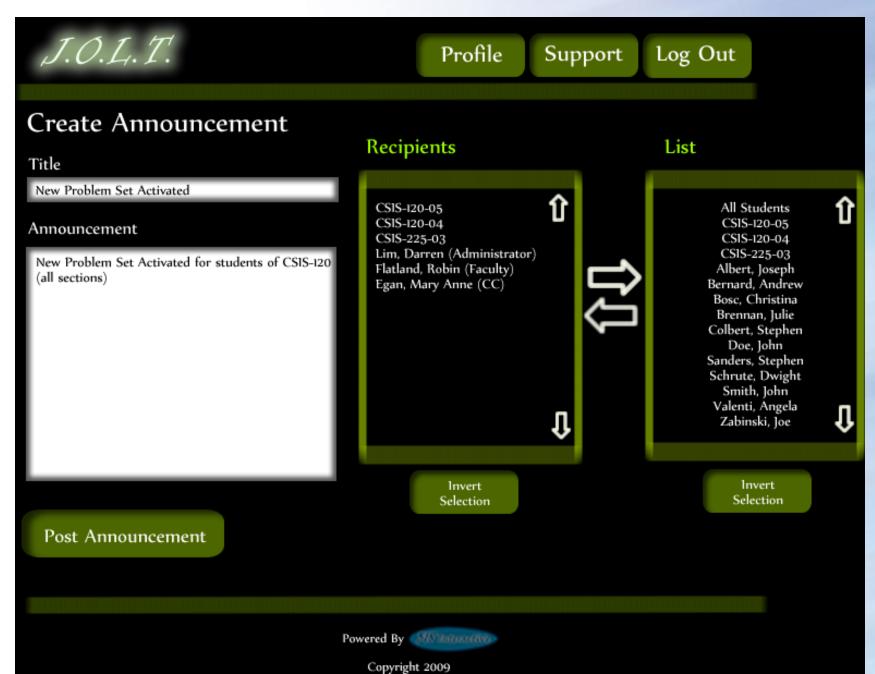
Course Coordinator Screen: Log In



12/11/2009 Course Coordinator Screen: (.(.



Course Coordinator Screen: Create Announcement



^{12/11/2009} Course Coordinator Screen: Announcement Created



Your announncement has been sucessfully sent to:

CSIS-120-05 CSIS-120-04 CSIS-225-03 Darren Lim (Administrator) Robin Flatland (Faculty) Mary Anne Egan (CC)

Return to Course Home

Return to Course Select

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12/11/2009 Course Coordinator Screen: Create

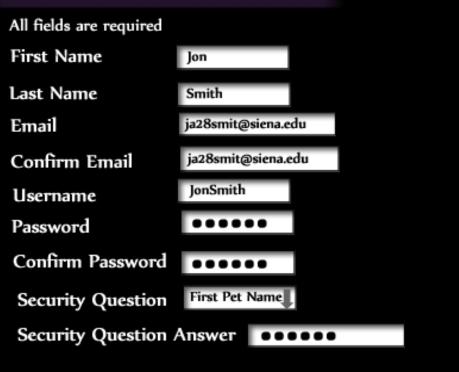
Faculty

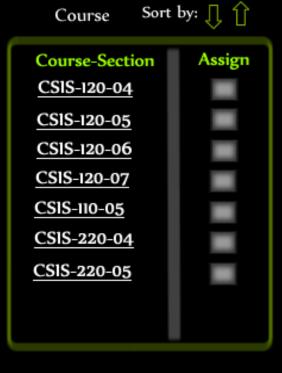


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Create Faculty Account

J.O.L.T.





Create Account

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Edit Course Section For CSIS-XXX

Semester	Fall 2009	Ŧ
Number	09	
Time	8:15-910 AM	T
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Agenda

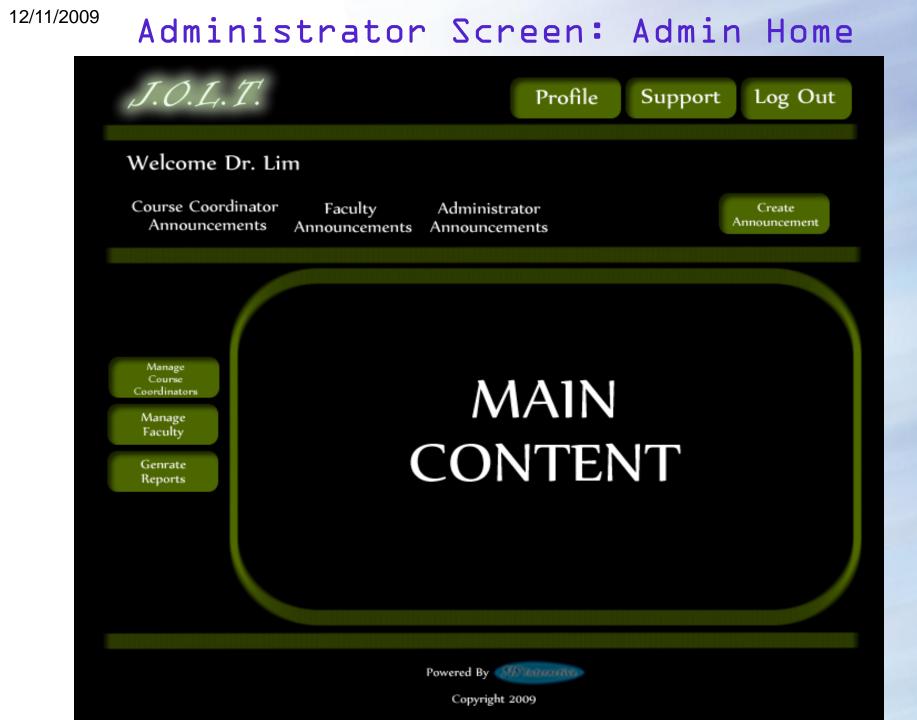
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Administrator Log In







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^{12/11/2009} Administrator Screen: Create Course





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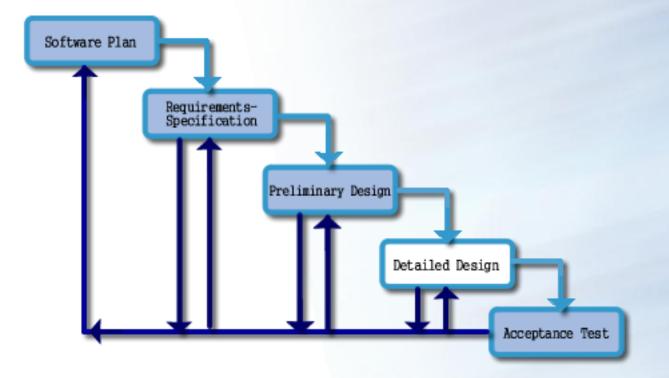
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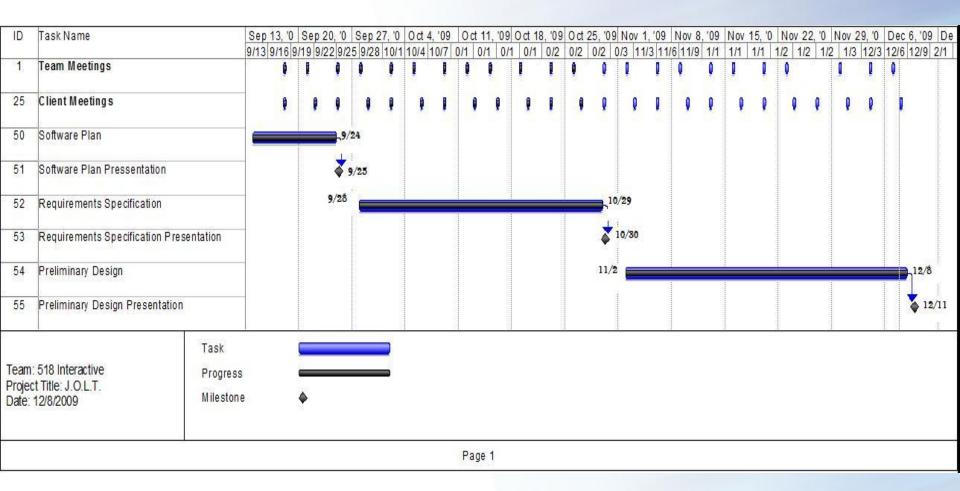
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What's Next



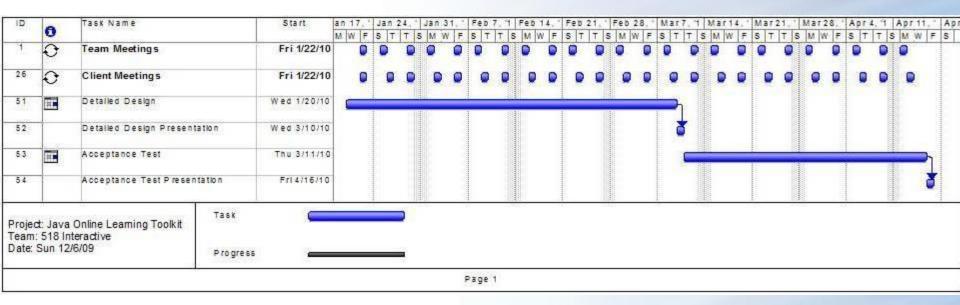


Timeline This Semester





Timeline Next Semester







J.O.I

Questions?

Thank You For Coming

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