

BUSINESS PROBLEM SCENARIO

Business Problem Scenario Information
Company Name: Howard & Maria Law Firm Management LLC Date: 5/25/2022 Prepared By: Kondaiah Nayak Malavathu
General Project Information: Project Team #: INDDZA1900144 Project Team Name: Spring Boot Law Firm Project KM & DJ Project Leader and Team Members: Kondaiah Nayak Malavathu and Djelloul Haradj
Business Problem/Scope Statement: The Law Firm Management System (LFMS) application's main functionality is to enter the law firms as well as client's information, ability to add, update, delete as it requires. Application will allow you to manage all law firms data from one database. Admin will be able to add, update, and delete law firms data from the database as needed. Clients can enter their own personal information and if they need any changes then they have to contact database admin for updating. In this application, all law firms are centralized in one database which can give the flexibility maintain, manage and improve speed of data access. In addition to that, you can generate reports and use different queries to customize data for required need of the moment.
Project Objectives: Project functions defined below: <ul style="list-style-type: none">• Front-end and back-end applications• Database admin and client privileges• Application limitations• Predefined dependencies and assumption• External interface requirements like client interfaces, hardware interfaces, software interfaces, software interfaces, and communications interfaces Defined objectives for project development: <ul style="list-style-type: none">• Application should work on Windows, Linux, and iOS operating systems• Use Spring Framework• Use Java language as base language• Using Maven Packages as dependency• Use Spring Boot Starter Data JPA for Spring Framework dependency• Use MySQL Connector Java for Spring Framework dependency• Use Spring Boot Starter Test for Framework dependency

- Spring Framework Jar packaging

Write the documentation for project:

- IEEE 829 Detailed Test Cases
- IEEE 830 SRS Outline
- Business Problem Scenario

Customers/Stakeholders:

- Clients
- Law Firms
- Database Admins
- Quality Assurance Analyst

Project Description:

- The Law Firm application is the management platform where Clients and Law Firms can add their required data and manage as the requirements needs to:
 - Clients able to add their data and login into their accounts to check their information
 - Law Firms can add the data through their admin privileges and then they can manipulate data as the requirement defined.
 - All Law Firms have login privileges so that they can use the information
 - Database admins have permissions to generate customized reports and able to export data files in CSV, HTML, JSON, SQL INSERT statement, XL Spreadsheet, XML (mysql format), and Tab separated formats
 - Generate an exception report that identifies problem situation and employees
- Functioning devices like laptops, PCs, iPad, and Android mobile devices with up to date operating system, with the assumption that these devices support application interface
- A GUI system will be used to navigate front end application. The GUI will provide options such as logging in
- Searching the inventory, checking out database, checking in equipment, adding users, and removing users. MySQL Workbench to maintain a centralized database that stores information in back-end database.

Software Engineering Best Practices:

- Favor Composition (Has a Relationship) over Inheritance (Is a Relationship)
- Program to Interfaces
- DRY (Don't Repeat Yourself)
- KISS (Keep it simple)
- Encapsulate Changes
- Single Responsibility for Objects
- Open to extend and closed to mutate

Major Project Deliverables:

Project Scope and High-Level Requirements

- Application should be able to take the Clients and Law Firms information and store it in a database. Data should be changeable with some conditional procedure.
- Clients should be able to choose the different categories as their requirement
- Clients should be able to report the problem by using the portal
- Database Admin and Quality Assurance Analyst should be able to perform their defined role and test to evaluate data access.

Project Requirements

- Project should be on GitHub
- Project should have Class Diagram
- Project should have all the required dependencies
- Project should be built up on Spring Framework
- Project should have Maven Package Dependency

Software Architecture

- It should be reliable, resilient, secure, and deliver the project with less latency
- Use Spring Framework and Spring Boot as skeleton while using Java language. Project should run on JVM for better speed and good performance.

Software Design and Construction

- To design the software application, identified company category to build the application for.
- Once, identified and then defined what are the specific columns in each table
- Meanwhile, build the database for the chosen law_firm category
- Confirmed that the database is responsive to the commands
- In the end tested the established database links from Postman application

Construction and Testing

- Once project is developed, application should be resilient to pass the test cases like adding, updating, and deleting data to law_firm_registry