

EE/CprE/SE 491 WEEKLY REPORT 7

Start Date – End Date: 11/4/2025 - 11/11/2025

Group number: sdmay26-16

Project title: AI Home Design Moodboard

Client &/Advisor: Md Maruf Ahamed

Team Members & Roles:

- ● **Prakeerth Regunath: Frontend & Scheduler/Organizer**
- ● **Onur Onal: Project Lead/Project Manager & Full-stack**
- ● **Kemal Yavuz: Fullstack**
- ● **Erroll Barker: Lead Frontend**
- ● **Bae Meh: Backend**
- ● **Om Sanghvi: Backend**

Weekly Summary

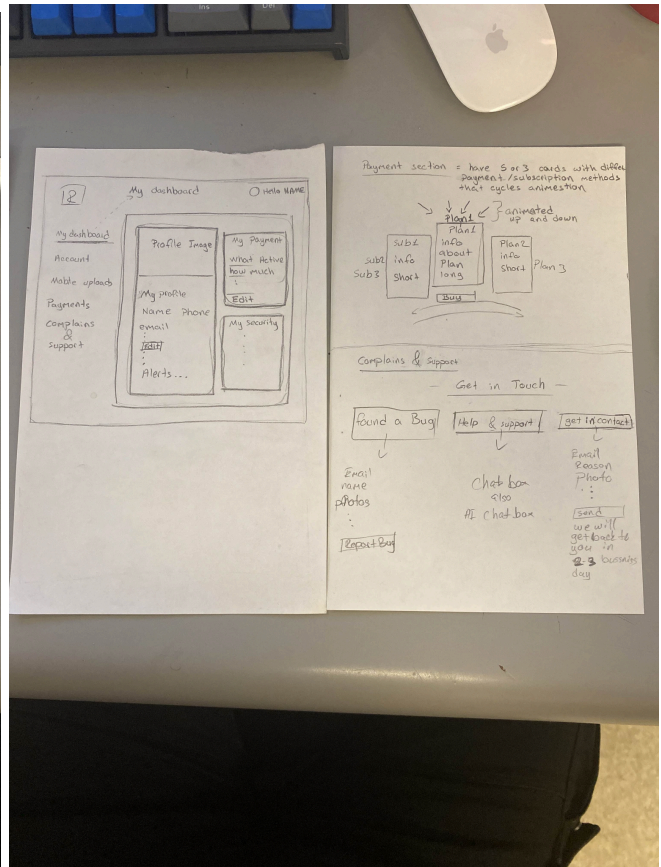
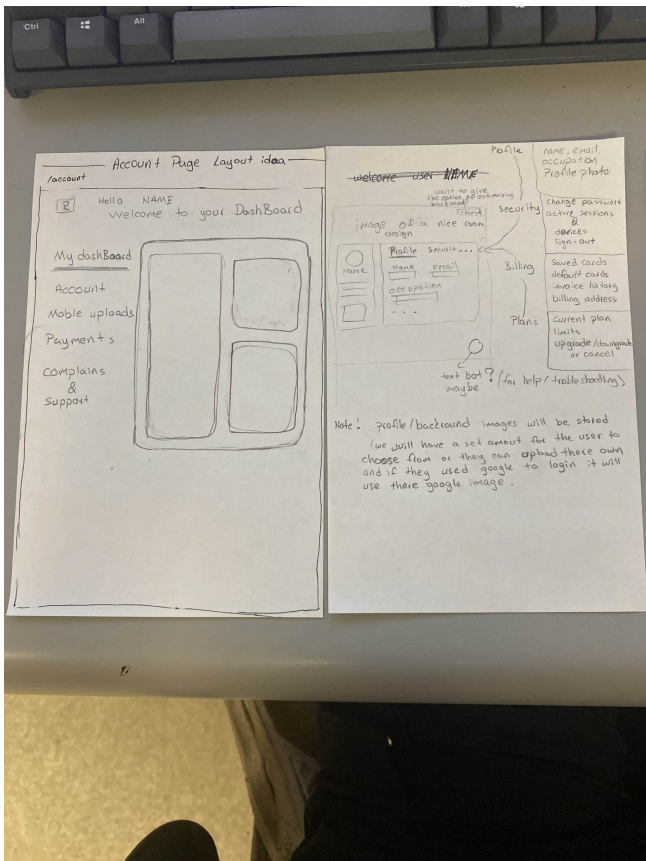
- o ***This week, we created end-to-end Cypress tests, reworked the Pinterest integration for backend API calls, and enhanced the moodboard canvas with image upload, drag, resize, and rotation features. We completed the CI/CD pipeline, tested a mock web server on the VM, and advanced the account page with new layouts and animations. We also improved frontend-backend integration by fixing authentication and token issues, and improved backend reliability with comprehensive unit, integration, and end-to-end tests.***

Past Week Accomplishments

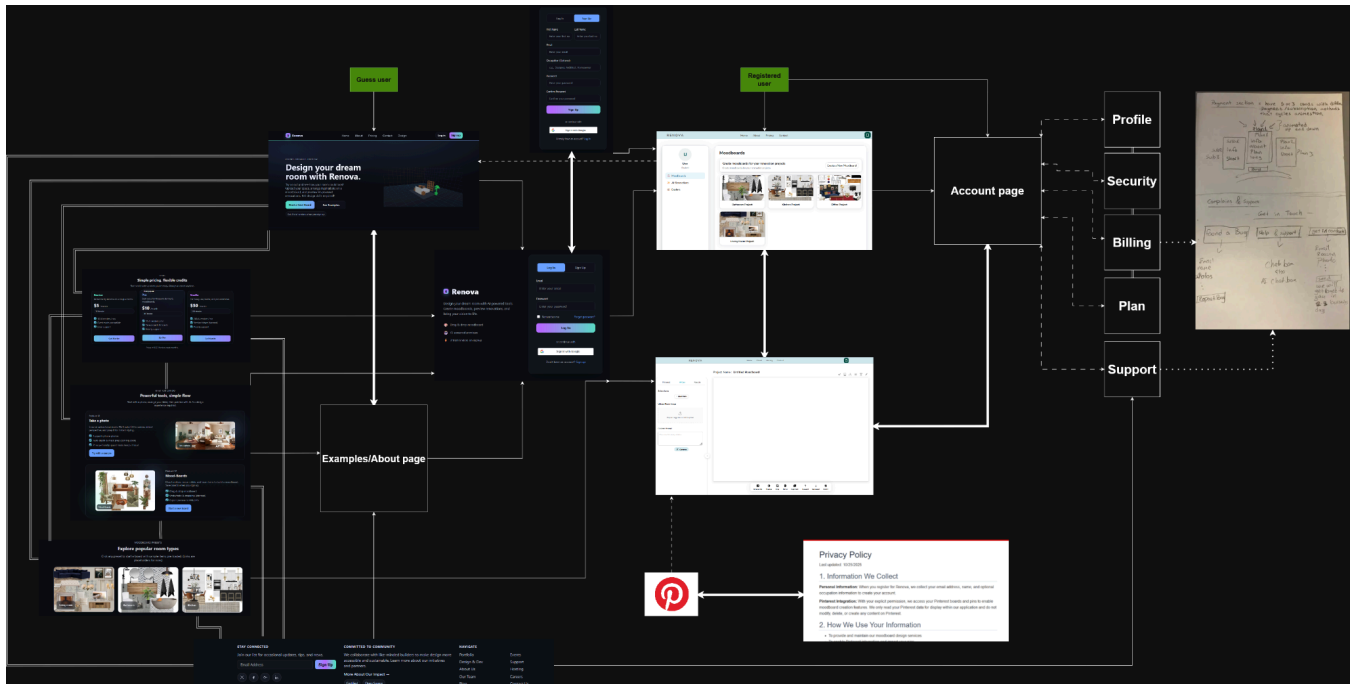
- **Prakeerth Regunath:** This past week, I created and finalized initial test cases for end-to-end testing using Cypress. Additionally, I reworked the Pinterest Integration to run API calls to the backend, rather than calling it directly from the frontend.
- **Onur Onal:** This week I was able to further develop the moodboard canvas by adding images from file explorer, dragging the images within the moodboard canvas, resizing them, and rotating them. I also conducted an extensive code review on Prakeerth's Pinterest integration code and offered feedback to improve integration security and consistency. I also logged onto the VM to explore the environment and created a mock Python web server to test connectivity.
- **Om Sanghvi:** Completed the CI/CD pipeline and successfully merged it into the main branch. Began setting up backend deployment on the virtual machine (VM), ensuring that new changes automatically deploy when pushed to the main branch. Worked on hosting the project website through the VM to maintain a consistent testing environment.
- **Erroll Barker:** This past week, I've been focusing on the account page and finally got the main setup completed. I've also been reviewing the front-end code, identifying several issues that need fixing, and documenting them in a list of current bugs and improvements. In addition, I worked on our presentation slides, created a node mapping and page view map, and designed multiple variations of the account page layout to explore different UI options. (Currently as I'm writing this, I'm working on the animation for the login & signup page)
- **Kemal Yavuz:** This week, I was planning to start the Explore page, but I needed to first finish refining the frontend-backend integration to make sure all features were working correctly. I focused on fixing small issues in the authentication flow, checking token handling, and making sure the frontend and backend communicated smoothly without errors. This helped improve the stability of the whole system and prepare it for upcoming features.
- **Bae Meh:** This week, I focused on backend testing. I wrote unit tests to validate controllers and core business logic, then added integration tests using Supertest against a real MySQL database to confirm that the API routes behave correctly in a live environment. I also set up basic end-to-end testing to ensure the full request flow works as expected

Rough Sketches/Drafts

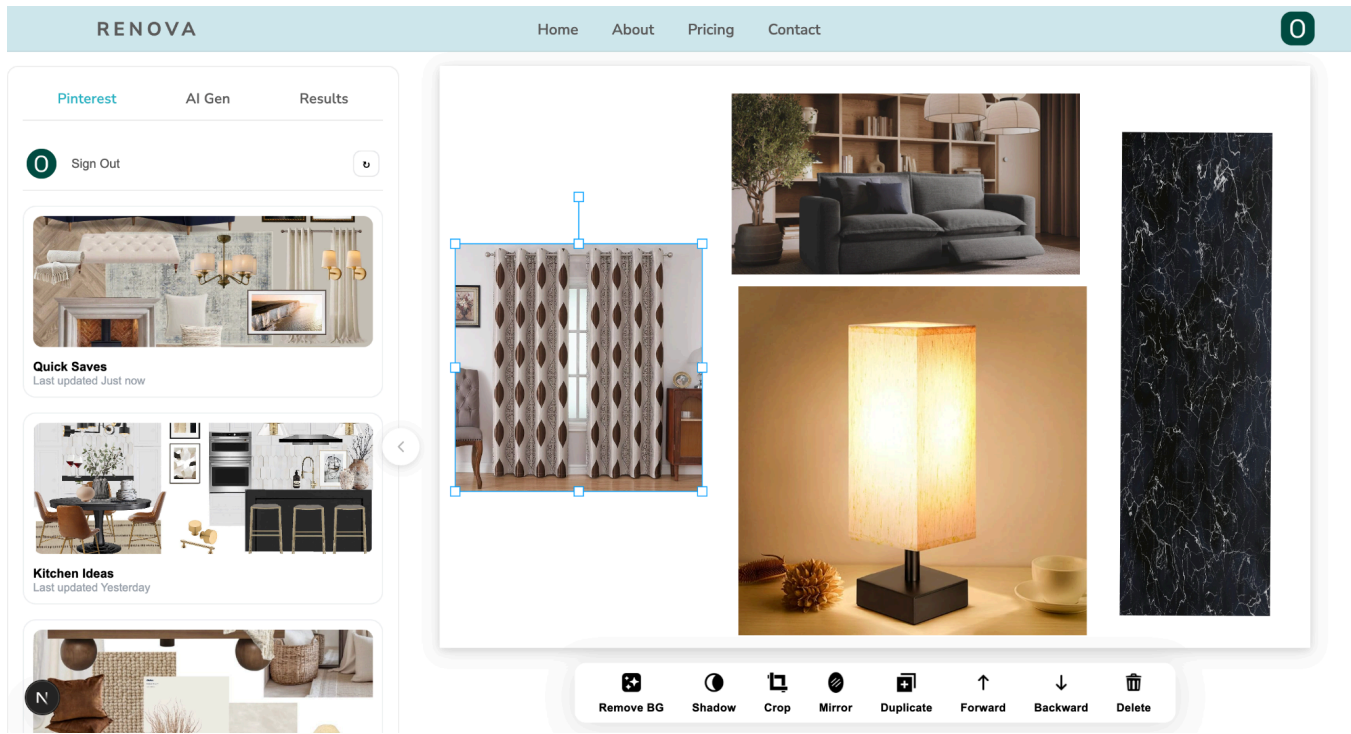
- Sketch designs for the accounting page



- Note mapping for page-to-page coverage



- Moodboard canvas progress



Pending issues

- Found some issues with the auth files
 - we can delete app/auth/callback/route.js
 - we should also remove handleGoogleSignIn from both forms
 - pass variant="signin" and variant="signup" to <GoogleSignIn />
 - we should add the dataset.bound guard in GoogleSignIn.jsx
 - make authAPI.request() JSON parsing robust (in diff)
 - also need to add <Suspense fallback> in AuthPage
 - need to verify NEXT_PUBLIC_GOOGLE_CLIENT_ID and Google console origins
 - get rid of all the include tokens/user in URLs
- Encountered potential security concerns with public port exposure on the VM. Since the deployment is managed through Iowa State's network, there are uncertainties about whether external access will be restricted or require additional configuration.

Individual Contributions Table

<u>NAME</u>	<u>Individual Contributions</u> <i>(Quick list of contributions. This should be short.)</i>	<u>Hours this week</u>	<u>HOURS cumulative</u>
Prakeerth Regunath	Reworked the Pinterest Integration functionality for primarily backend usage and formed the following Cypress test cases: <ul style="list-style-type: none"> - User Auth Flow Test Case - Pinterest Integration Auth Flow Test Case 	10	47
Om Sanghvi	Completed CI/CD pipeline, configured automatic VM deployment, and identified port security concerns during hosting setup.	6	36
Erroll Barker	Wrapping up the account page, working on sign-up page animations, creating the node map for testing and presentation, and compiling an issue list of current website problems.	~16	90
Onur Onal	Developed moodboard canvas by implementing image adding, dragging, resizing, rotating. Conducting code review on fullstack pinterest integration, logging onto VM to test mock web server.	8	89
Kemal Yavuz	Focused on frontend-backend integration, fixed token/auth flow issues, improved stability; postponed Explore page to next week.	6	45
Bae Meh	<ul style="list-style-type: none"> • Wrote unit tests for controllers and core logic • Built integration tests with Supertest using a real MySQL database • Added end-to-end tests to verify full request flow • Helped ensure API reliability and consistent backend behavior 	6	42

Plans for the upcoming week

- **Prakeerth Regunath:** For the upcoming week, I plan to identify and fix the usage of the access and refresh tokens. The endpoints of the moodboard seem to work, but without the validation of the tokens, our website won't fully be capable for users wanting to use the website.
- **Onur Onal:** I plan on continuing to work on the moodboard, working on keyboard-driven actions and image manipulations. I'll also help out Prakeerth with fixing some issues on token-based protected routes in the frontend. Lastly, I'll complete the backend setup for AWS S3 so we can host images of user profile pictures, moodboard thumbnails, and AI generations.
- **Om Sanghvi:** Finalize VM deployment configuration, address port exposure and network security issues, and ensure the website can be safely accessed through Iowa State's infrastructure. Begin documenting the full deployment process for the team.
- **Erroll Barker:** Finish the bug report and continue fixing any bugs related to the account page and login/sign-up pages. Begin working on the UX design improvements for the account page to refine layout and usability. Develop and document test cases for the front-end components to ensure functionality and consistency. If time allows, move on to the odd pages or review the overall code structure to verify that all components are

- properly connected and organized.
- **Bae Meh:** Next week, I plan to expand integration test coverage for more API routes, clean up and improve the MySQL test setup, and refine some controller logic based on issues uncovered during testing. I'll also add a few missing end-to-end scenarios and start documenting the overall testing workflow so the team can follow it easily.
 - **Kemal Yavuz:** For the next week, I plan to begin developing the list view feature on the moodboard page, allowing users to organize and view their projects in a cleaner layout. Once that is finished, I'll move on to the Explore page, where users can find and get inspiration from shared moodboards.

Summary of Weekly Advisor Meeting

We meet with Professor Maruf bi-weekly, and our next meeting with him is tomorrow. We will share general progress, show updated user interfaces, and speak about our plan for this upcoming week.