Graduate Student Information System (gSIMS)
Walkthrough

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Outline

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Outline

1 **Introduction**

- **Project Details**
- Technical Requirements
- Analysis
- Architecture
- Iteration 1
- Iteration 2
- Test Plans

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Introduction
Summary

Project Details
Technical Requirements
Analysis
Architecture
Iteration 1
Iteration 2
Test Plans

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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Introduction
Summary

Project Details
Technical Requirements
Analysis
Architecture
Iteration 1
Iteration 2
Test Plans

Current System

Demo of the Current System.

Introduction
Summary

Project Details
Technical Requirements
Analysis
Architecture
Iteration 1
Iteration 2
Test Plans

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.
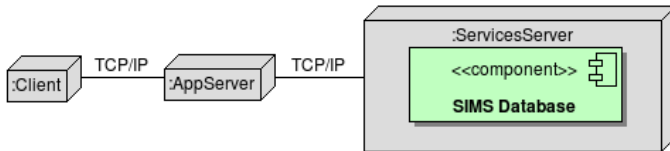   - Adhere to required constraints.

Introduction
Summary

Project Details
Technical Requirements
Analysis
Architecture
Iteration 1
Iteration 2
Test Plans

Proposal

Figure: The proposed system

Introduction
Summary

Project Details
Technical Requirements
Analysis
Architecture
Iteration 1
Iteration 2
Test Plans

Outline

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Western Ontario

Introduction
Summary

Project Details
Technical Requirements
Analysis
Architecture
Iteration 1
Iteration 2
Test Plans

Interfaces

- Graphical User Interface:
    - The implementation of the Business Rules defined as HTML pages.
- Electrical User Interface:
    - Collect signatures from a Wacom ©Tablet and store securely in the DataBase.

Introduction
Summary

Project Details
Technical Requirements
Analysis
Architecture
Iteration 1
Iteration 2
Test Plans

Graphical User Interface

Specific requirements for the view of the Web Pages:

- Set of HTML pages that are to be the template of the system.

Figure: Sample GUI provided

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Introduction
Summary

Project Details
Technical Requirements
Analysis
Architecture
Iteration 1
Iteration 2
Test Plans

Electrical Device Interface

System Features

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Constraints

Introduction
Summary

Project Details
Technical Requirements
Analysis
Architecture
Iteration 1
Iteration 2
Test Plans

Outline

1 **Introduction**

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

Oranizing Data

Conceptual Model of the Student

Critical Assumptions

Introduction
Summary

Project Details
Technical Requirements
Analysis
Architecture
Iteration 1
Iteration 2
Test Plans

Outline

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

Hardware

Introduction
Summary

Project Details
Technical Requirements
Analysis
Architecture
Iteration 1
Iteration 2
Test Plans

Software

Introduction
Summary

Project Details
Technical Requirements
Analysis
Architecture
Iteration 1
Iteration 2
Test Plans

Network Protocols and Schemes

Introduction

Summary

Project Details
Technical Requirements
Analysis
Architecture
Iteration 1
Iteration 2
Test Plans

REST Web Applications

Introduction
Summary

Project Details
Technical Requirements
Analysis
Architecture
Iteration 1
Iteration 2
Test Plans

Perl Batch Services

Introduction
Summary

Project Details
Technical Requirements
Analysis
Architecture
Iteration 1
Iteration 2
Test Plans

Outline

1 **Introduction**

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

System Features

Intrinstic Data of a Student

Role Based Authentication

Introduction
Summary

Project Details
Technical Requirements
Analysis
Architecture
Iteration 1
Iteration 2
Test Plans

Outline

1 **Introduction**

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

System Features

Introduction
Summary

Project Details
Technical Requirements
Analysis
Architecture
Iteration 1
Iteration 2
Test Plans

E-Signature Clien

Introduction
Summary

Project Details
Technical Requirements
Analysis
Architecture
Iteration 1
Iteration 2
Test Plans

Outline

1 **Introduction**

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Unit Tests

Introduction
Summary

Project Details
Technical Requirements
Analysis
Architecture
Iteration 1
Iteration 2
Test Plans

Integration Testing

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.