PROJECT PLAN

on

“CLASS SCHEDULER”

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CLASS SCHEDULER

Introduction:

Academic Planning is the key for success of any educational institution or student. The major duty for any academic planning unit manager will be to schedule classes, but for educational institution which has large wide range of courses (cross major also), faculty and students it is always difficult to schedule classes for a semester. Planning classes manually for such a huge organization is becoming too hectic and time consuming. This has become our prime motivation behind selecting this as our project.

Project Goals and Objectives

- ## Overall Goal:

  Our goal is to provide sophisticated web application to the organization to schedule the classes to a large number of students with many courses.

- ## Problem statement:

  In the present world planning is very important in every aspect of life. For an organization to be successful and to give its best to its students it should definitely have a perfect academic plan. Main thing is scheduling of classes with plethora of courses and students. This has to be done manually and it is becoming more frantic and laborious for the manager. So it is now time to create a web application for scheduling to be done systematically.

- ## Significance:

  The most significant idea of the proposed project is to make the entire planning of course timings for students to be done systematically without any clashes in anyone schedule using software. The class timings will be allocated based on either adjunct or Full-time faculty. With faculty name and the course they offer as inputs to the system the class timings are scheduled systematically. The

system also checks the courses with their pre-requisites and schedule them, so that a student can take only either of the courses in one semester.

Project Background and Related work

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1. There have been some applications and websites which are help us in scheduling of classes online by giving name of courses and time as input.

2. Software by name Mimosa is always present to assist in scheduling classes.

Proposed System

- ## Functional requirements:

  1. The application will schedule the classes for an organization with wide range of courses and students by inputting the faculty and the courses they offer.

  2. It will produce the details like the timings of the courses, number of students, days on which the course is scheduled and the place of the class.

- ## Non-functional requirements:

  1. Basically this application requires a computer with internet connection to enter the courses.
  2. We need an admin account to enter the courses and the names of the professors who are taking the courses.

- ## Technological and Architectural Requirements:

  Web Framework:

  We will use HTML5, CSS3, and JavaScript to render the client side user interface. Web pages themselves will be rendered by the server.

  Data Set:

  The data set that is used in the project is obtained from Schooling of Engineering and computing department at University of Missouri- Kansas City (UMKC).

Web Services:

The web services will be developed in C# using Visual Studio 2010. They will be deployed on to UMKC server.

Framework specification: Build an overall system model

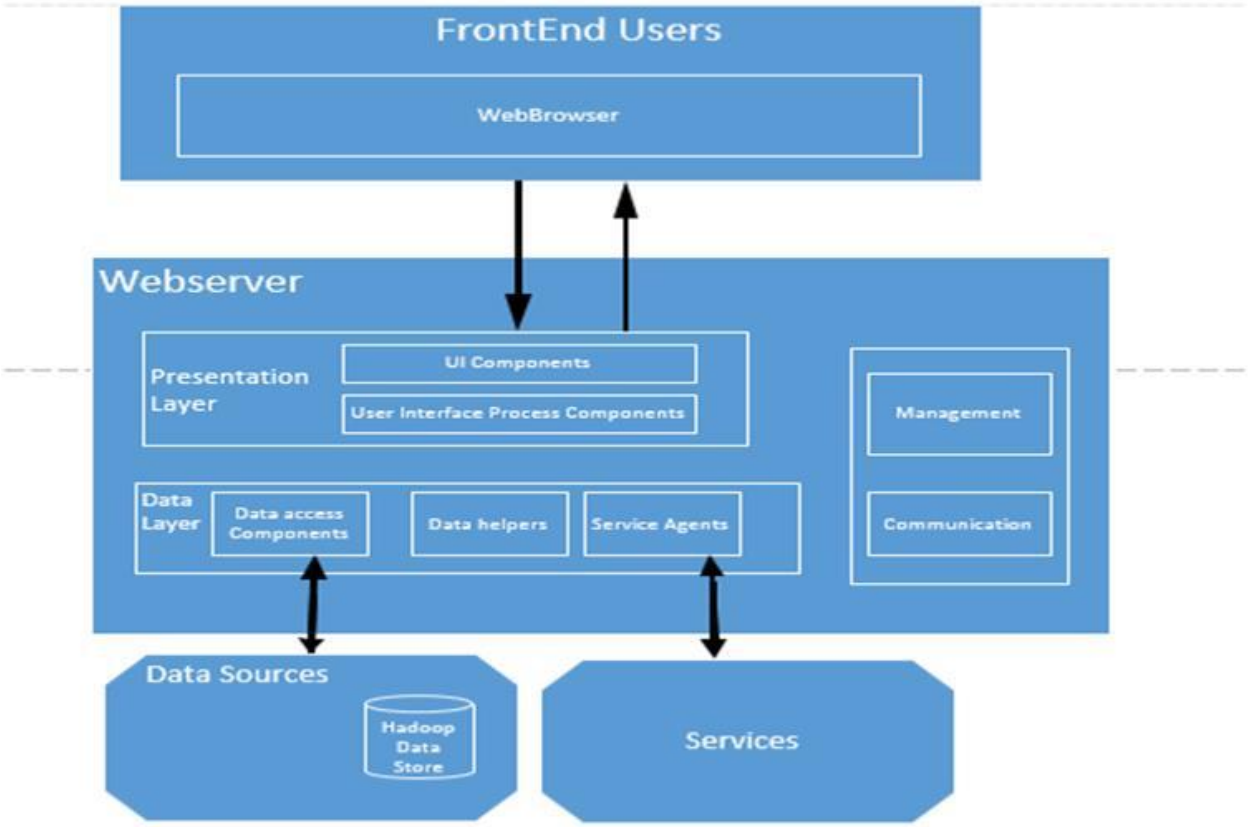
- ## Assumptions and Principles:

Our Application assumes the admin to have the knowledge of the courses being offered in that semester and the names of the faculty dealing with the courses.

- ## Methodologies and Algorithms:

We follow Agile development model to develop this application and use HTML5, CSS3 and JavaScript. We also make use of REST and SOAP Web Services. We will make use of Scrum Do to track the progress of our project and create tasks as stories in all the four increments.

- System Architecture Diagram:



System specification: Identify Primary services

Existing Services:

1. **RESTFULL Services:**

   Representational State Transfer (REST) is an architectural style that shows the architectural elements within a distributed hypermedia system. REST ignores the details of component implementation and protocol syntax in order to focus on the roles of components, the constraints upon their interaction with other components, and their interpretation of significant data elements. REST has emerged as a predominant web API design model.

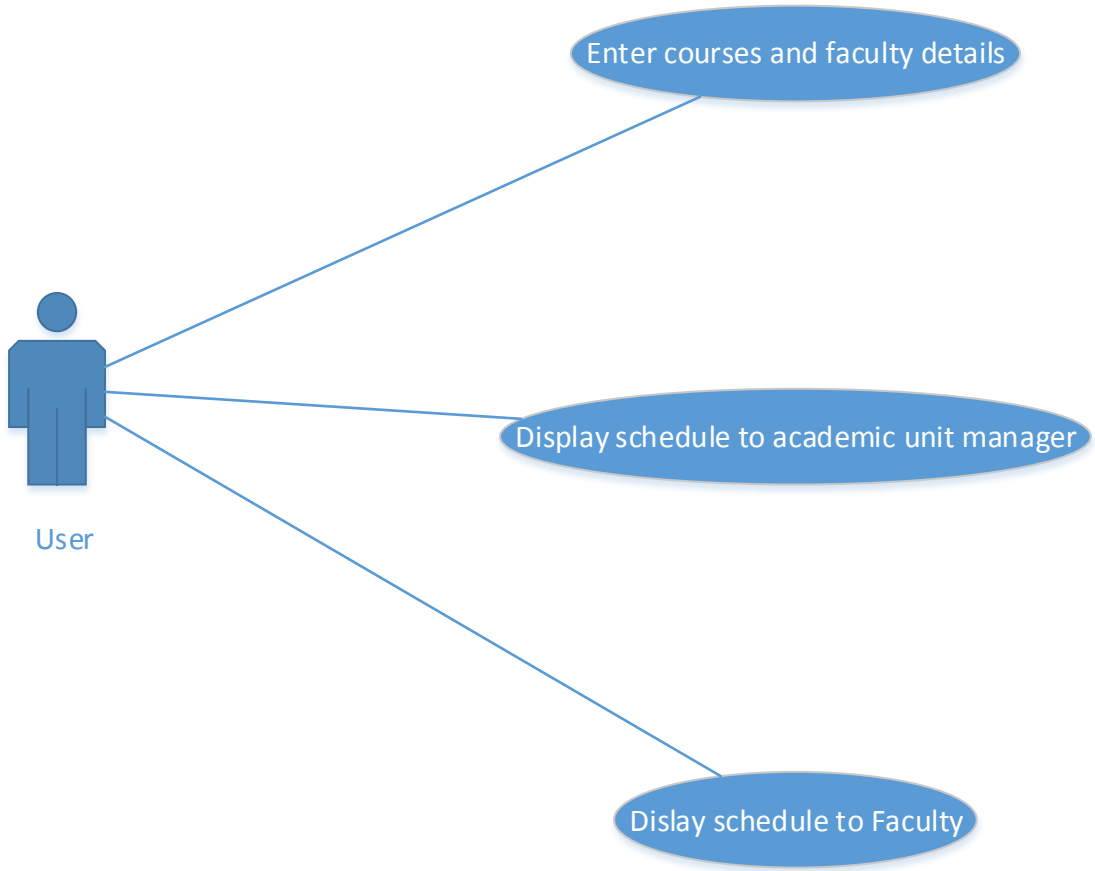
2. **SOAP Services:**

   SOAP which stands for Simple Object Access Protocol, is a protocol specification for exchanging structured information in the implementation of Web Services in computer

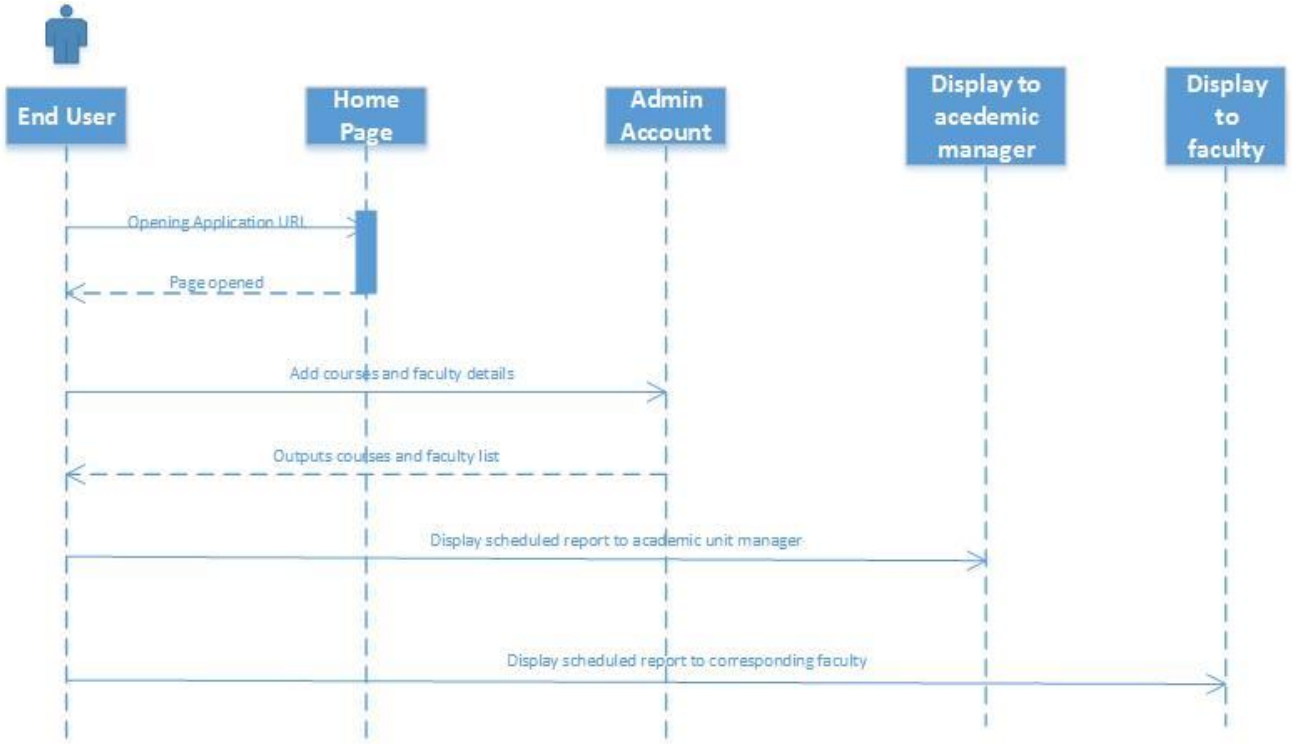
networks. We can say in other words like it is a way for a program running in one kind of operating system (Example Windows 2000) to communicate with a program in the same or another type of an operating system (Example Linux) by using the World Wide Web's Hypertext Transfer Protocol (HTTP) and its Extensible Markup Language (XML) as the mechanisms for information exchange.

- **New Services to be built:**
    - Admin should enter the details like name of the courses offered in that semester and the professors dealing with the courses.
    - The application should display the final scheduled report to the manager of the academic unit.
    - The faculty should also be given the final scheduling report.

User Cases:



Sequence Diagram:



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