

# Graduate Student Information System (gSIMS) Walkthrough

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# Outline

- 1 Introduction
  - 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.

# Current System

Demo of the Current System.

# 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.

# Proposal

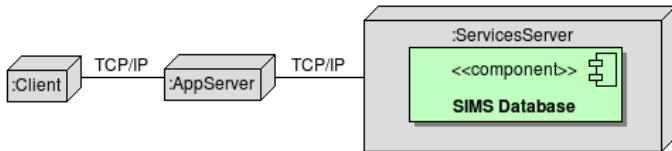


Figure: The proposed system

## 1 Introduction

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# 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.

# 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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# Electrical Device Interface

- Provide an interface for the User to sign on the screen.
- On the client side acquire a bitmap of the signature and encrypt the bitmap data.
- The image should be viewable only by the user who signed and the graduate admin.

# System Features

# Constraints

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# Organizing Data

# Conceptual Model of the Student



# Critical Assumptions

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Introduction  
Summary

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

# Hardware

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Author

Project Title

Introduction  
Summary

Project Details  
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Iteration 2  
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# Software

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Author

Project Title

# Network Protocols and Schemes

Introduction  
Summary

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

# REST Web Applications

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Author

Project Title

# Perl Batch Services

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# System Features

# Intrinsic Data of a Student

# Role Based Authentication

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- **Iteration 2**
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# System Features

# E-Signature Clie

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- **Test Plans**

# Unit Tests



# 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.