**C868 – Task 2 – Section A**



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| **Project Name:** | Customer Scheduling App: Project Punctual |
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# **Business Problem**

**Customer**

The customer Canny Consults, a small consulting company that has been able to expand massively in the last couple of years. This is due to strong new leadership, new consults, and business cutting positions to hire consults on a needed basis. These factors lead to Canny Consults to open one new location. These new locations allowed Canny Consults to double their client bases, but also lead to more work per consultant they have. They currently have over fifty employees and over two hundred customers.

**Problem**

Currently scheduling was handled by each consulting personally normally on pen and paper. Due to the relatively small customer count before opening the second location this was no problem. Things started to become problematic when consults started having more than two customers per consult. Consults started to double book appointments. This led to many customers not getting the help they need and eventually getting frustrated and leaving.

## **Case**

Canny consults deal with on average between three to five meeting per consult a day. These vary from scrum meetings to get everyone on board, presentations to management on new management techniques, lunch meetings, interview with potential employees, and standard consultations. When the second location was open it started to come clear the old method for scheduling appointments no longer would work. There was a need for an application to manage appointments and generate reports for each consultant to know one’s schedule.

## **Solution**

Punctual will be a standalone workstation application written in C#. It will utilize a MySQL database for storing of data. A consultant will sign in using personal credentials for them, which will be validated against the user table within the database. The username will be cached so information shown on other pages will show appropriate names and appointments for logged in user. The main application dashboard will have three options customers, appointments, and reports. From the customer button user will be directed to a customer page where they can view, add, edit, and delete customers. From the appointment page they will be able to view, search, add, edit, and delete appointments. From the appointment page the user will have three type of searches they can perform one based on customer ID, one on the type of appointment, and lastly one on a date search. Lastly, from reports page they will be able to generate reports base on type for the previous, current, and next month. Also, they will be able to see a report of what was scheduled for each consultant. For the last report they will be able to get a list of customers with appointments this week and a contact number for them.

# **Methodology**

Because this project is the first of its kind for Canny Consultants, it is likely that the first attempt will be unable to capture all needs that the client is envisioning for the long term. It is vital for this application to be implemented as fast as possible; to prevent relationship damage of company due to missed appointments. This is why we recommend using the developing model Agile. This will allow the consultants to be on time for appointments as soon as possible, and allow for the implementation more edge cases, or less critical items to be completed on further development.

Agile, follows the six stages within each sprint:

* Planning
* Design
* Coding/Development
* Testing
* Deployment
* Review

The six Agile stages will be used in developing the Punctual Application. For the Planning phase, developers will conduct an interview and develop stories based on those stories and perspectives of at least two people which will use the application daily. By reviewing these stories, we will determine what the application main needs are, vs what is less needed, but it will be a good note on further updates. Some overlap with the design phase will be present, as when planning developers must communicate with power users’ part of company that can best confirm their findings for the application requirements are dialed in from the power users by using approach known as Top-Down.

Once Planning step and Design step is completed the development process can start. This is when the actual coding of the application is finished. We will also be making the User Interface (UI) at this stage of development. This stage will be overlapping with the beginning of the Testing stage, as unit tests are made as soon as possible, to minimize total development time for the application. When all main pieces have been tested separately and combined, full Application testing can be done, first by quality assurance team, then by real users in a beta that is live. When the beta is done, and all-important fixes completed, the application will be deployed to Canny Consultants cloud environment and local workstations. We will take Feedback afterwards, and the second iteration of the Agile process can start. This is the main benefit of using Agile methodology in the Punctual Project. The software can be planned and delivered in a short amount of time, and more visual pleasing, less critical features can be shipped in future developments when the company has time and resources to do as such.

# **Deliverables**

Agile SDLC has two type of deliverables which are the project and product deliverables. The details for these are listed below.

## **Project Deliverables**

Listed below are items that is the Project Manager’s responsibilities:

* Timeframe
  + The schedule of the project, what must be done, and outlines for the time it will take to complete.
* Wireframe/UI Documents
  + The user interface will have a rough outline
* Product backlog
  + Product requirements are listed for both in and out of scope for the current cycle. This is the document which will be viewed to determine what will be worked for each iteration of development.
* Sprint Backlog
  + List of requirements for this product are part of this cycle of development. This will be limited to what is being worked on by the development team.

## **Product Deliverables**

What will be shipped to Canny Consultants when the project is finished.

* GUI
  + A developed UI will allow users to get each section of the application.
* Security access
  + Standard login protocols will guarantee user security.
* Custom functional database
  + The database will be part of the company cloud environment, the database will be mainly accessed by the Punctual application.

# **Deployment**

The deployment of the software will need to be coordinated between Canny Consultants IT Department manager as well as well as the heads of each IT department. As the IT department is small, the requirements before we can deploy this software will be simple the application will be installed on all endpoints and they will require a good network connection to access the database on Canny Consultants cloud servers. The support of technicians will be important to ensure deployment of this software as they are responsible for the full functioning of all Canny Consultants software. The original training should be done with the client IT staff to ensure their knowledge of the new application. This will ensure onsite IT can help with most inquiries without having to reach back to us. This deployment process should not take any more than four business days which this includes the training sessions.

# **Testing Methods**

Data entry and storage is the main two parts of this application. Other features will be added in time once needed, but its core functionality is to create, update, store, and delete records. For that reason, the most important testing should be on these functions. There are two types of records and user sign in function. Customers, Appointments, and Users. We will test the function of adding, deleting, updating, and saving for each type of record. Also testing to make sure only created users can sign in. Lastly, the search functionality for appointments needs to be tested. Unit testing of each part of the application as it is combined with the application will be the best way to ensuring record management is working properly. The application will be assembled which will start end-to-end application testing will be started with dummy data provided. Black box testing will be the last stage completed, done by the important users during training. This will also be part of requirements gathering for future development of the software via cycles.

# **Resource Requirements**

## **Programming Environment**

This application was designed to work on windows environment properly windows 10 and will need a dedicated server for storage of the database. This will use MySQL Cloud database user already uses. Software requirements detailed below:

* MySQL Custom Cloud Database (client already has)
* Microsoft Windows 10 (any version)

## **Environment Costs**

The environment costs are shown to be small for the making of the standalone application. The client has well everything they need for infrastructure for this project. This is because most of the workstations are Windows 10 machines, and existing cloud servers in place used for database management. They already have a MySQL license so they will only have to pay for the extra data usage from there cloud provider. This fee should be around $500 based on most cloud-based server solutions. This is the only fee not currently included in yearly budgeting.

## **Human Resource Requirements**

The biggest expense for the human resources requirement for this project will be for the developers. The estimated that 90% of the budget hours and money will be used by the development team. The remaining 10% will come from the important users in testing and the IT team in administrative activities.

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# **Timeline**

Listed below are the projects proposed timelines. These dates and schedules can change based on new project needs.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
| Phase | Milestone/Task | Deliverable | Description | Dates |
| Planning | Requirements gathering and initial planning | Requirements | Client meeting and user stories gathered | 05/03/2021-05/04/2021 |
| Design | Core Design | Low fidelity wireframe  And  High fidelity mockup | Wireframe mockup  And  UI prototypes of wireframe | 05/05/2021-05/07/2021 |
| Development | Complete Application 1st iteration | Functional application with live data | Development Work for the creation of application based on requirements gathering and the using of UI prototypes | 05/10/2021-05/21/2021 |
| Testing | Unit and Application testing | Test results  and make a hit list for future bug fixes | Testing will start during the Development process and will be done concurrently to lower development time | 05/24/2021-05/28/2021 |
| Deployment | Application Deployment | Application and  Deployment | Application will be deployed first to Power Users and after several days to regular users after training sessions | 05/31/2021-06/04/2021 |
| Review | Post-mortem | Future goals and review of process | A review of the development process and then determining areas that need to be reviewed in future Agile cycles. Will form the requirements gathering for next stage of project | 06/07/2021 |