

Summary

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Business Opportunity

The application provides diverse business opportunities for many different customer bases. The solution's design can streamline scheduling processes such as booking, updating or canceling appointments. Business opportunities for this solution can range anywhere from salons, sales teams, medical teams or other professional services. The business requirements the software solution can fulfill makes the target consumer other businesses in need of scheduling software. Because the system does not require many resources, the solution may best fulfill the needs of small to medium size businesses. The scheduling software will fulfill the needs to store users, customers, and appointment data.

Life Cycle Methodology

The development of this solution utilize waterfall method of development. The solution will be thoroughly designed before development of the project starts, and each phase of development will be completed before moving on to the next phase. The requirements phase will consist of information gathering and requirements gathering so that the solution can be best designed to fit the needs of stakeholders and customer. The design phase will consist of creating class and design diagrams, unit testing, project timeline design, and thorough documentation. Implementing the project will start with construction of the database, code connecting to the database, GUI implementation, class implementation, and functionality implementation in that order. Testing phase will consist of unit testing with tests designed during the design phase. Deployment phase will consist of collecting the required application and documentation and preparing the package for release.

Deliverables

Deliverables associated with the project solution will be this summary, a timeline that includes milestones, start and end dates, a resource allocation, documentation associated with design, the application, and documentation associated with the application. Documentation associated with the design of the software application will be class diagrams, design diagrams, GUI mock-ups, unit testing plans, unit testing summaries, and user guides for running the application. Documents associated with the software application will include a README file, an activity file documenting user activity, the source code, and XML files containing the GUI.

Implementation

Implementing will start with the construction and import of the GUI created in Scene Builder. Scene Builder produces and edits FXML files. After the FXML files are imported, the classes will be built in to the project according to the designed class structure defined in a UML diagram. After then, the database will be constructed in MySQL, and connected to the project using a JDBC structure. Then the functionalities can be added to manipulate the data in the database through the GUI. After the functionalities of the project are complete it will be tested using the unit tests designed during the design phase. The outcome of the project will include a stand-alone application that is fully functional and capable of these key features:

- + Using user data to log in to the application
- + Displaying appointment data in a readable format
- + Notifying users of upcoming appointments
- + Displaying time of appointments in local time
- + Capability to add, update, and delete appointments
- + Form input validation
- + Search functionalities
- + Report generation
- + Scalable
- + User-friendly

Requirements Validation

Verifying stakeholder needs will include processes that test software requirements. One such test will be a user interview on different stages of the stages of the application's development such as surveys that examine whether the application aligns with their expectations or not. Prototypes and mock-ups will also be developed and will be processed with stakeholder feedback. Use cases and usability testing will be designed to unit test the software solution as well. The outcome of these methods for validating requirements will result in an application that meets stakeholders needs and expectations of this application.

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Development Environment

- + Most documentation will be written in WPS Office
- + Mock-ups will be outlined in drawing
- + Mock-ups will be created in Scene Builder
- + App will use Java written in IntelliJ Idea
- + Version Control will be stored in GitHub repository
- + Database will be built/stored in MySQL workbench

Associated costs

- + Hardware
- + Internet costs
- + Training and learning resources
- + Housing Utilities and Electricity
- + Time and opportunity costs
- + Health and well-being

Timeline and Milestones

Start Date: September 9, 2023

Design: 20 Days (Milestone 1)

Resources:

- + WPS Office
- + Scene Builder

Implementation: 30 Days (Milestone 2)

Dependencies:

- + Design Docs
- + Mock-Ups
- + Stakeholder Feedback

Resources:

- + IntelliJ
- + GitHub
- + MySql WorkBench
- + Scene Builder
- + Design Documents

Testing/Deployment (15 Days)

Dependencies:

- + App functionality
- + Testing Documentation

Resources:

- + Software Application
- + Test Cases
- + Design Documents
- + WPS Office

End Date: November 15, 2023