Spring 2016

Student Assistant Portal

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1. Project Description

1.1 Project Abstract

There is no communication medium which is beneficent to all the people in the college through which they can share their ideas, information and have a personal account where they can save some stuff which is helpful in future. So our aim is to provide an application which provides a good interaction between all members of the college and is available for them anywhere. This is an application which provides a common solution for personal library, schedule our work and Forum.

The project is meant for web based which allow the users to access it from anywhere as most of them carry smart phones with them. The proposed project is to help learn subject efficiently with connected to the university network: Faculty, Students, Management and other department.

The following are the key features of the application:

1. Creating personal library
2. Creating Forums among different department
3. Creating Schedules

The following are the different modules of our application:

- My Profile
- Library
- Schedule
- Forum
- Accounts

Technology Used:

1. Eclipse software for development interface
2. AJAX, JavaScript and CSS  
3. Java JDK  
4. MySQL database  
5. Servlets for connectivity  
6. HTML5 for web Pages  
7. JSP for frontend to server

1.2 Competitive Information

Moodle’s, Blackboard, Comprehensive group study environment on cloud are the major web based application this application systems are competitors of the Student Assistant portal System.

1.3 Relationship to Other Applications/Projects:

The project developed based on Google books. We are using google books for uploading and downloading the books in Library

1.4 Assumptions and Dependencies

Our application is web based application which can be accessed 24/7 from any web browser. Active Internet connection is required in order to access our application. Accounts for students in any department can only be created by admin or management, while faculty can create accounts for students under their department. Students will not be able to create account from their end, however, they will be able to change their password.

1.5 Future Enhancements

It is not possible to develop a system that meets all the requirements of the user, user requirements keep changing as the system is being used. Some of the future enhancements that can be done to this system are:
1. The System can be enhanced to increase look and feel of the Application.
2. Will try to scale the application.
3. Add voice assistance to the application.
4. Will try to include synchronization to the online users.
5. Add notifications to application, which intimates what are the different new schedules that are added.
6. Add one-to-one private messaging.

1.6 Definitions and Acronyms.

SRS – Software Requirement Specifications
FR – Functional Requirement
NFR – Nonfunctional requirement
DR- Domain requirement
SE- Software Engineering
HTTP- Hypertext transfer Protocol
HTML- Hypertext Markup Language
CS- Computer Science

2. Technical Description

The objective of the project is to develop a communication medium which is beneficent to all the people in the college through which they can share their ideas, information and have a personal account where they can save some stuff which is helpful in future. If it is an online application we need to move to a system and approach a browser to open and is not possible every time. The information is seen in different systems and it becomes a problem to collect all the information in one place. So our aim is to provide an application which provides a good interaction between all members of the college and is available for them in pocket (phone).
A) JAVA

Application code contains following JAVA concepts thought in the class

1) Dialogue box, Menu, MenuBar, Panel and JFrame.
2) Textbox, dropdown, buttons.
3) String class methods to manipulate the string objects
4) Text files to export data.

B) SQL SERVER

Microsoft SQL Server is comprehensive, integrated data management and analysis software that enables organizations to reliably manage mission-critical information and confidently run today’s increasingly complex business applications. SQL Server allows companies to gain greater insight from their business information and achieve faster results for a competitive advantage.

2.1 Project/Application Architecture.
2.2 Application Information flows
Description: The above figure of use case diagram shows the modules and actors interacting with the defined modules.

2.3 Interactions with other Projects

This is project developed based on College assistant portals

2.4 Interactions with other Applications

This project uses college website and forums for scheduling purposes and can also be used as communication medium for student’s faculty and management.

2.5 Capabilities

- Scheduling the meetings and events in efficient way.
- Cancelling the meeting and events.
- Automatic deletion of events based on the validity date.
- Uploading documents and books to library
- Downloading books from library
- Forum discussions
• Skill showcase

2.6 Risk Assessment and Management:

• Before risk management begins it is imperative that a foundation is established for providing structured project information, thus, the following project elements were completed and defined prior to developing this Risk Management Plan:
  • Define work scope, schedule, resources, and cost elements
  • Develop project WBS/WBS dictionary
  • Develop master schedule and detailed schedules
  • Estimate project cost and finalize budget
  • Identify required and available resources
  • Establish performance measurement metrics
  • Define minimum and maximum baseline thresholds
    • Schedule
    • Resources
    • Cost
  • Baseline reporting requirements
    • Format
    • Frequency of distribution
    • Distribution list
  • Define Risk Management Roles and Responsibilities
  • Project Manager chairs the risk assessment meetings
    • Project team participates in risk assessment meetings and members serve as meeting recorder and timekeeper
    • Key stakeholders participate in risk assessment meetings
    • Project Sponsor may participate in risk assessment meetings.

3 Project Requirements

3.1 Identification of Requirements:

<SAP-001-0.1 ADMIN /000101>
In this admin is been given the position in which he created the ID, password and alsoe email for the university users

**<SAP-002-0.1 MANAGEMENT ID/000101>**
Required for the Management identification when logging in to the portal Management id is been provided by the admin

**<SAP-002-0.2 MANAGEMENT EMAIL/000101>**
Management email should be provided by the admin to communicate and get notified through the portal

**<SAP-003-0.1 FACULTY ID/000101>**
Required for the Faculty identification when logging in to the portal Faculty id is been provided by the admin

**<SAP-003-0.2 FACULTY-EMAIL/000102>**
Faculty email should be provided by the admin to communicate and get notified through the portal

**<SAP-004-0.1 STUDENT-STUDENTID/000101>**
Required for the student identification when logging in to the portal student id is been provided by the admin

**<SAP-004-0.2 STUDENT-EMAIL/000102>**
Student email should be provided by the admin to communicate and get notified through the portal

**<SAP-005-0.1 DATABASE-MAINTENANCE/00501>**
DATABASE maintenance should be a fixed schedule every Saturday from 12 am to 3 am by which the database can me maintained

**<SAP-006-0.1 LIBRARY/000801>**
Using this Users can select their desire books and also upload the books

**<GSU-007-0.1 ADD SCHEDULE/000901>**
Uses will add the schedules and give validity time for it. Implementation: Mandatory

3.2 Operations, Administration, Maintenance and Provisioning (OAM&P)
Student assistant portal is a web based application. We have used the eclipse for the development interface. The Client Side Design Developed using AJAX, Java script, CSS, JDK and server side validation done by HTML and servlets for connectivity and we are using MySQL for storing student details, professor details and classes. If students want to use this web application they need web browser (chrome, firefox, safari, internet explorer) of any version.

If users want to deploy the web application we need windows server with IIS enabled and admin role is required to back up the database every one month users are required to change their password for every 90 days.

Those who are registered for the Student assistant portal they can perform the following operations based on their role

a) **Admin:**
   i) Add management
   ii) Add faculty
   iii) Maintain Database

b) **Management:**
   i) Adding faculty
   ii) Deleting the faculty account.
   iii) Communicating with the Students by email / SMS.

c) **Faculty:**
   i) Create meetings or events for the Student
   ii) Selecting books from the library.
   iii) Uploading the book

d) **Student:**
   i) Uploading books to library
   ii) Download the books
   iii) Creating forums
   iv) Responding to threads in forums

3.3 **Security and Fraud Prevention**
Our Project is a web based application whenever the user wants to login in to the Student Assistant portal it automatically records the IP address of the particular user login session and its stores the information in the database. Using this we can easily track the user details those who are trying to perform the fraud.

3.4 Release and Transition Plan

Release Process

The Statement of Work commenced on February 3\textsuperscript{rd}, 2016 and continued till May 1\textsuperscript{st} 2016. The final presentation is to be given on May 2\textsuperscript{nd}, 2016. The timelines and deliverable details are given below:

- Interim Project I (Phase 1.1) has been given on March 7\textsuperscript{th}, 2016
- Interim Project II (Phase 1.2) has been given on April 04, 2016
- Final Project I (Phase 1.3) has been given on May 2\textsuperscript{nd}, 2016

Transition Schedule
### Phase I

<table>
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<th>Member3</th>
<th>Member4</th>
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### Phase II

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<th>Member4</th>
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<td>User Manual</td>
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<tr>
<td>Document Formatting</td>
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</tr>
</tbody>
</table>

**Fig-3: Transition Diagram**

### 4 Project Design Description

Our aim is to provide an application which provides a common solution for personal library, schedule our work and Forum. There are many emerging social networking websites and also websites with forums which allows us to enhance our knowledge as the people with whom we will interact will be of different profession. So this websites are providing an opportunity to communicate with those people of such good profession, keeping that in mind we thought of implementing forums module which helps each and every one to help communicate with anyone at campus.

There might be research done by particular group and there documentation might be very useful for the coming up students so our intention was to allow the student to maintain their own library where the important stuff what they hold can be shared later on.
Most of the implementations in these area will be web based so our motivation was to come up with the project which will be accessible through web based or system specific application like android which is most reputed in the market at present. The manual attendance taking is very time taking process as it has to be recorded and finally required calculations are done, our intention was to come up the idea which makes this process very simplified. Finally this module helps the faculty to record attendance through there Smartphone and updates it to attendance record server. It’s interesting to use application with good user interface so we tried to give a good looking GUI. This application has different modules for different types of users like different modules for faculty and different one for staff. This provides a good medium for communication at campus.

Screen 1: Home screen of the web based application with login prompt

Screen 2: Screen shot of schedules module with the list of all Accounts only admin can view
Screen 3 screenshot of creating account

Screen 4 screen shot of deleting account
### Delete Accounts

<table>
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<tr>
<th>S.NO</th>
<th>ID</th>
<th>BRANCH</th>
<th>POSITION</th>
<th>SELECT</th>
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<td>admin</td>
<td></td>
<td>admin</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>shireesha</td>
<td>Arts and Science Graduate</td>
<td>Management</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>mehmood</td>
<td>Arts and Science Graduate</td>
<td>Student</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>D Park</td>
<td>College of Business Graduate</td>
<td>Faculty</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>methi</td>
<td>College of Business Graduate</td>
<td>Management</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Dr Tang</td>
<td>Management</td>
<td>Faculty</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>munsor</td>
<td>Management</td>
<td>Management</td>
<td></td>
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</table>
Screen 5 screenshot to upload the books

Screen 6 Screenshot of viewing the library
Screen 7 screen shot of schedule reminders events update and much more

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<th>S.No</th>
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<th>Uploader</th>
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<td>123</td>
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<td>2</td>
<td>Java</td>
<td>01/05/2016</td>
<td>05/05/2016</td>
<td>✔</td>
<td>108</td>
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<tr>
<td>3</td>
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<td>28/04/2016</td>
<td>05/05/2016</td>
<td>✔</td>
<td>123</td>
</tr>
</tbody>
</table>
Screen 8 screenshot for adding the schedule
**Screen 9** screenshot for creating the forums which allows to create respond and delete forums

<table>
<thead>
<tr>
<th>SL</th>
<th>SUBJECT</th>
<th>BY</th>
<th>ON</th>
</tr>
</thead>
<tbody>
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<td>1</td>
<td>Framing</td>
<td>108</td>
<td>2016-06-01</td>
</tr>
<tr>
<td>2</td>
<td>Sales Force</td>
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<tr>
<td>3</td>
<td>Cloud Computing</td>
<td>123</td>
<td>2016-06-01</td>
</tr>
</tbody>
</table>

**Screen 10** screenshot for creating the forum

Create Forum

Subject: GENERAL

Content:

[Save] [Clear]
Screen 11 screenshot for forums threads

Project Management

I want to know about the Project Cycle

Answers

It basically starts with requirements then follows other aspects

Answer This Question
**Screen 12** screenshot for changing password

![Change Password](image)

**Screen 13:** screenshot for deleting forums

![Delete-Forums](image)
6 Project Design Units Impacts

The Techniques we will be using in our project will be focused on Model driven development, Test driven development, and object oriented development.

MDD gives architects the ability to define and communicate a solution while creating artifacts that become part of the overall solution. MDD is also comprised of the ability to visualize the domain, such as a business domain, and the generation of implementation artefacts. The Model-Driven Architecture (MDA) defines an approach to modelling that separates the specification of system functionality from the specification of its implementation on a specific technology platform. In short it defines a guideline for structuring specifications expressed as models.

Test Driven Design (TDD). With a TDD approach you create a test then write enough production code to fulfil that test. In other words, the tests form your detailed design model (as executable specifications), arguably making TDD a modelling approach.

Object Oriented Development (OOD) promises to reduce development time, reduce the time and resources required to maintain existing applications, increase code reuse, and provide a competitive advantage to organizations that use it.

6.1 Functional Area/Design Unit A

The objective of the project is to create a communication medium for the members of a University to exchange information, share their ideas, and have a personal account where they can save their work. The project is meant for web based which allow the users to access it from anywhere as most of them carry smart phones with them. The proposed project is to help learn subject efficiently with connected to the university network: Faculty, Students, Management and other department.

The primary focus of our team is the reliability, usability, and quality. Satisfying requirements and perfecting the product is very important to us. Meeting user's needs is our top goal.
6.1.1 Functional Overview

With this system, users can do the following major functions:

I. Schedule meetings.
II. Create forums.
III. Upload files.
IV. Create accounts.
V. Change password

6.1.2 Impacts

Impacts of the system are:

I. User should be able to access the system over the network.
II. Participants should be the lecturer or students of GSU.
III. Participants must have the GSU email for the authentication purpose.
IV. Participants and the initiator are not allowed to modify the information about the schedules and events.

6.1.3 Requirements

<SAP-001-0.1 ADMIN /000101>
In this admin is been given the position in which he created the ID, password and alsoe email for the university users

<SAP-002-0.1 MANAGEMENT ID/000101>
Required for the Management identification when logging in to the portal Management id is been provided by the admin

<SAP-002-0.2 MANAGEMENT EMAIL/000101>
Management email should be provided by the admin to communicate and get notified through the portal

<SAP-003-0.1 FACULTY ID/000101>
Required for the Faculty identification when logging in to the portal Faculty id is been provided by the admin

<SAP-003-0.2 FACULTY-EMAIL/000102>
Faculty email should be provided by the admin to communicate and get notified through the portal

<SAP-004-0.1 STUDENT-STUDENTID/000101>
Required for the student identification when logging in to the portal student id is been provided By the admin

<SAP-004-0.2 STUDENT-EMAIL/000102>
Student email should be provided by the admin to communicate and get notified through the portal

<SAP-005-0.1 DATABASE-MAINTENANCE/00501>
DATABASE maintenance should be a fixed schedule every Saturday from 12 am to 3 am by which the database can me maintained

<SAP-006-0.1 LIBRARY/000801>
Using this Users can select their desire books and also upload the books

<SAP-007-0.1 SLOT BOOKING-AVAILABLE TIMES/000803>
Students can check what are the classes available and get enrolled in it
Implementation: Mandatory

<SAP-008-0.1 SLOT BOOKING- STUDENT ID/000804>
While booking the classes students must provide their Student ID
Implementation: Mandatory

<SAP-009-0.1 ADD STUDENT/000901>
Administrator will add the students those who are reliable for the class
Implementation: Mandatory

6.2 Functional Area/Design Unit B

I. “My profile” users can change the password here.

II. “Schedules” under this section users will add a schedule by giving subject, validity, content, branch and an option file and also users can delete the schedules.

III. “Accounts” Management and Admin can create users accounts under any department, but faculty can only create student accounts under only their departments.
IV. “Library” allows users to upload documents, files and view them later

V. “Forums” allows users to create and respond to threads and delete forums.

6.2.1 Functional Overview

The Student Assistant Portal has 4 main users: Admin, Management, Faculty, Students. The main functionality of the application includes creating schedules, creating accounts, uploading and downloading content to user’s library and creating, deleting and forums and responding to the threads. User have to be logged in to their account in order to use any of the functionality. Meetings or events can be scheduled under schedules module, and can also include a file while scheduling which is optional. These meetings and events have a validity date; after which they will be deleted automatically. Library feature allows users to upload books or documents in different formats like text, word, pdf, ppt etc., These documents will be stored in the users account and they will be able to download them at a later point of time. Any user will be able to create thread in a forum by giving subject, branch, and their content. Other users will be able to see this thread and can reply to it.

6.2.2 Impacts

I. GSU’s students and employees database is needed for the list of participants.

II. Database is required for scheduling the meeting’s location.

6.2.3 Requirements

<SAP-001-0.2 ADD BOOK/000901>

We will upload the files documents and ppt and view it later, we can also download it in future.

<SAP-002-0.2 DELETE FILE/000901>

We can delete the work we do not require

<SAP-003-0.2 SCHEDULE AN EVENT OR MEETING /000901>

This module allows us to add the schedule for the future purposes.
<SAP-003-0.2 DELETE AN EVENT OR MEETING /000901>

This module allows us to delete an event

<SAP-003-0.2 CREATE FORUMS/000901>

This module allows us to create an forums where people can discuss their doubts.

<SAP-003-0.2 DELETE FORUMS/000901>

This allows us to delete the forums

<SAP-003-0.2 ADMIN LOGIN/000901>

Administrator has his own login and he the one who creates users accounts and manages the database

<SAP-003-0.2 FACULTY LOGIN/000901>

Faculty can create the accounts for students under only the specific branch

8 Acknowledgements:

I have taken endeavors in this anticipate. Be that as it may, it would not have been conceivable without the kind backing and help of numerous people and associations. I might want to extend my genuine on account of every one of them.

I am exceptionally obligated to for their direction and consistent supervision and in addition for giving vital data with respect to the task and additionally for their backing in finishing the venture.

I might want to express my appreciation towards my folks and individual from for their kind co-operation and consolation which help me in consummation of this anticipate.

9. References