

EC 9540
HUMAN COMPUTER INTERACTION
LAB 3

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SEMESTER 7

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Project Title: Student Progress Viewer for Universities

Frontend works

Home Tab

According to questionnaire, most are voted for black and white theme. Then, we decided to use black and white theme for our GUI. Also, we tried to make it look simple.

Navbar also include only 4 tabs. Those are Home, GPA, Results and Attendance. So, Users can go through each tab manually. Otherwise, users can click “Let’s start” button. It will give users a better experience like a tour. It automatically navigate to GPA tab, Results tab, and then the Attendance tab. We include that “Let’s start” button for each tab to get a better user experience for users.

Also, we included some motivational quotes on the application to inspire users.

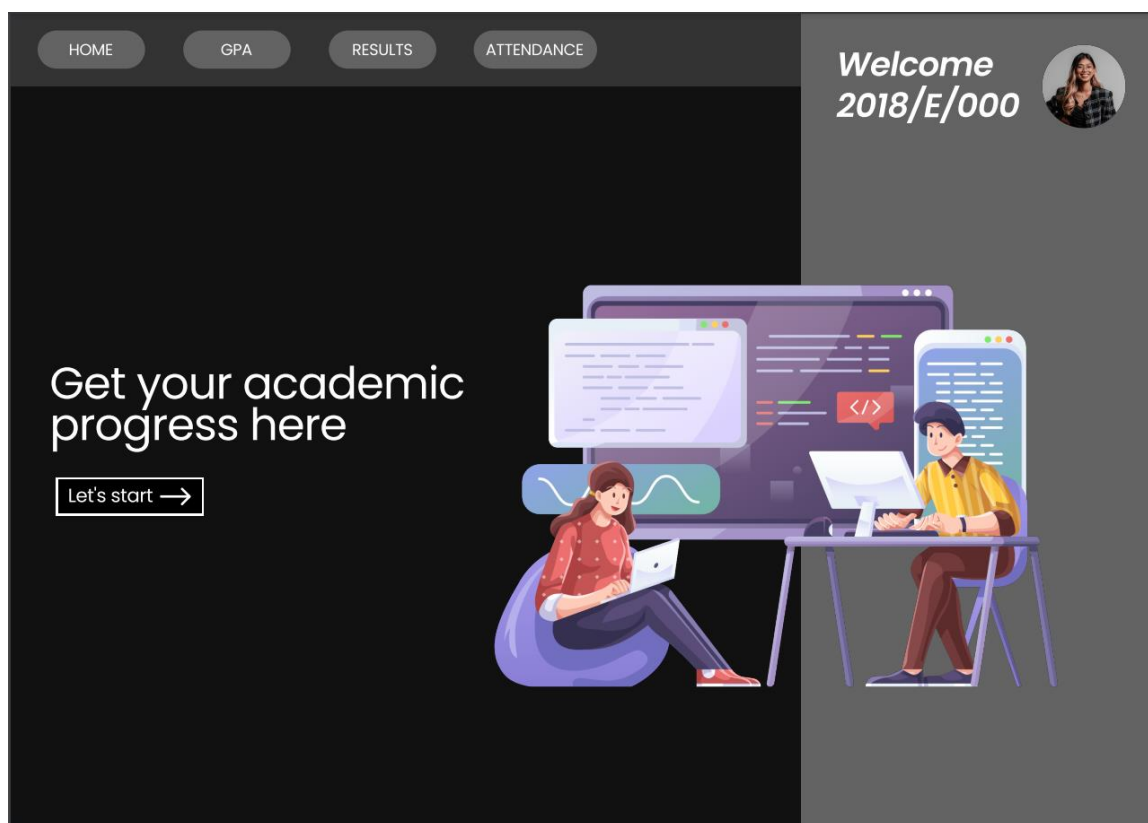


FIG.01: LANDING PAGE (HOME PAGE) DESIGN

GPA Tab

Here, students can see their current GPA. We try to display it very attractive way. Also we tried to highlight it by creating a circle around it.

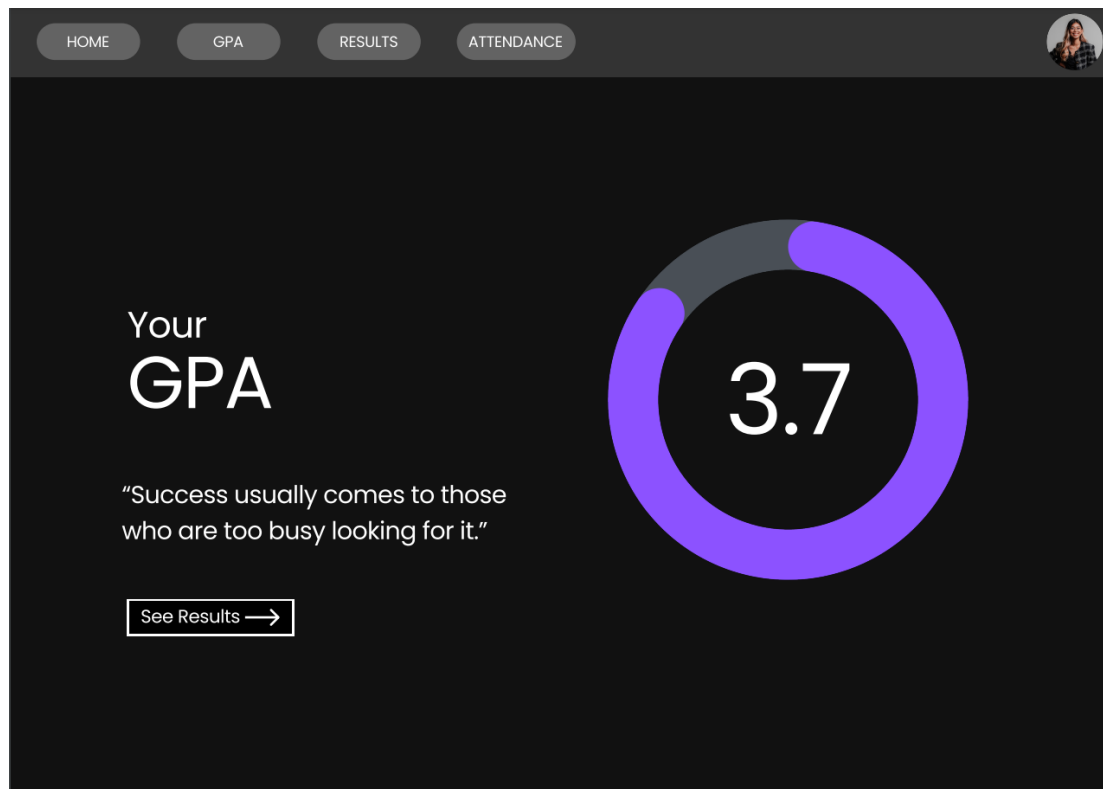


FIG.02: GPA PAGE DESIGN

Result Tab

Students can see their results in here. They are able to see subject code, corresponding credit amount, and the corresponding result in a tabular format. We tried to highlight titles of the table by using purple color. Then accordingly use light purple and white color for represent subject codes and other data in the table to get better attraction.

Also, users are able to filter their results by semester wise and department wise. We used two different drop down menus for achieve that tasks. Users easily can select corresponding semester or corresponding department for see results.

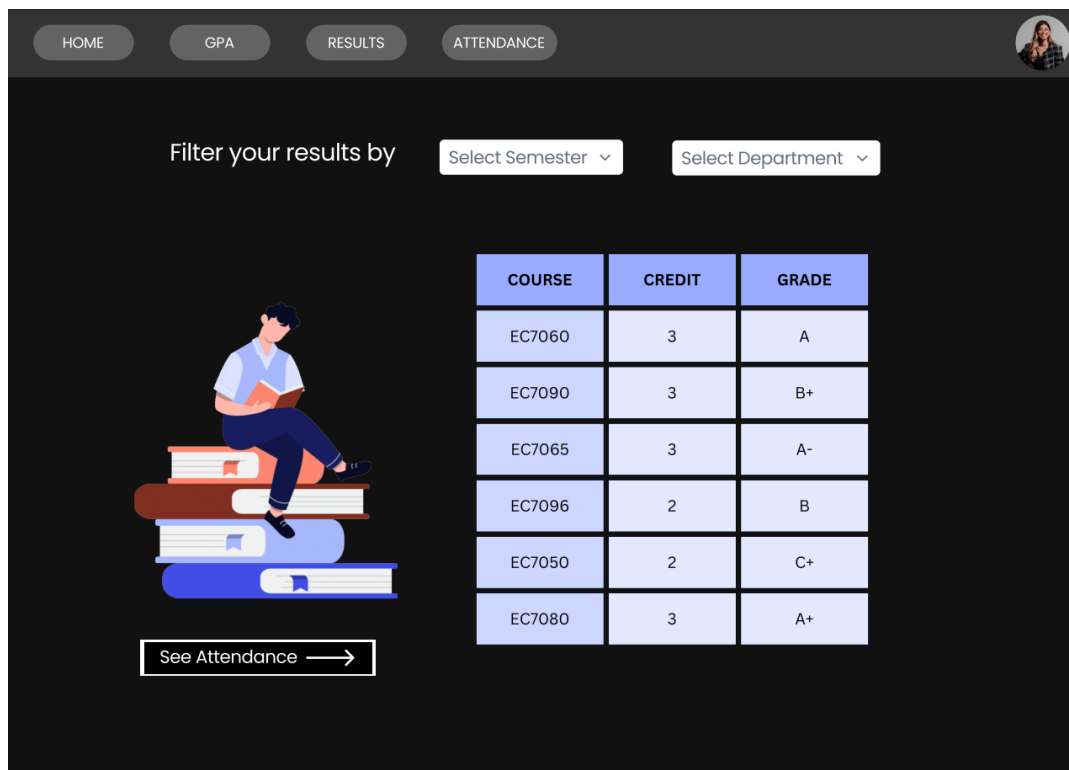


FIG.03: RESULTS PAGE DESIGN

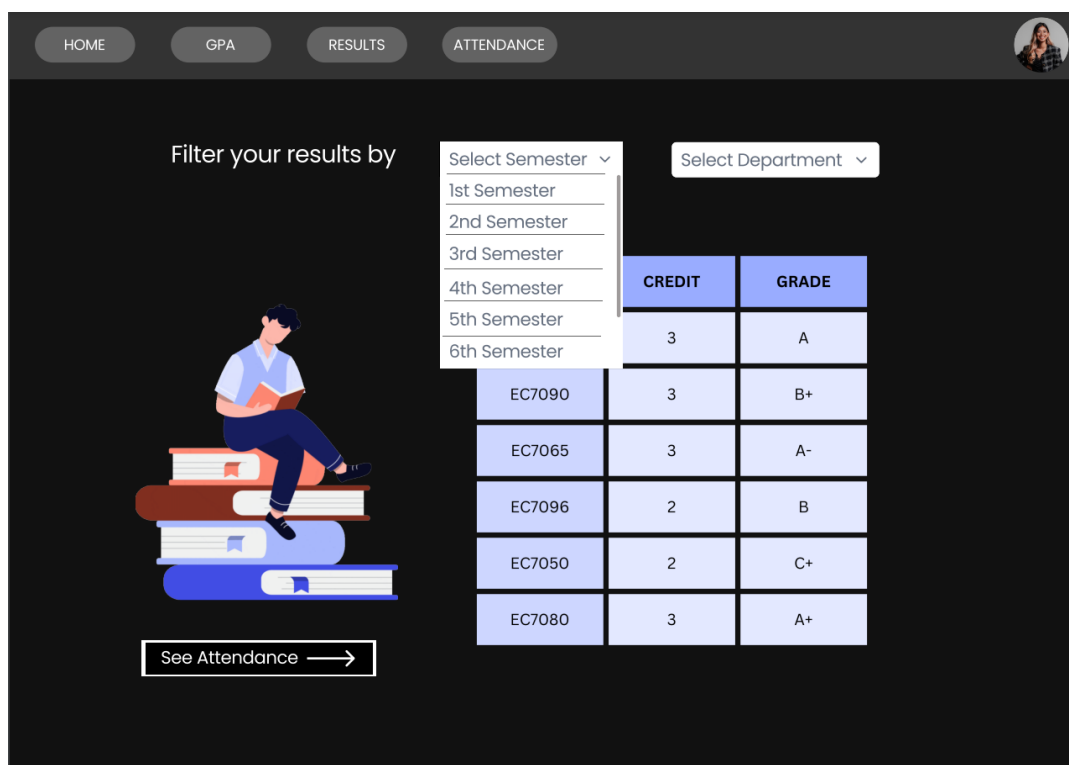


FIG.04: RESULTS PAGE DESIGN WITH SEMESTER DROPDOWN

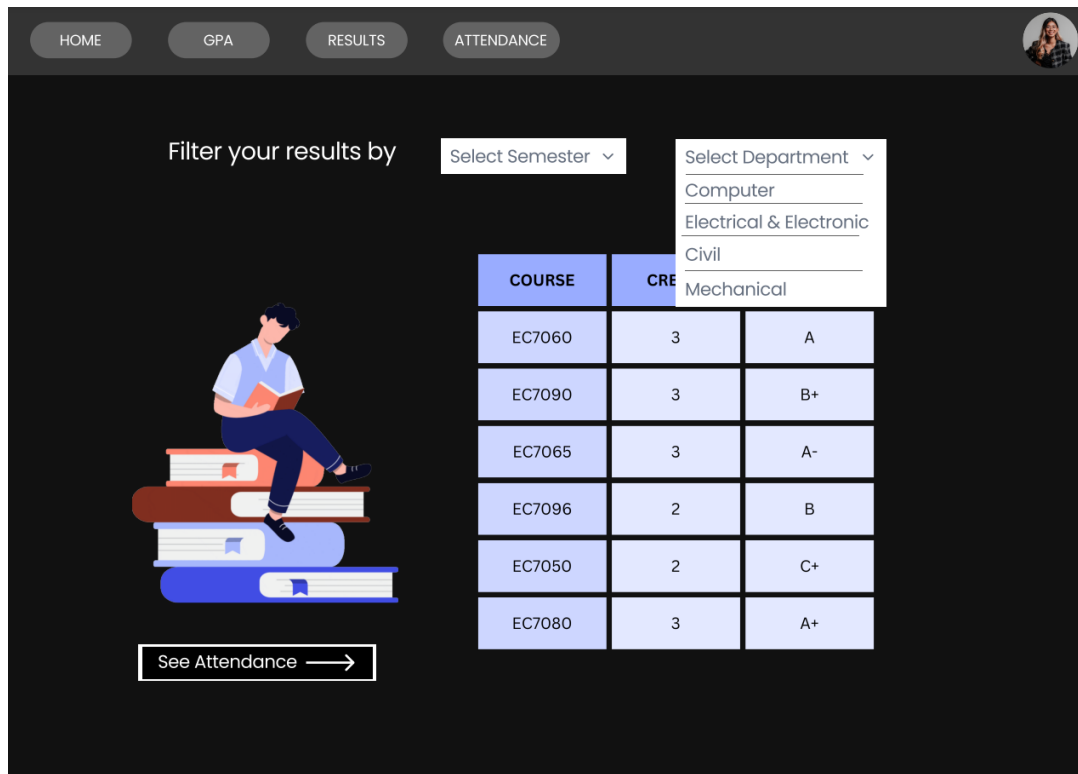


FIG.05: RESULTS PAGE DESIGN WITH DEPARTMENT DROPDOWN

Attendance Tab

Here, students can see their attendance by semester wise. They able to see course id and percentage of attendance as a tabular form. Also we include a dropdown menu to select a semester. So, users able to simply select a semester and see their results.

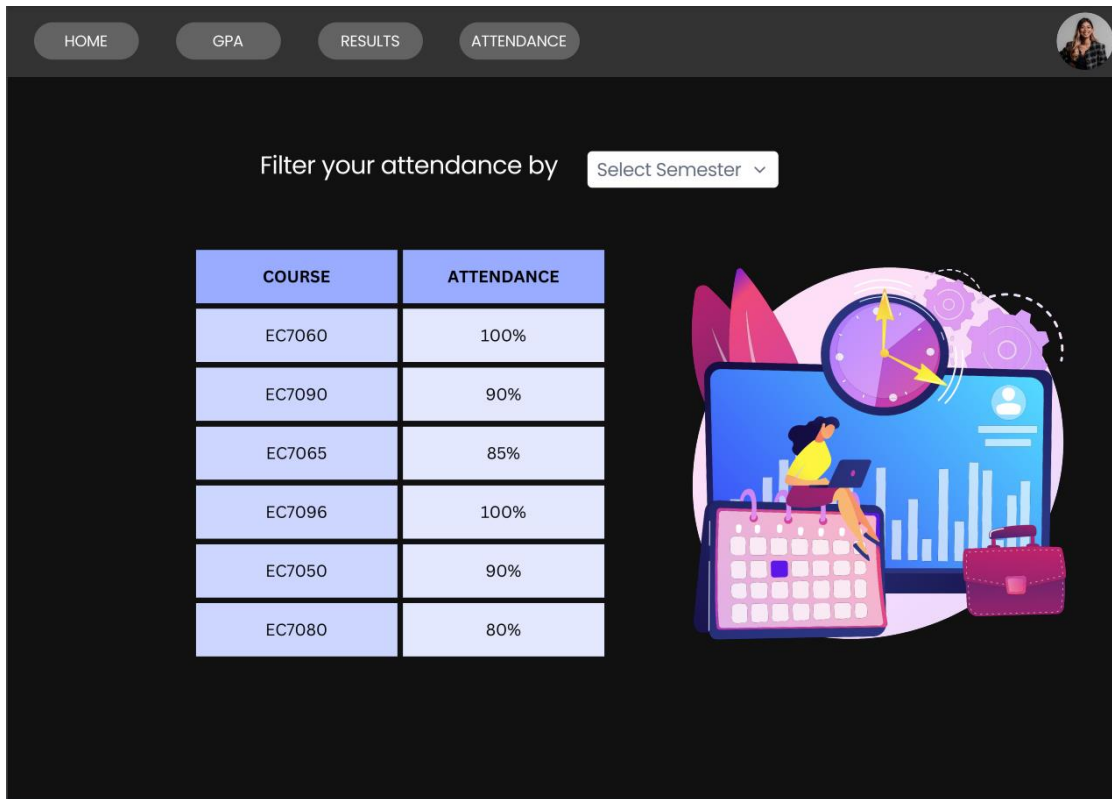


FIG.06: ATTENDANCE PAGE DESIGN

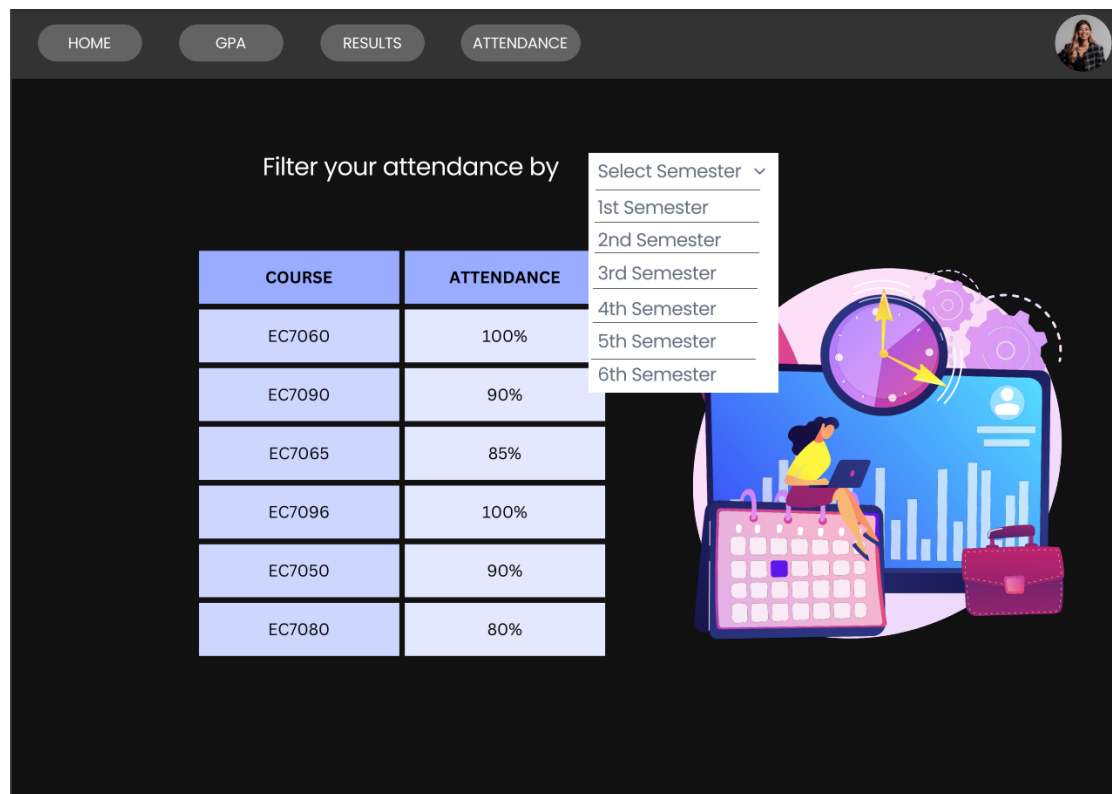


FIG.07: ATTENDANCE PAGE DESIGN WITH SEMESTER DROPDOWN

Link for the figma design file -

<https://www.figma.com/file/z43S0OGbQfysKm7UnrVPN7/Untitled?node-id=0%3A1&t=WCEMw6zbLGdCloka-1>

Backend works

Our database has 6 tables. Which are,

Department (dept_no, dept_name)

Student (student_id, dept_no, student_name)

Course (course_id, dept_no, semester_id, course_name, credits)

GPA (grade, gpa)

Result (student_id, course_id, grade)

Attendance (student_id, course_id, attendance)

Semester (semester_id, semester_name)

According to our project, we need to do functionalities given below.

- Calculate GPA for a student
- View results for a student semester wise
- Filter results department wise
- Monitor student attendance data

Calculate GPA for a student

We can obtain results for a particular student for each subjects by joining Student table and Result table.

Next we can map those results with GPA by using GPA table.

Next we can observe number of credits for each selected subject by joining Course table and Result table.

Then, we can calculate the GPA for a particular student using observed GPA values and course credits.

View results for a student semester wise

We can observe corresponding courses for a given semester by joining Course table and Semester table.

Then, we can get results for above resulted courses by using Result table.

Filter results department wise

Here students can filter their results according to departments. Then students able to see which department they can choose.

That functionality we can achieve by using Department, Student, Course and Result tables.

Monitor student attendance data

We can monitor attendance using Attendance table. For some subjects, there are some percentage attendance need for eligible the end exam. So, here it will can observe for each student.