

E-LEARNING PLATFORM

Programming made simple



PROJECT DESCRIPTION

- Computer Science popular choice in today's time
 - Better employment opportunities
- Difficulty in setting up the development environment
- Tiring grading process:
 - Few programming assignments given to students
- Programming assignment made easy
 - By solving the above mentioned issues



AIMS & OBJECTIVE

Students

- Platform to code
- Real time grading
- Access to notes and video lectures

Teachers

- Monitor class performance
- Automatic grading
- Plagiarism checking



AIMS & OBJECTIVE (CONT.)

- Account Management System
- Course Management System
- Module System
- Assignment System
- Grading System
- Plagiarism Checker
- Code Runner



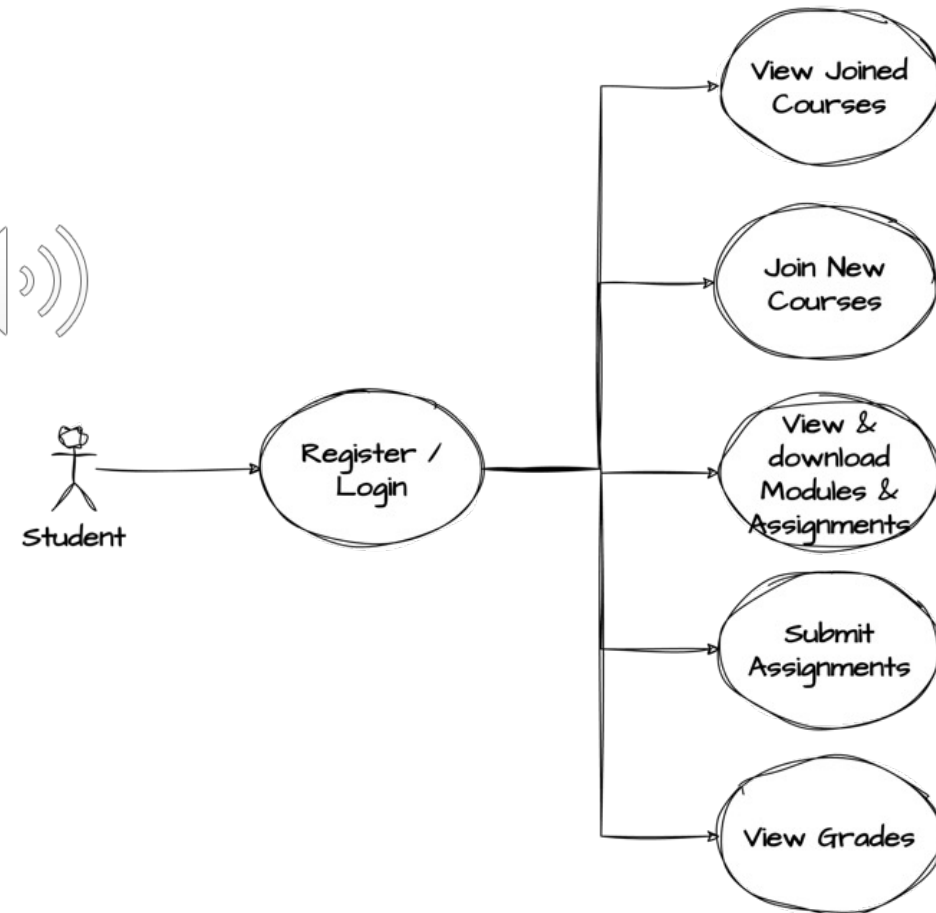
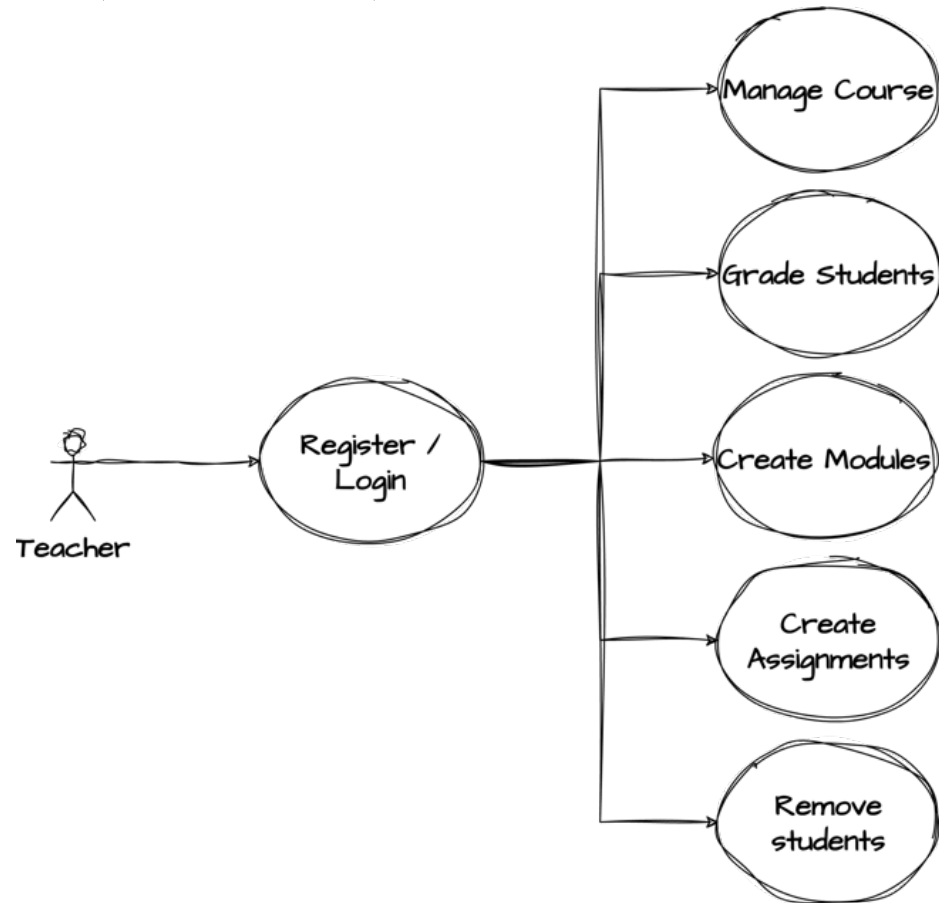
DEVELOPMENT & IMPLEMENTATION

Technologies Used

- Backend
 - Python (Django)
 - PostgreSQL
- Frontend
 - JavaScript (ReactJS)
 - TailwindCSS



DEVELOPMENT & IMPLEMENTATION (CONT.)



DATA SOURCES & ETHICAL CONSIDERATION

Data Sources

- All data is generated through user action
- Data stored
 - Email Address
 - First & Last Name
 - Profile Picture
 - Courses
 - Grades



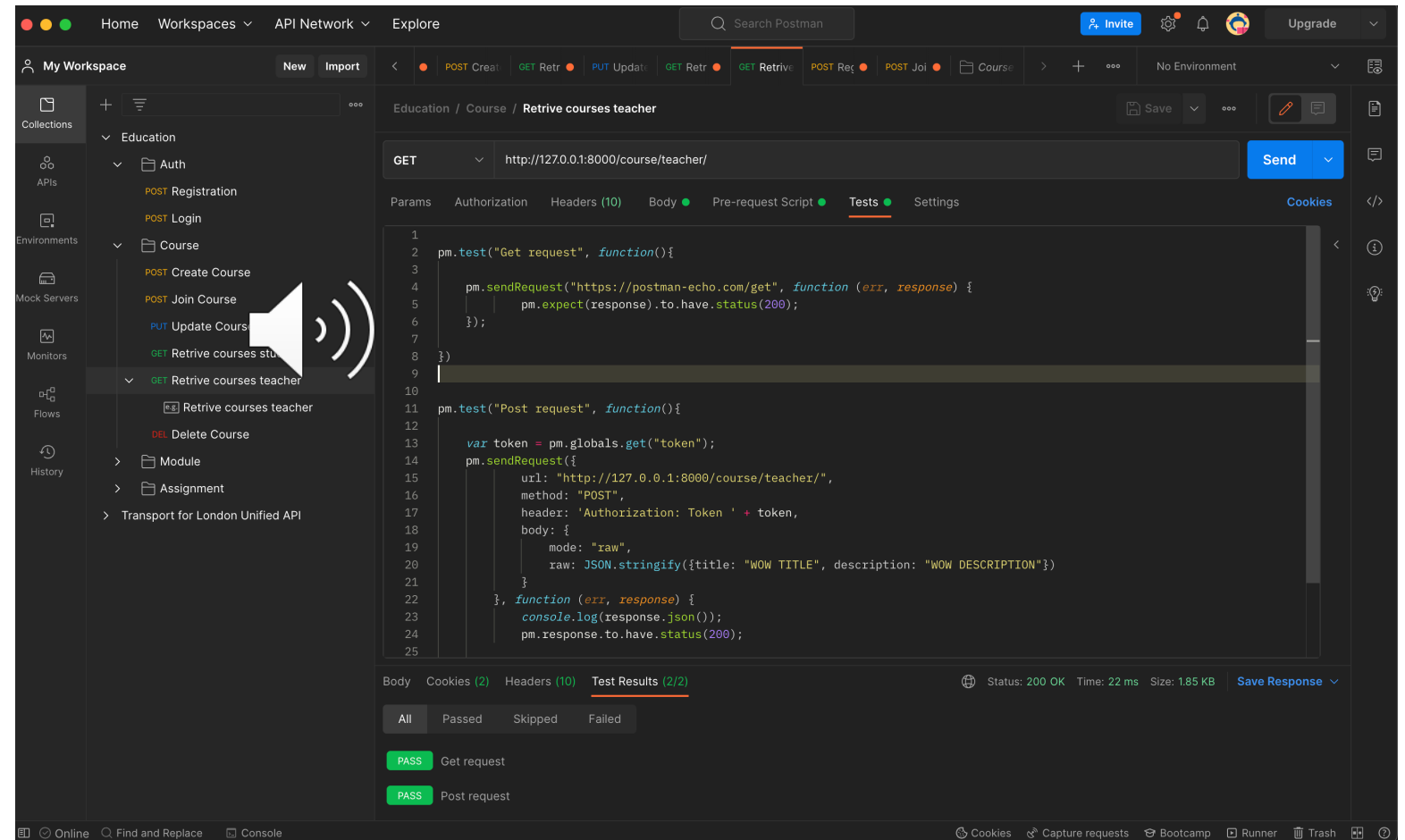
Ethical Consideration

- No personal information stored
- Using encryption and hashing to store user password information
- No real data




TESTING & EVALUATION

- Unit Testing
 - Postman
- What is postman?
 - Tool for testing RestAPI




RISKS AND CONTINGENCY PLANS

| Risks | Contingencies | Likelihood | Impact |
|------------------|--|---|--|
| Waiting Time | Implementing WebSocket and Multi-Threading | Medium (depends on traffic)  | Impact website performance affecting user experience |
| Server crash | Handling server crash | Low | Website becomes inaccessible to the users unless restarted by the admin. |
| Database offline | Making sure server stays online 24/7 | Low | Website will be accessible but it will won't display any information from the backend. |









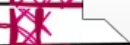














RISKS AND CONTINGENCY PLANS (CONT.)

| Risks | Contingencies | Likelihood | Impact |
|----------------------------------|--|--|---|
| Cloud Storage / Backup | Creating a backup everyday | Low  | User data lost like their uploaded assignments |
| Lack of experience with 'Python' | Add support for more programming languages | High | If user doesn't know python, he / she might not be able to code |



PROJECT PLAN

| No. | Task Name | June | July | August | September |
|-----|---|---|---|---|---|
| 1 | Project Planning |  | | | |
| 2 | Project Specification Report & Presentation | |  | | |
| 3 | Presentation | | |  | |
| 4 | Dissertation | | | |  |
| 5 | Testing |  |  |  | |
| | Backend |  | | | |
| 6 | Account Management System |  | | | |
| 7 | Course Management System |  | | | |
| 8 | Module System |  | | | |
| 9 | Assignment System |  | | | |
| 10 | Grading System |  | | | |
| | Frontend | |  | | |
| 11 | Login / Registration Pages |  | | | |
| 12 | Course Page |  | | | |
| 13 | Module Page |  | | | |
| 14 | Assignment Page |  | | | |
| 15 | Grading Page |  | | | |
| 17 | Code Runner | |  | | |
| 18 | Plagirism Checker | | |  | |



