# Graduate Student Information System (gSIMS)

## Walkthrough

Kartik Thakore[1]

[1]Department of Software Engineering
University of Western Ontario

23 Nov 2010

School of Graduate and Postdoctoral Studies

The University of Western Ontario

# Outline

# Outline

# 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

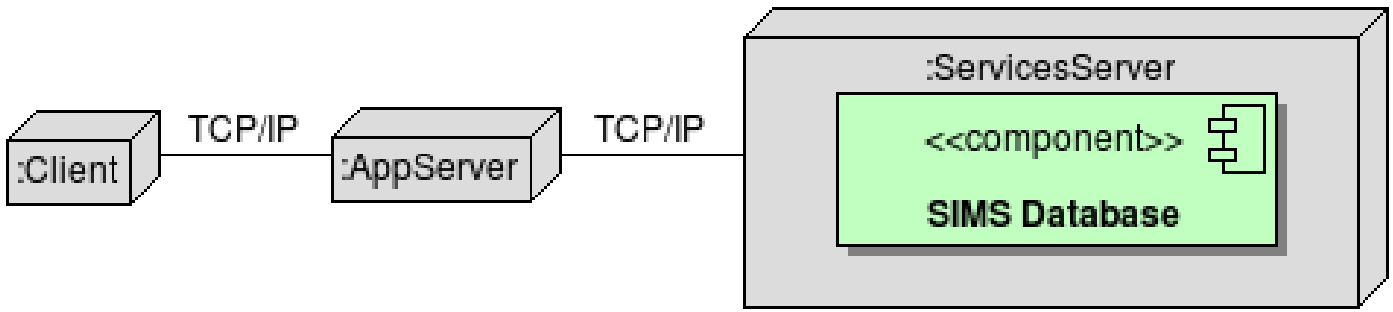


Figure: The proposed system

# Outline

# 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.

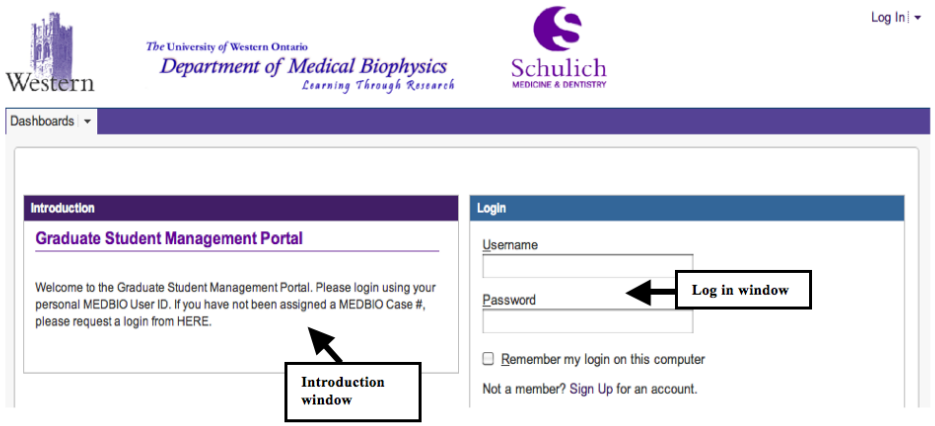


Figure: Sample GUI provided

# 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

# Outline

# Oranizing Data

# Conceptual Model of the Student

# Critical Assumptions

# Outline

# Hardware

# Software

# Network Protocols and Schemes

# REST Web Applications

# Perl Batch Services

# Outline

# System Features

# Intrinstic Data of a Student

# Role Based Authentication

# Outline

# System Features

# E-Signature Clien

# Outline

# 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.