

Software Engineering Project

By Group Q

E-learning Platform

Objective:

The E-learning platform aims to provide free easily accessible educational materials to users globally. The users will be able to perform CRUD operations, that is, upload, access, update and delete files of the user. This project aligns with the below United Nations Sustainable Development Goals:

- Goal 4: Quality Education.
- Goal 8: Decent Work and Economic Growth.
- Goal 9: Industry, Innovation, and Infrastructure.
- Goal 10: Reduced Inequality.

How it works?

Users are able to register themselves in the e-learning platform providing the name, user name (unique alphanumerical), email ID and password (should be validated). No user will be allowed to register again using the same email ID or the username. Users will be able to login after validating the entered credentials by the user. Forget password can be implemented as an additional functionality, which will help users to retrieve their account if they have forgotten the password. And if the account is inactive for more than six months, the account will be removed from the database and he/she needs to register again.

After successful login, user will be entering into the home page which is a read only page. In the home page, a welcome text addresses the user and recommendations will be shown. There will be a profile button to access the profile page of the user. Home page should also have a search bar for user to search the materials using keywords. As an additional functionality, the searched result can be sorted with respect to the date of upload, author and rating. In the profile page, user will be able to see the personal details which the user entered while registering in the platform. Profile page must have an upload button to upload study materials (pdf/png/video format). It should also include an edit and delete button to edit/delete the uploaded materials by the user. Additionally, users should be able to view the history of their downloaded data.

Technical Requirements

- Functionality and layout of the User Interface can be done using JavaFX.
- The core functionalities including authentication of the user, file uploading and updating can be done with Java.
- A database is need to store user information and the metadata information of the files, which can be implemented using Java Database Connectivity function.
- Client-server communication need to be developed to handle the data exchange between the client-side application and the server.

Future Scope

- User will be able to monitor the progress made in the respective field of academic studies.
- User will be able to provide reviews and ratings for the uploaded study materials.

- Introduction of personal and global chat functionality, so that users will be able to interact privately as well as in groups.

Conclusion

The software is designed to be easily accessible as well as user friendly where the interface would be made such that it would be able to provide a seamless experience in navigation. By utilizing the software user would be able to gain knowledge by accessing study material as well as it acts as a platform to share the acquired knowledge to others.