

Phase2 Project Specification

LearnersVault

By: Nilakshi Nitinkumar Patil

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LearnersVault

- **Project Objective:**

LearnersVault 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.

- **Project Details:**

Project Name: LearnersVault

Developed by: Nilakshi Patil

- **Sprint Details:**

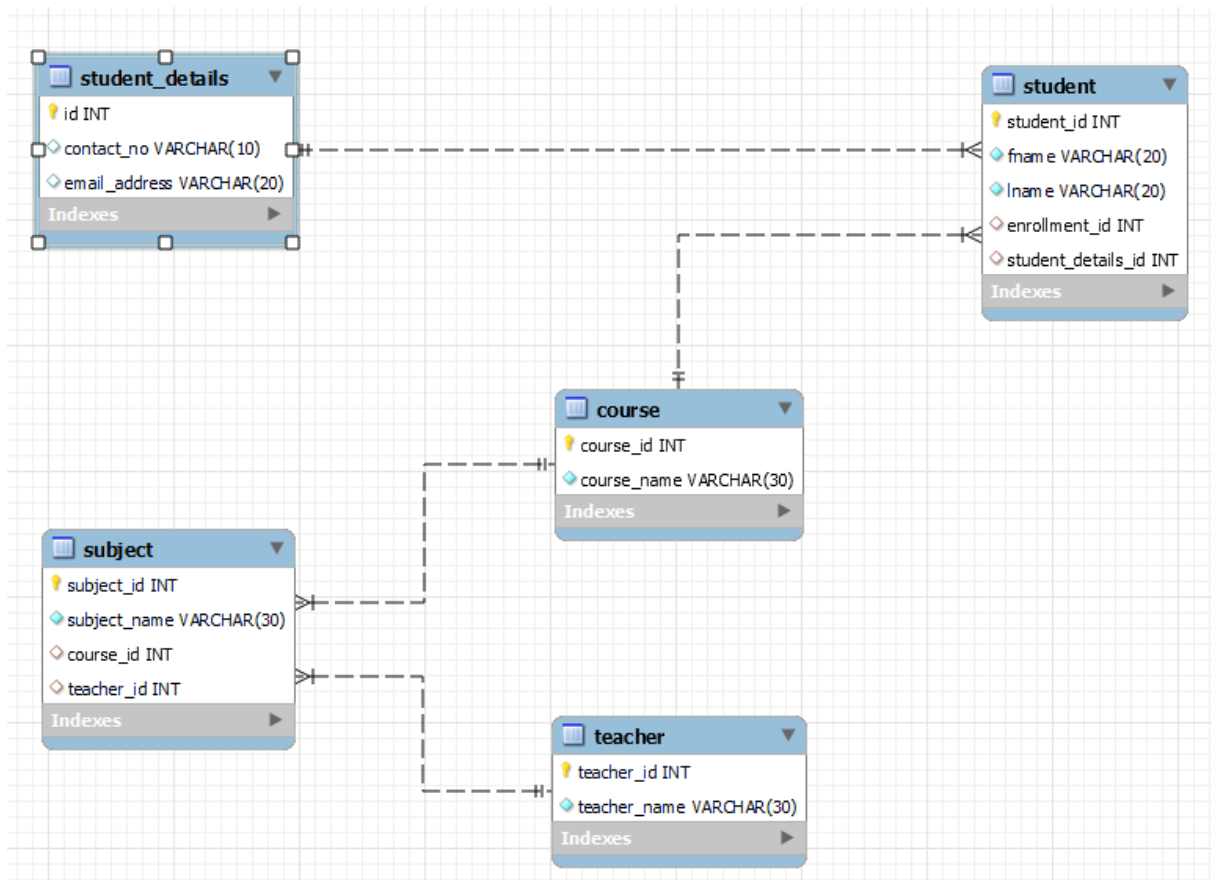
- ❖ **Sprint1:**

1. Setting up Git and GitHub account to store and track the enhancements of the application.
2. Setup pom.xml to include required dependencies
3. Setting up initial servlet and jsp pages for login and logout capability.
4. Design the database tables.
5. Configure hibernate to connect to database and map database entities with Java POJO classes.
6. Create dashboard page to view master list of all entities.
7. Test the implemented features and fix the bugs found while testing..
8. Stage and commit all changes to Git and GitHub.

- ❖ **Sprint2:**

1. Add Dao classes to handle to retrieve, update and delete operations.
2. Prepare servlet and jsp pages to view master list of all entities.
3. Prepare servlet and jsp pages to assign or delete teacher for selected subject.
4. Prepare servlet and jsp pages to assign or delete subjects for selected course.
5. Test the implemented features and fix the bugs found while testing.
6. Stage and commit all changes to Git and GitHub and release the prototype product.

- **ER Diagram:**



- **Algorithm:**

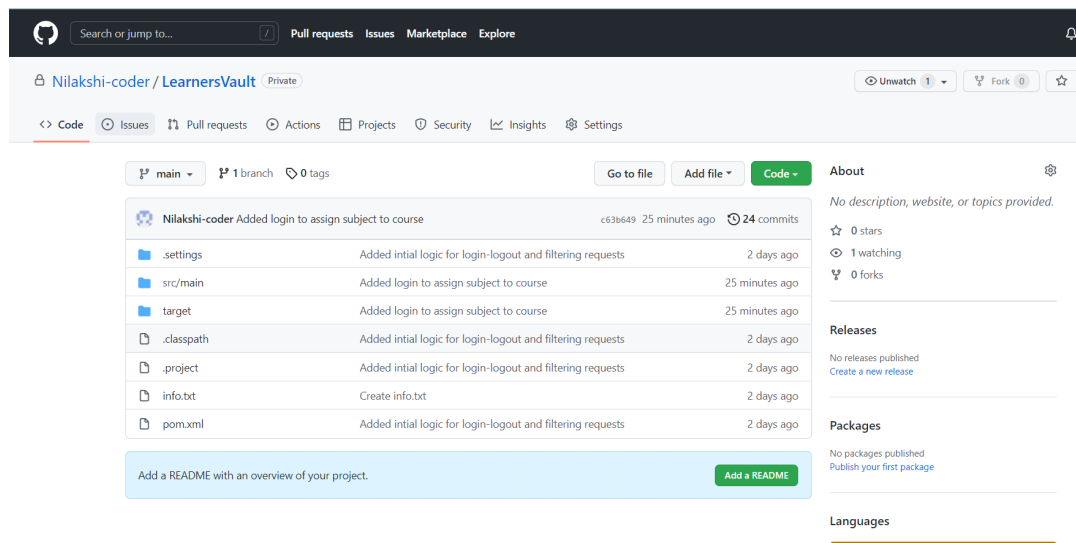
1. Display login form for admin. Verify username("admin") and password("admin@123") provided by user and statically verify it in ValidationFilter.
2. Display admin dashboard page, if login is succeed.
3. Add header page to show application name and logout option to invalidate session. Include this header page in other pages.
4. On dashboard page, show links to navigate to view details for student, course, subject, teacher and add "Back" button to navigate back.
5. On Course details page, show options to view list of subjects added in course and list students enrolled for course. Show option to assign/delete subject to course from the list from subjects available.
6. On Subjects details page, add option to view teacher assigned to that subject and allow user to update and modify the teacher.

- **Concepts used:**

- ❖ **Servlets and Filters:** This project contains servlets to handle request coming from user and filters are used to validate it before sending that request to intended page.
- ❖ **Session Management:** HttpSession is used to store entire session with a admin.
- ❖ **JSP Pages:** JSP pages are used to display table content driven by servlet logic.
- ❖ **Data Structures used:** List Collection is used.
- ❖ **Java8 Features:** Lambda expressions and streams are used for better performance and concise code.

- **GitHub Link:**

<https://github.com/Nilakshi-coder/LearnersVault>



- **Conclusion:**

The current LearnerVault version is a very basic version. It can be enhanced by adding following features to it:

1. The “Sign Up” page can be added to register new user. This user can be added in database and user validation can be verified against database users data.
2. This application can be enhanced by adding insertion feature to add new student, course, subject, teachers details.

Above mentioned features can enhance the user experience of the product.