Graduate Student Information System (gSIMS) Walkthrough

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Outline

- Introduction
 - Project Details
 - Requirements
 - Analysis
 - Architecture
 - Iteration 1
 - Iteration 2
 - Test Plans





Project Details Requirements Analysis Architecture Iteration 1 Iteration 2

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Project Inception

- Advisor: Dr. Hanif Ladak
- Concerned with managing students in the graduate program for BioMedical Physics.
- Current system has lots of problems.
 - Calculations and updates are mostly manual.
 - Need to keep the paper copies of meetings.
 - Takes lots of time to create reports.
 - Hard to track when a student must have a requirement done.



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Current System

Demo of the Current System.



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Project Organization

Two components of the problem:

- (ECE4416) Business rules:
 - Graduate program milestones and dataflow.
 - Direct interaction with the User.
- (SE4450) Technical requirements:
 - Provide the functionality for the User Interfaces.
 - Adhere to required constraints.



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Scope

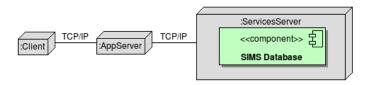


Figure: The proposed system



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Interfaces



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Graphical User Interface



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Electrical Device Interface



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System Features

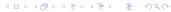


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Constraints

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Oranizing Data



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Conceptual Model of the Student



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Critical Assumptions



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Hardware



Introduction

Architecture

Software

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Network Protocols and Schemes



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REST Web Applications



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Perl Batch Services



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System Features



Introduction

Iteration 1

Intrinstic Data of a Student

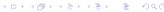
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Role Based Authentication

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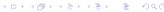
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System Features



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Unit Tests



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Integration Testing



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System Integration Testing



Summary

- Requirements and Analysis has received direct user feedback.
- Architecture based of the Analysis has been clarified and prototyped.
- The iterative Software Life Cycle has produced useful work quickly and with less effort.
- A strong emphasis on 3 testing levels is present from the starting.

