**Developing a Backend Admin for Learner’s Academy**

DESCRIPTION

**Project objective:**

As a Full Stack Developer, design and develop a backend administrative portal for the Learner’s Academy. Use the GitHub repository to manage the project artifacts.

**Background of the problem statement:**

Learner’s Academy is a school that has an online management system. The system keeps track of its classes, subjects, students, and teachers. It has a back-office application with a single administrator login.

**The administrator can:**

● Set up a master list of all the subjects for all the classes  
● Set up a master list of all the teachers  
● Set up a master list of all the classes  
● Assign classes for subjects from the master list  
● Assign teachers to a class for a subject (A teacher can be assigned to different classes for different subjects)  
● Get a master list of students (Each student must be assigned to a single class)

There will be an option to view a Class Report which will show all the information about the class, such as the list of students, subjects, and teachers  
       
The goal of the company is to deliver a high-end quality product as early as possible.

**The flow and features of the application:**

● Plan more than two sprints to complete the application  
● Document the flow of the application and prepare a flow chart   
● List the core concepts and algorithms being used to complete this application  
● Implement the appropriate concepts, such as exceptions, collections, and sorting techniques for source code optimization and increased performance

**You must use the following:**

● Eclipse/IntelliJ: An IDE to code for the application   
● Java: A programming language to develop the web pages, databases, and others  
● SQL: To create tables for admin, classes, students, and other specifics  
● Git: To connect and push files from the local system to GitHub   
● GitHub: To store the application code and track its versions   
● Scrum: An efficient agile framework to deliver the product incrementally   
● Search and Sort techniques: Data structures used for the project   
● Specification document: Any open-source document or Google Docs

**The following requirements should be met:**

● The source code should be pushed to your GitHub repository. You need to document the steps and write the algorithms in it.  
● The submission of your GitHub repository link is mandatory. In order to track your task, you need to share the link of the repository. You can add a section in your document.   
● Document the process step-by-step starting from sprint planning to the product release.   
● The application should not close, exit, or throw an exception if the user specifies an invalid input.  
● You need to submit the final specification document which will include:   
● Project and developer details   
● Sprints planned and the tasks achieved in them   
● Algorithms and flowcharts of the application   
● Core concepts used in the project   
● Links to the GitHub repository to verify the project completion

The project is planned to be completed in 3 sprints. Tasks assumed to be completed are

* Project Analyzing for the flow and for the implementation.
* Creating the flow of the application.
* Initializing git repository to track changes as development progresses.
* Writing the Java & JSP program to fulfill the requirements of the project.
* Testing the Java program with different kinds of User input
* Pushing code to GitHub.
* Creating this specification document highlighting application capabilities, appearance, and user interactions.

## **Demonstrating the product capabilities, appearance, and user interactions**

**Technologies used in the Project:**

Java , JSP, Eclipse, GitHub, gitbash

**Core concepts:**

Servlets, html, css

## **Conclusions:**

Further enhancements to the application can be made which may include:

* Able to enter user id, password.
* Getting master list of all teachers, classes and subjects
* Assign teachers to a class for a subject.