# 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 artefacts.

## 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.

This document contains contents for:

1.Sprint planning

2.Project Description

3.Flow of the Application

4.Core concepts used in project

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**1.SPRINT LEARNING**:-

The project is planned to be completed in 2 sprints. Tasks assumed to be completed in the sprint are:

>Creating the flow of the application

>Initialising git repository to track changes as development progresses.

>Writing the Dynamic web project program to fulfil the requirements of the project.

>Testing the Dynamic web project program with different kinds of User input

>Pushing code to GitHub

>Creating this specification document highlighting application capabilities, appearance, and user interactions.

**2.Project Description**:-

●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.

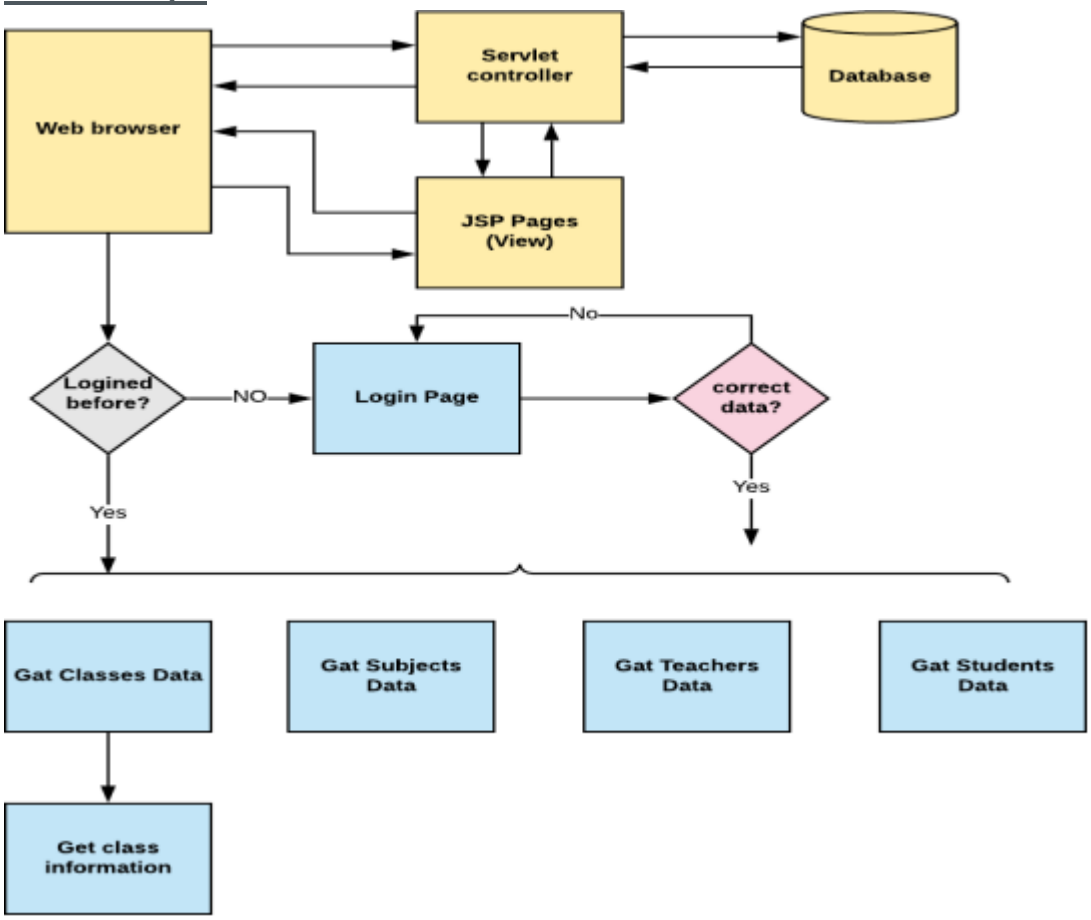
●Assign classes for subjects from the master list.

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.

## 3.Flow Graph:-




## 1.Core concepts used in project:-

- Eclipse IDE to code for the application.
- web pages, databases, and others
- SQL: To create tables for admin, classes, students, and other specifics