**C868 – Software Capstone Project Summary**

**Task 2 – Section A**



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| **Capstone Proposal Project Name:** | Global Consulting Scheduling App |
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# **Business Problem**

**The Customer**

This customer is a global consulting organization with four employees and is responsible for performing consulting services to improve business operations providing services to over 100+ clients worldwide. Its mission is to provide professional business consulting to its clients to help its client improve business operations and reduce costs. Since the company is currently so small but has so many clients, the employees must have a uniform way of keeping track of clients and scheduling appointments. The appointments must include a URL for meetings as most meetings will be remote. In addition, they need a scheduler app to meet their business needs as they grow.

## **Business Case**

The global consulting organization is not currently using a uniform scheduling method between employees. At the moment, each employee keeps track of clients and appointments individually. That has made tracking issues and well confusion. It is not unusual for employees to have different information for each employee, which has led to a scheduling application that uses a database. That includes customer information, appointment information, contacts information, and the ability to generate reports. Which will benefit the client but ensuring each employee has uniform information about each client information about the other employees and the ability to quickly schedule appointments. In addition, it allows for reports to be run on the data to see better each employee's workload and other helpful information allowing for future growth.

## **Fulfillment**

A stand-alone scheduling application will fulfill the needs of the global consulting organization to keep client information, schedule appointments, and run reports. The system will use JavaFX and a MySQL database. The application will make scheduling more manageable and the ability to track the meetings of each employee.

The app will contain a login screen that takes users to a homepage. The homepage will include the ability for the user to go to their calendar, access customer data, access consultant data, access reports, log out, and information about upcoming appointments. In the calendar, the consultant will have the ability to view all appointments, the next seven days or the next 30 days. Via the calendar view, the user will create, edit, view, and delete appointments. The customer view and contact view will show a user a list of all customer/contacts and add new, edit, view details, or delete ether customer or contact. Access Report will allow a user to run some preset reports and run reports to track the information desired by the global consulting organization.

The application will use an MYSQL database, which will allow for future growth and implementation.

# **SDLC Methodology**

The Software Development Lifecycle (SDLC) Methodology utilized in this project is the Waterfall method. Since the client will be unable to test the application until the application is almost complete, a methodology that requires little testing though-out from the client is ideal. The Waterfall has different phases where are requirements, design, implementation, verification, and maintenance. It will require the developers to go through each step until the project is complete.

# **Deliverables**

With using Waterfall, there are required deliverables that are necessary with the methodology. Therefore, they are broke into two groups; Project and Product.

## **Project Deliverables**

* Schedule of the Project
  + The plan starts and finishes the different steps of the project
* Requirement document
* Wireframe
  + Low fidelity wireframe, a rough draft example of the layout of the application
  + High-fidelity wireframe/prototype more detailed layout of the application
* Test Plans
  + Test cases
* User guide for running the application

## **Product Deliverables**

* Class Diagrams
* Design Diagrams
* Source Code
* User guide for setting up and running

# **Implementation**

Implementing the Scheduling Application should be straightforward and will create minimum disruption to the Global Consulting Company. With this new system, no outages will be needed, and intimal deployment can happen with minimum input from the client. In addition, we choose the waterfall method of development to reduce the impact on the user and only require their feedback at the beginning and end of the project due to their time constraints.

After going through the requirement phase of development, the coding and development of the application will be hands-off until the testing phase. During the testing, phase the end user will go through all test cases and sign off the Scheduling App. Once the end-user signs off on the final testing. The implementation can begin. The developer will deploy the application to the end user's computers, and then the developer will migrate the database to an MYSQL database of the end user's choosing.

After deploying the application, the end-users will work with the developer to assign an admin to add the user via MYSQL. The admin will handle setting up and delete users using MYSQL in the future. After setting up the users in the database, the install files will be available to all users and the user guide. Finally, the end-user training will need scheduling for 1 hour at the clients' earliest convenience.

# **Validation and Verification**

The end-user will only be involved in the beginning and end of the development and testing process. The end-user will only be involved with outlining the requirements, test cases, and then final testing. Outlining the requirements and agreeing on the requirements will happen before any coding takes place. Then test cases will be created from the beginning of the development phase, and the developer will work through the test cases as each requirement is complete and fix any issues found at that time. Then, the test cases will be designed based on the requirements.

Testing the application against the test cases will happen during the testing phase. The testing for this application will primarily be manual with database verification. Testing the functionality, error handling, and requirements will ensure all requirements are met, the application's usability, and Data integrity throughout the testing phase. The final testing will happen with the end-user, and the end-user will be required to sign off on the final testing.

# **Environments and Costs**

## **Programming Environment**

The development of the application uses JavaFX and MySQL and developed in NetBeans IDE 8.2 and MYSQL Workbench 8.0. Therefore, the development will need a server running MySQL database version 5 or higher.

* Java 8
* MySQL database version 5 or higher
* NetBeans IDE 8.2
* MYSQL Workbench 8.0

## **Environment Costs**

The Environmental cost should be relatively low to run this application. Hosting A MySQL database will require around $500 a year for unlimited storage size and 99% uptime. The end-users already must maintain computers and a network connection due to the nature of their business.

## **Human Resource Requirements**

The human resource involved in this project is mainly the developer, about 90%, and the end users' involvement in final testing. The project runs from 6-25-2021 to 7-26-2021, adding about 210hrs by the developer, 5hrs by the admin, and 1hr per end-users.

# **Project Timeline**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Phase | Milestone/Task | Deliverable | Description | Dates |
| Topic Approval | Task1 | Topic Approval Form | Clarify capstone topic, project scope | 6-25-2021 – 7-13-2021 |
| Planning and Design | Task 2 / Design files | Low fidelity wireframe  High fidelity mockup | Create the UI that relates the look and feel of the project | 7-14-2021 – 7-18-2021 |
| Development | Task 2/Source Code Section B | Source Code  Test Results/Plan | Program and test the application | 7-19-2021 – 7-25-2021 |
| Documentation | Task 2 Section A&C Documentation | User Guide  Task 2 -Section A  Task 2 – Section B | Document Functionality, create User Guide and finish Section A and B | 7-26-2021 - 2021 |