LearnerAcademy

Documentation

Project submitted by:

Ramakrishna G. Kannari

Email: rkannari@teksystems.com

Phone: +918296242431

Contents

Ramakrishna G. Kannari

1. Sprint planning

The project is planned to be completed in three sprints and detail of every sprint functionalities is explained below:

Sprint-1

- Understanding the problem definition and project.
- Creating the flow of the project based on the requirements listed.

Sprint-2

- Creating the GitHub repository for the project and cloning the GitHub repo to local repo.
- Setting up Database Schema in MySQL Workbench.
- Creating the Tables and adding constraints

Sprint-3

- Create Dynamic Web Project and setup tomcat-9 server
- Download sql-connector jar and jstl jar and add them to library
- Create Servlets and Setup JDBC and write Java code different pages.
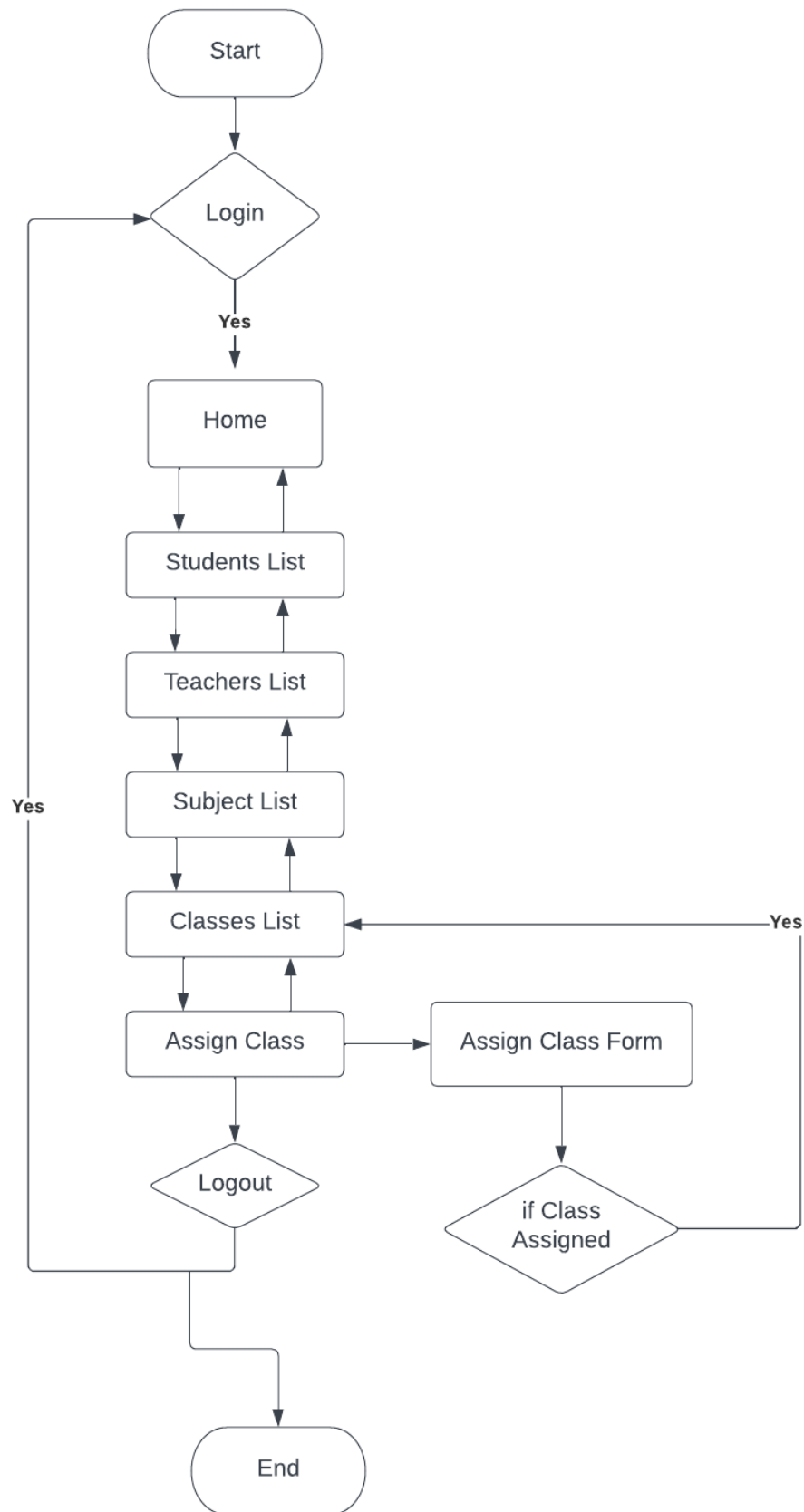- Create JSP pages for front-end.

Sprint-3

- Testing the code and all the features with different inputs.
- Pushing the code to GitHub Repository
- Writing the Specification document with code and outcomes.

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2. Core concepts

The Core concepts used for developing this project are

- Java Servlets
- JDBC
- Java Server Pages
- MySQL
- HTML
- CSS

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3. Flow of Application

```
                    ┌─────────┐
                    │  Start  │
                    └─────────┘
                         │
                         ▼
                    ◇ Login ◇ ──────────────────────┐
                         │                          │
                        Yes                        Yes
                         │                          │
                         ▼                          │
                    ┌─────────┐                     │
                    │  Home   │                     │
                    └─────────┘                     │
                         │  ▲                       │
                         ▼  │                       │
                  ┌──────────────┐                  │
                  │ Students List│                  │
                  └──────────────┘                  │
                         │  ▲                       │
                         ▼  │                       │
                  ┌──────────────┐                  │
                  │ Teachers List│                  │
                  └──────────────┘                  │
                         │  ▲                       │
                         ▼  │                       │
                  ┌──────────────┐                  │
                  │ Subject List │                  │
                  └──────────────┘                  │
                         │  ▲                       │
                         ▼  │                       │
                  ┌──────────────┐             Yes  │
                  │ Classes List │ ◄────────────────┤
                  └──────────────┘                  │
                         │  ▲                       │
                         ▼  │                       │
                  ┌──────────────┐   ┌──────────────────┐
                  │ Assign Class │──►│ Assign Class Form │
                  └──────────────┘   └──────────────────┘
                         │                   │
                         ▼                   ▼
                    ◇ Logout ◇         ◇ if Class  ◇
                         │              Assigned
                         ▼
                    ┌─────────┐
                    │   End   │
                    └─────────┘
```

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4. Demonstrating product capabilities, appearance and user interactions

To demonstrate the product capabilities, below are the sub-sections configured to highlight appearance and user interactions for the project:

Step 1. Creating the Dynamic web project in eclipse

Step 2. Setting up Database Schema in MySQL.

Step 3. Create Servlet and establish connection to Database

Step 4. Write servlet code for different pages such as *Login, Student List, Teachers List, Subject List.*

Step 5. Create Java Server Page for front-end and write code for different pages.

Step 7. Improve Styling for front-end pages.

Step 8. Pushing code to Git Repository.

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5. Unique selling points

- The application is designed to render master list of all the entities students, teachers and subjects.
- The application is given with option to assign new class for students with available students and subjects.
- The options on Main-Menu are
    - Student List
    - Teachers List
    - Subjects List
    - Classes List
    - Assign Class
    - Logout
- Logout option will take us to login page again to start over.

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6. Conclusion

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

- Admin given with privilege to add, delete, update students, teachers, subjects in page.
- Asking user to verify user using OTP to mail-id.
- Improving styling to pages with more attractive CSS.

Ramakrishna G. Kannari

7. Source code link

GitHub:

https://github.com/ramkrishnareddy24/LearnerAcademy