

Academic Advisor Application Report

“Academic compass”

Group Members:-

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LINK : <https://mason.gmu.edu/~rnagara2/>

1. Introduction:-

Academic decisions usually prove to be a tough and overwhelming process for students. On their own, students are expected to make or break choices about matters as such: identifying the most suitable major of study, arranging semester schedules, and being able to secure financial assistance. The role of an academic adviser becomes crucial here, but because of limited resources and overwhelming demand, personalized advising sometimes does not materialize.

In that regard, we have developed our new digital innovation-a webpage, namely ‘Academic Compass’ to support students and academic advisors extensively. For students, it offers personalized guidance in choosing a major, planning their academic path, and managing financial aid. For academic advisors, it provides a streamlined platform to monitor students academic progress, review course schedules, and review their financial aid eligibility, enhancing efficiency and decision-making.

With an intuitive interface and structured guidance, our model enhances the advising experience for which students receive timely and effective support from their academic advisor.

2. Design

1. Stakeholders

There are two primary stakeholders for our webpage:-

1. Students :-

The user who can make use of the system for getting help in making a choice of a major, planning a course of study, scheduling courses, and dealing with financial aid.

2. **Academic Advisors**:- University faculty or staff providing guidance for academic planning to students and needing to have an efficiency- and process- streamlining tool.

To gain insights for user needs, a questionnaire was conducted for the students and the academic advisor. Here are some of it:

2. Student interview:-

1: What challenges do you face when selecting a major?

Ans: I find it difficult to determine which major aligns best with my skills and long-term career goals.

2: In the academic compass, what features would you find helpful?

Ans: The application could include a list of recommended majors and automated scheduling based on my completed courses.

3: What bothers you most about financial aid?

Ans: Finding out about when to apply for scholarships and grants and eligibility.

4: Would an AI-based suggestion system be useful?

Ans: I mean, it should look at my progress and suggest the courses I should take next.

5: Besides that, what would make the academic roadmap easier for you?

Ans: Some sort of graphic representation that shows how much progress I have made toward my degree completion.

Advisor interview:-

1. What are common mistakes made by students in course selection?

Ans: Just forgetting the prerequisites or overloading with hard courses.

2. How often do students consult you?

Ans: Some visit almost regularly and others just wait to see me with academic problems.

3. How often do students seek your guidance?

Ans: Some visit regularly, while others wait until they face academic problems.

4. Do you think there is any use of an AI based suggestion system for simple queries in academic advising?

Ans: Sure, all those queries that are usually asked like prerequisites for course, schedule conflict, or financial aid information can be managed by AI very well and can facilitate advisors in focusing more on the complex questions without making a student wait too long.

Problem-articulation:

Comprehensive approaches can be possibilities about addressing the needs of students who want to select majors, plan courses, or even manage financial aid. A personalized academic planner is the tool that can provide personalized recommendations, as well as better communication between students and advisors. Specific details can include prerequisite information for courses, the eligibility criteria for financial aid, and avenues for career pathways so that students are well equipped to make decisions. The entire academic planning and support facility may help students get better across the board in academic terms as well.

2. Implementation:-

Technologies Used:-

- **Frontend:** HTML,css, Bootstrap, JavaScript,selenium

Application Pages:-

1. Main Page (index.html)

The main page serves as the central hub of the application, providing access to two key portals:

1. **Student Portal** – Directs students to their dedicated webpage, where they can register for classes, view their schedules, and apply for financial aid.
2. **Academic Advisor Portal** – Directs advisors to their respective webpage, where they can monitor student progress, review course workloads, and assess financial aid applications.

2. Student Page (student.html)

This page is designed for students to manage their academic activities efficiently.
Students can:

- **Select Courses** – Choose and enroll in desired courses.
- **Course Plan** – Organize and plan their academic coursework.
- **Semester Schedule** – View their class schedule for the semester.

- **Financial Aid** – Apply for and manage financial aid.
- **Submit Courses** – Finalize and submit selected courses for enrollment.

3. Academic Advisor Page (academic.html)

This page is designed for academic advisors to manage and monitor students' academic progress.

- **Overall Study Plan** – Review and guide students on their academic journey, including long-term course and graduation planning.
- **Course List for Each Semester** – View and manage the courses available each semester, ensuring students are selecting courses that align with their academic goals.
- **Student List** – Access and review a list of students assigned to the advisor, tracking their academic performance, progress, and course enrollment.
- **Financial Aid Review** – Review and manage the financial aid status of students, ensuring they receive the necessary financial support and assisting in any required follow-up.

3. Interface:-

1. Interface metrics:-

1. Gulf of Execution:-

To bridge the gap between user goals and available system actions, we incorporated a home button that allows users to navigate easily back to the homepage.

2. Affordance:-

We have implemented clickable options across various modules to allow users to navigate, as well as keyboard input functionality for users to type in text. Also we use chatbot on the Academic Advisor page by offering real-time guidance and interaction. It assists users in searching for courses, tracking the status of their financial aid, modifying course selections, and contacting advisors. By providing immediate responses and clear instructions, it helps users navigate the platform efficiently, enhancing their overall academic experience.

3. Gulf of Evaluation:-

The Gulf of Evaluation is bridged through clear confirmation feedback provided to users across various sections of the Academic Advisor webpage. For example, when users fill out the Financial Aid tab, an acknowledgment message confirms the successful completion of the action, ensuring users are aware their input has been recorded. Similarly, when selecting courses, a confirmation message reassures users that their course choices have been successfully made. These confirmation messages help users understand that their actions have been properly executed, providing clarity and confidence throughout the process.

4. Signifier:-

Bootstrap class components enhance the interface, making it more user-friendly and intuitive. Signifiers are used across both the student and academic advisor portals to guide users seamlessly through the system. Clearly labeled buttons, structured menus, and visual cues ensure interactions feel natural and effortless.

2. Accessibility:-

Seeing(perception):-

The webpage includes screen reader compatibility, high-contrast visuals, resizable text, and customizable color schemes to assist users with visual impairments.

Simplified Content and Clear Language:-

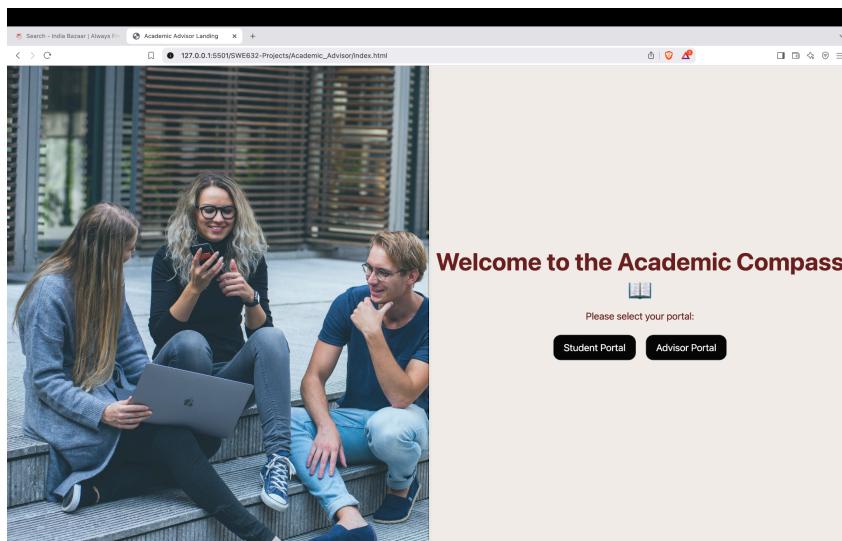
The platform uses plain language and simplified instructions to ensure that users with cognitive disabilities, learning disabilities, or limited language skills can easily understand and navigate the website.

5. Conclusion:-

The Academic Advisor application serves the function of empowering students to diligently make informed academic decisions. By responding to the stakeholders' needs and promoting accessibility, it will enhance the advising process of the tool for both students and academic advisors. Future improvements could include real-time chat interaction with an advisor and predictive analytics for the time of graduation.

Screenshots for implementation:-

Home page:-



Student portal:-

Select course Tab:-

The screenshot shows a web browser window with a green header bar containing navigation links: Home, Select Course, Course Plan, Semester Schedule, and Financial Aid. The 'Select Course' link is highlighted. Below the header, the main content area has a title 'Select Your Course' and a sub-instruction 'Choose the course (or major) you're interested in from the list below:'. A dropdown menu is open, showing the placeholder '-- Choose a Course --'. A blue 'Submit Course' button is located below the dropdown.

Select Your Course

Choose the course (or major) you're interested in from the list below:

-- Choose a Course --

Submit Course

Chat

Course plan Tab:-

The screenshot shows a web browser window with a green header bar containing navigation links: Home, Select Course, Course Plan, Semester Schedule, and Financial Aid. The 'Course Plan' link is highlighted. Below the header, the main content area has a title 'Your Personalized Course Plan' and a sub-instruction 'The following table shows the recommended courses for your selected course:'. A table is displayed with columns: Course Code, Course Name, Credit Hours, and Professor. At the bottom of the table is a green 'Generate Plan' button.

Your Personalized Course Plan

The following table shows the recommended courses for your selected course:

Course Code	Course Name	Credit Hours	Professor
Generate Plan			

Chat

Semester Schedule:-

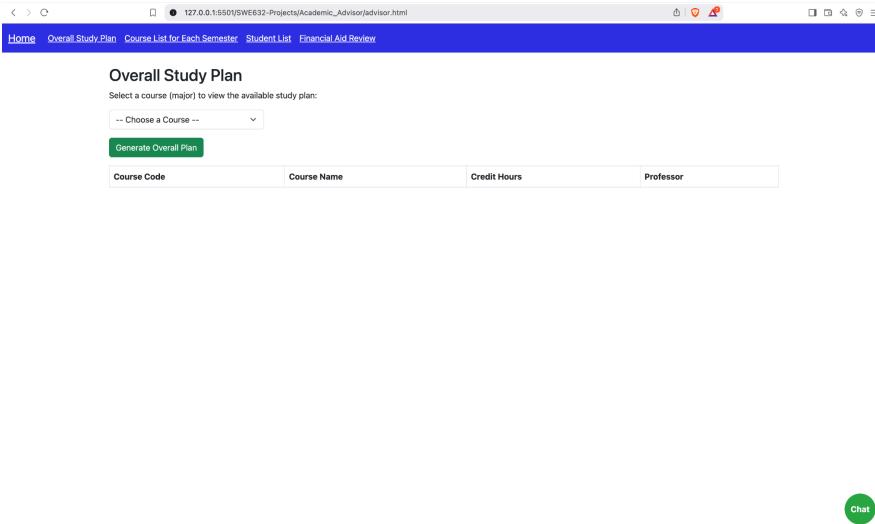
The screenshot shows a web browser window titled "Student Dashboard - Academic Advisor". The URL is 127.0.0.1:5501/SWE632-Projects/Academic_Advisor/student.html. The navigation bar includes links for Home, Select Course, Course Plan, Semester Schedule (which is highlighted in green), and Financial Aid. The main content area is titled "Semester Schedule" and contains a sub-instruction: "Below is your schedule for the upcoming semester. Click on "Register" for a course to enroll.". A table header is visible with columns: Course Code, Course Name, Credit Hours, Professor, and Action. Below the table is a blue "Generate Semester Schedule" button. A small "Chat" icon is located in the bottom right corner of the page.

Financial Aid Tab:-

The screenshot shows a web browser window titled "Student Dashboard - Academic Advisor". The URL is 127.0.0.1:5501/SWE632-Projects/Academic_Advisor/student.html. The navigation bar includes links for Home, Select Course, Course Plan, Semester Schedule, and Financial Aid (which is highlighted in green). The main content area is titled "Financial Aid Guidance" and contains the instruction: "Fill in your details and click submit for financial aid advice:". There are four input fields: "Name:" with placeholder "Your name", "Student ID:" with placeholder "Your student ID", "Why do you need aid?", and a larger text area for "Describe your financial situation". A yellow "Submit" button is at the bottom. A small "Chat" icon is located in the bottom right corner of the page.

Advisor portal:-

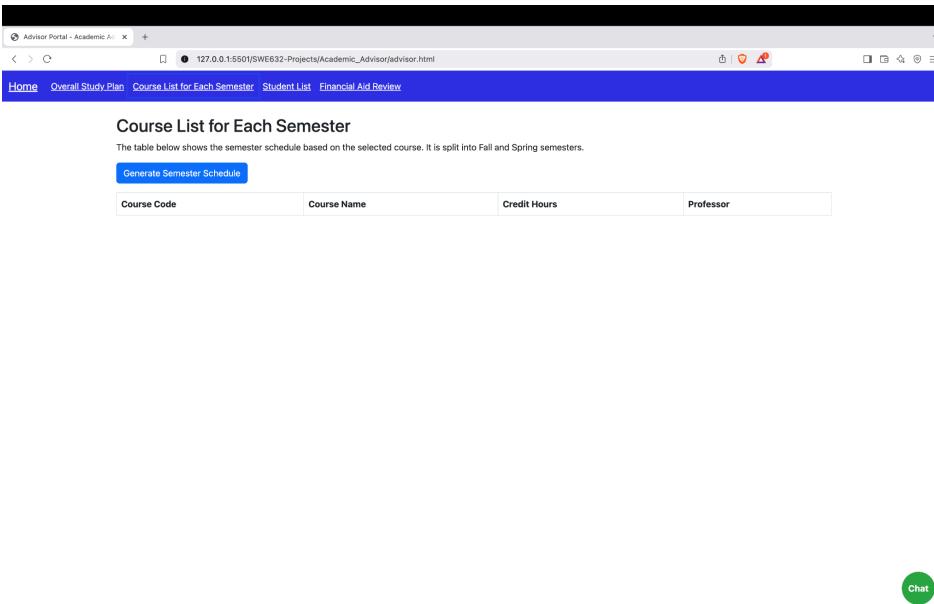
Overall Study plan:-



The screenshot shows a web browser window with the URL `127.0.0.1:5501/SWE632-Projects/Academic_Advisor/advisor.html`. The title bar says "Overall Study Plan". Below it is a navigation bar with links: Home, Overall Study Plan, Course List for Each Semester, Student List, and Financial Aid Review. The main content area has a heading "Overall Study Plan" and a sub-instruction "Select a course (major) to view the available study plan:". A dropdown menu is open, showing the option "-- Choose a Course --". Below the dropdown is a green button labeled "Generate Overall Plan". At the bottom of the page is a table header with columns: Course Code, Course Name, Credit Hours, and Professor.

Chat

Course List for Each Semester:-



The screenshot shows a web browser window with the same URL as the previous page. The title bar says "Course List for Each Semester". Below it is the same navigation bar. The main content area has a heading "Course List for Each Semester" and a note: "The table below shows the semester schedule based on the selected course. It is split into Fall and Spring semesters." Below this is a blue button labeled "Generate Semester Schedule". At the bottom of the page is a table header with columns: Course Code, Course Name, Credit Hours, and Professor.

Chat

Student List:-

Advisor Portal - Academic Advisor

127.0.0.1:5501/SWE632-Projects/Academic_Advisor/advisor.html

Home Overall Study Plan Course List for Each Semester Student List Financial Aid Review

Student List

The table below shows a list of students and their selected courses:

Student Name	Student ID	Selected Course
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[Load Student List](#)

javascript:void(0);



Financial Aid Review:-

Advisor Portal - Academic Advisor

127.0.0.1:5501/SWE632-Projects/Academic_Advisor/advisor.html

Home Overall Study Plan Course List for Each Semester Student List Financial Aid Review

Financial Aid Review

Review the financial aid applications submitted by students below:

Student Name	Student ID	Requested Amount	Action
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[Load Financial Aid Applications](#)

javascript:void(0);



Selenium testing:-

Student Portal

The screenshot shows the Selenium IDE interface with a test script for the 'student portal'. The script consists of 21 commands:

Command	Target	Value
1 ✓ open	/Academic_Advisor/index.html	
2 ✓ set window size	1710x980	
3 ✓ click	linkText=Student Portal	
4 ✓ click	id=courseDropdown	
5 ✓ select	id=courseDropdown	label=Computer Science
6 ✓ click	css=selectCourseSection > .btn	
7 ✓ mouse over	css=selectCourseSection > .btn	
8 ✓ mouse out	css=selectCourseSection > .btn	
9 ✓ click	linkText=Course Plan	
10 ✓ click	linkText=Semester Schedule	
11 ✓ click	linkText=Financial Aid	
12 ✓ click	id=aidForm	
13 ✓ click	id=studentName	
14 ✓ type	id=studentName	sagar
15 ✓ click	id=studentID	
16 ✓ type	id=studentID	1707
17 ✓ click	id=aidReason	
18 ✓ type	id=aidReason	lkjkjk
19 ✓ click	css=.btn-warning	
20 ✓ mouse over	css=.btn-warning	
21 ✓ mouse out	css=.btn-warning	

At the bottom, it shows 'Runs: 1 Failures: 0' and tabs for 'Log' and 'Reference'.

Academic portal:-

The screenshot shows the Selenium IDE interface with a test script for the 'advisor_portal'. The script consists of 21 commands:

Command	Target	Value
1 ✓ open	/Academic_Advisor/index.html	
2 ✓ set window size	1710x980	
3 ✓ click	linkText=Advisor Portal	
4 ✓ click	id=overallStudyPlanSection	
5 ✓ click	id=overallCourseDropdown	
6 ✓ select	id=overallCourseDropdown	label=Computer Science
7 ✓ click	css=.btn-success	
8 ✓ mouse over	css=.btn-success	
9 ✓ mouse out	css=.btn-success	
10 ✓ click	linkText=Overall Study Plan	
11 ✓ click	linkText=Course List for Each Semester	
12 ✓ click	css=.btn-primary	
13 ✓ click	linkText=Student List	
14 ✓ click	css=.btn-info	
15 ✓ mouse over	css=.btn-info	
16 ✓ mouse out	css=.btn-info	
17 ✓ click	linkText=Financial Aid Review	
18 ✓ click	css=.btn-warning	
19 ✓ mouse over	css=.btn-warning	
20 ✓ mouse out	css=.btn-warning	
21 ✓ click	css=[nth-child(1)] .btn-success	

At the bottom, it shows 'Runs: 1 Failures: 0' and tabs for 'Log' and 'Reference'. The Mac OS X dock is visible at the bottom.

