

# **Project Feasibility Study and Plan**

## **Group Members**

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## **Client**

Department of Computer Science/College of Engineering

## **Brief Description of Project**

The project is to develop an online room reservation system for the rooms that are in the Department of Computer Science, University of the Philippines-Diliman. The end user will need to log in to the website first using their UPD webmail account. There will be a map of the building and the rooms that are available for reservation will be specified. The user can then choose the room(s) to be reserved and submits it for approval of the administrator.

## **Suggested Deliverables**

- *Source code*
  - the source code of the final completed project. In this deliverable, the specified requirements and design are implemented. It is expected that the system is already bug-free after thorough testing and is already ready for deployment.
- *Database*
  - a database to store the reservations made. It needs to be set up on the department server.
- *Administrative interface*
  - an interface for the administrator. The administrator should be able to add, remove, or modify rooms or any information regarding the room reservation system.
- *Map*
  - a map showing the rooms of the department. This will make it easier for the client and users to locate the room they want to reserve. The map is labeled with floor numbers and room names.

- *Documentation*
  - a document provided to the client describing the underlying mechanics of the system and how to use it. This will be a useful reference for the client especially when the client needs instructions about a certain feature of the system.

## **Suggested Schedule**

### **I. Iteration 1 (December 1, 2011) - Requirements Analysis (draft)**

This is an initial draft of the requirements analysis of the system. The client needs to take part on this and so, a meeting is required to discuss the matter.

### **II. Iteration 2 (December 8, 2011) - Requirements Analysis (final)**

This is the finalized requirements analysis. The final draft is presented to the client.

### **III. Iteration 3 (December 15, 2011) - System Architecture and Design (draft)**

This is an initial draft of the system architecture and design. Feedback on the design is needed. A meeting with the client follows Iteration 5.

### **IV. Iteration 4 (December 22, 2011) - System Architecture and Design (final)**

This is the finalized system architecture and design. A presentation of the final draft should be prepared for the client.

### **V. Iteration 5 (December 29, 2011) - Database**

The database, the most important part of the system, needs to be fixed to be able to store all the information handled by the system. All other components depend on this deliverable.

### **VI. Iteration 6 (January 19, 2012) - Administrative Control**

This provides control to the administrator over information in the system's database. The administrator should be able to add, remove, and modify data.

### **VII. Iteration 7 (February 2, 2012) - Map and Interface**

This is basically the graphical web interface that the public users sees and interacts with.

### **VIII. Iteration 8 (March 1, 2012) - Testing and Debugging**

The program should be thoroughly tested and debugged at this point in time.

### **IX. Iteration 9 (March 20, 2012) - Project Deadline**

The project should be ready for deployment. The source code and documentation should be handed over to the client. A presentation and demo is prepared.

## Visibility Plan

- *With the Client*

The group will conduct regular meetings with the client every two weeks to discuss progress. It will also be for the purposes of two-way feedback. If problems arise or if there are any concerns regarding the project, the group and the client could communicate via email. A report will be issued to the client at the end of every principal activity or iteration to make sure that there will be no miscommunication in the requirements. This helps ensure that the group is adhering to the client's specifications.

- *As a Group*

The group will meet weekly or hold a conference online to discuss the progress and the problems of the project. The meeting will also assure that the members understand their respective roles and jobs. For additional matters, the group can communicate through email or Facebook message for faster transaction. The group will be using collaboration tools such as Google docs, Trello, and HiTask. The source code will be stored at github, a repository for the project. The progress of the major steps and iterations will be monitored and compared with the schedule.

## Business Considerations

The group owns the copyright of the software in this project that has been done. However, the group has agreed to transfer the copyright to the client after it has been delivered.

As of date, there is no foreseen part of the project that can be considered as patentable. However, if such a situation arises, the group collectively owns the right to all patents associated with the project.

There are no licensing issues to the tools or resources that the group will be using as open source tools to complete the project.

## Risk Analysis

- *Time*

The course requirements specify that the project should be completed by the end of the semester. There's a risk that the project may not be completed by that time and therefore not delivered to the client. To avoid such scenario, the schedule that was planned beforehand shall be strictly followed.

- *Changing requirements*

During the course of the project, the client may have changing ideas about the system. This will of course affect the progress of the project. Changes in the system architecture may even arise due to the changes that the client wants to be implemented. To avoid this situation, the group needs to establish a clear visibility plan with the client.

- *Incomplete requirements*

It is possible that some requirements that the client wants to be in the project were implied or misunderstood. Therefore, the group's understanding of the project should be presented to the client first before the group starts in doing it to clear up any misunderstanding.

## **Suggested System Architecture**

- **Web Interface**

The Web Interface is a set of PHP script-driven web pages that include the Login Page, the Administrator Interface, and the End-user Interface. The Login Page would be the starting point of the system. The Administrator Interface contains all the administrative functions of the system such as Room Management, User/Groups Management, Report Generation and Printing and System Backup/Restoration. The End-User Interface is the interface available to the public, it contains the Room Reservation module in which the end-user is able to see the map of the rooms and reserve a schedule for it.

- **Centralized Database**

The Centralized Database is based on MySQL and it will be placed on a server to be able to handle simultaneous queries from the Web Interface.

- **Web Server**

The Web Server back-end will be based on Apache or any web server that is capable of hosting the PHP-driven web pages.

- **Security**

The security module includes the User accounts, the privileges assigned to each user and group, and also the encryption used to protect data stored in the system. Since the group also intends to integrate the system with UPD's existing webmail account system, an interface to the UPD's server using the LDAP protocol will also be included. User and Group privileges will be derived from the designation of the webmail account.

## **Probable technical requirements**

### **Minimum Hardware Requirements**

- Processor with 500MHz
- 256MB RAM
- Local Area Network Connection
- at least 1GB space for software (Apache, PHP, MySQL)

### **Software to be used**

- Windows or Linux Operating System
- Apache Web Server, PHP, MySQL, OpenLDAP