518 Interactive

J.O.L.T

Detailed Design 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 & Students

- Erik Stegmann- Team Leader

- Larry Gregory - Senior Software Developer

- Christopher Hughto - Webmaster

- Jedidiah Turnbull - Systems Administrator

- Connor Vander Bogart - Organizational
  Information Manager

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Agenda

- Team Introduction

- Restatement of Problem

- Project Progression

- Requirements inventory

- Logical Data Stores and Databse design

- Testing

- System Demonstration
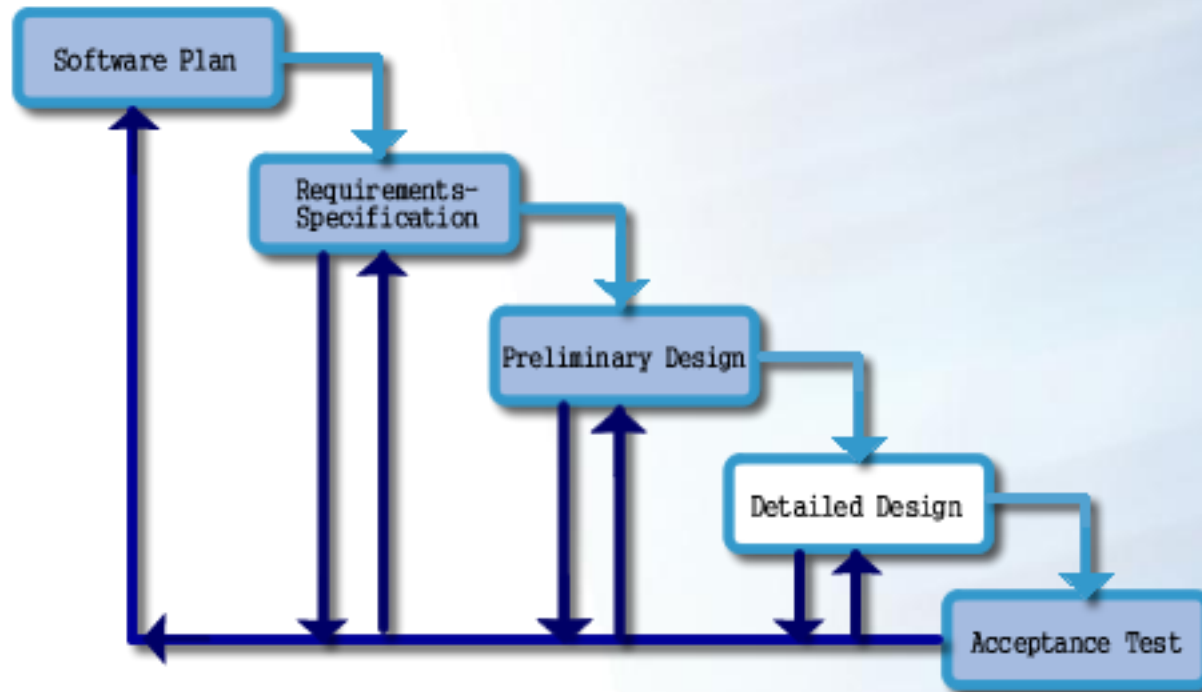
- What's Next?

- 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

Requirements Inventory

- Types

- Provides a basis for understanding between the client and the developers

- Set of criteria to develop the system

- Drives Our Testing

Data Dictionary

• Central Data repository

• Used as a reference for developers

Example Entry:

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Database Design

Entity Relationship Diagram Key:

Could Be Null ◇		1 Relationship 1	
Not Null ◆		Many Relationship ∞	

Primary Key or Foreign Key 🔑

Table Name ▦ **problem** ▼

Links Primary Key to Primary Key ▬▬▬▬▬▬

Link meaning at least one of the fields is not a Primary Key ▬ ▬ ▬ ▬ ▬ ▬

Entity Relationship Diagram

section Table

section				
Field	**Type**	**Null**	**Default**	**Comments**
sectionId	int(9)	No		Unique id for each section
semester	varchar(6)	Yes	*NULL*	Semester that section is active for
year	int(4)	Yes	*NULL*	Year that section is active for
courseId	int(9)	Yes	*NULL*	ID of course section belongs to
sectionName	varchar(30)	Yes	*NULL*	Name of section (do we need this?)
sectionNumber	varchar(30)	Yes	*NULL*	Number of Section
faculty	varchar(30)	Yes	*NULL*	Faculty username in charge of section
coordinator	varchar(30)	Yes	*NULL*	Coordinator for course that section lies in (This breaks 3rd normal form)
enrollPin	varchar(10)	No		PIN for section that students use to enroll in course

problem Table

problem				
Field	**Type**	**Null**	**Default**	**Comments**
problemId	int(9)	No		unique id for each problem
problemName	varchar(30)	No		Name of Problem
problemCategory	varchar(30)	No		Category of problem
problemDescription	varchar(500)	No		description of problem
problemActive	int(1)	No	0	field indicating that problem is active (i.e., that it passes all checks, a valid solution is specified, etc) and can be used in a problem set.
totalAttempts	int(9)	No	0	number of times this problem has been attempted to be solved.
correctAttempts	int(9)	No	0	number of times this problem has been sucessfully solved.
createdOn	int(10)	No		timestamp of when the problem was created.
createdBy	varchar(30)	No		username if problem creator
methodSignature	varchar(100)	No		method signature of problem
methodName	varchar(40)	No		name of method of problem
numParameters	int(1)	No	1	number of parameters the method contain
parameters	varchar(60)	No		parameter types, in object format (Integer, Boolean, Character, etc)
numTestCases	int(2)	No		number of test cases for this problem
parm1Name	varchar(20)	Yes	*NULL*	Name of first parameter of problem
parm1Type	varchar(10)	Yes	*NULL*	Data type of first parameter of problem
parm2Name	varchar(20)	Yes	*NULL*	Name of second parameter of problem
parm2Type	varchar(10)	Yes	*NULL*	Data type of second parameter of problem
parm3Name	varchar(20)	Yes	*NULL*	Name of third parameter of problem
parm3Type	varchar(10)	Yes	*NULL*	Data type of third parameter of problem
parm4Name	varchar(20)	Yes	*NULL*	Name of fourth parameter of problem
parm4Type	varchar(10)	Yes	*NULL*	Data type of fourth parameter of problem
parm5Name	varchar(20)	Yes	*NULL*	Name of fifth parameter of problem
parm5Type	varchar(10)	Yes	*NULL*	Data type of fifth parameter of problem
resultType	varchar(10)	Yes	*NULL*	Data type of result of problem
solution	varchar(1000)	No		Faculty provided solution
publishSolution	int(1)	No	0	Field indicating that the solution should be published for the students to see.

Testing

- Overview

- System Test

- Integration Tests

- Regression Tests

- Unit Tests

- Test Cases

Unit Test Catalog

Pass/Fail Status		Unit Number	Unit Test Name	Date Last Tested	Comments	Integrated with these units
		1	Header Subtest			All Unit Tests
		2	Footer Subtest			All Unit Tests
		3	Announcements Subtest			6,19,24,25,37,38,48,49
		4	Log In			1,2
		5	Register			1,2
		6	Admin. Welcome Page			1,2,3,7,9,10,11,15,16,22

Unit Test

J.O.L.T Unit Test by 518 Interactive

Unit 41 Faculty Create Problem Unit Test
Allow a Faculty User to create a problem

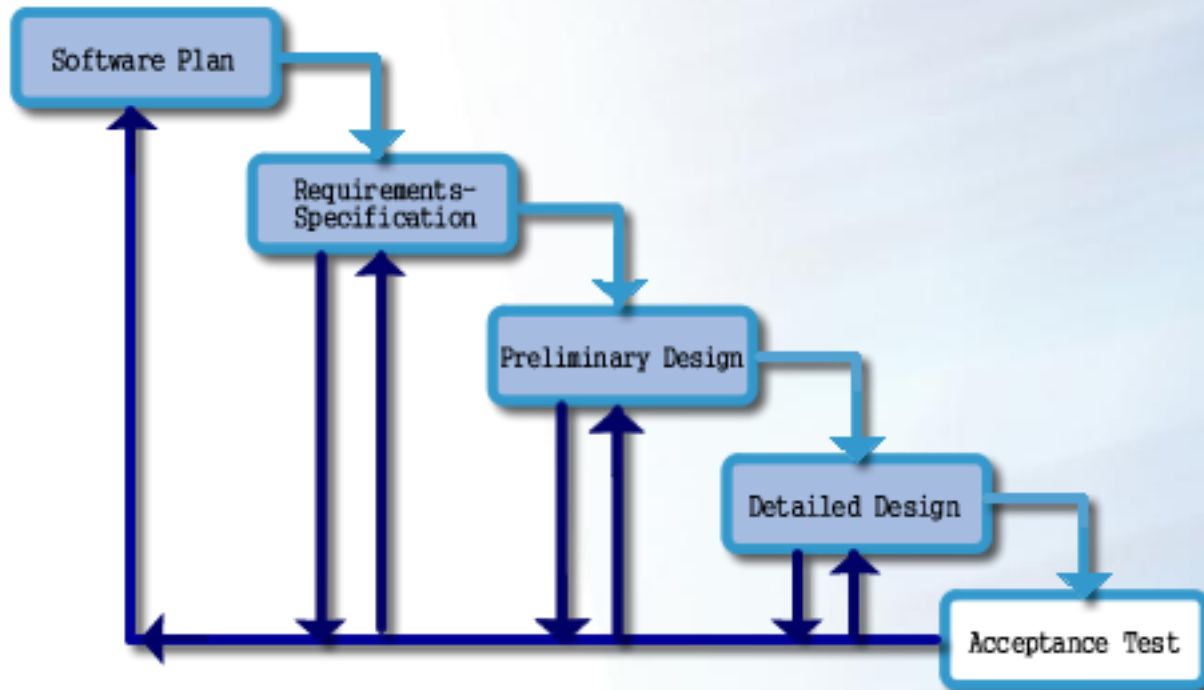|	Test Cases									
Pass/Fail Status	**Test Number**	**Description**	**Action to perform test (input)**	**Steps to be Executed**	**State Before Test**	**Expected result**	**Observed result**	**Comments**	**Tested By**	**Test Date**
P	41.001	Header Subtest								
P	41.002	Footer Subtest								
P	41.003	Null Title field	Leave Title field blank	Leave title field blank, press submit	Blank field	Error message alerting user to required fields that need to be completed				
P	41.004	Null Method Name field	Leave method name field blank	Leave method name field blank, press submit	Blank field	Error message alerting user to required fields that need to be completed				
P	41.005	Null Solution field	Leave solution field blank	Leave solution field blank, press submit	Blank field	Error message alerting user to required fields that need to be completed				

Screen Prototypes

What's next

Timeline

J.O.L.T Timeline (Detailed Design Presentation)

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Task	Start	End	Duration	% Complete	2010				
					January	February	March	April	May
Team Meetings (Occurs Tuesdays 5:30pm-6:00pm and Thursdays 9:00am-10:00am, Excluding Holidays & Breaks)	1/28/2010	4/30/2010	67	52.0					
Client Meetings (Occurs Tuesdays 4:00pm-5:00pm and Thursdays 3:00pm-4:00pm, Excluding Holidays & Breaks)	1/28/2010	4/30/2010	67	50.0					
Detailed Design	1/21/2010	3/8/2010	33	100.0					
Detailed Design Presentation	3/9/2010	3/9/2010	1	100.0					
Development & Testing	3/10/2010	4/29/2010	37	0.0					
Acceptance Test	4/30/2010	4/30/2010	1	0.0					

Key:

Completed Milestone ◆   Completed Task ▬   Linked Task ⌄

Incomplete Milestone ◆   Incomplete Task ▬

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Questions?

Thank You For Coming