

EE/CprE/SE 491 WEEKLY REPORT 9

Start Date – End Date: **11/18/2025 - 12/12/2025**

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: Full-stack**
- **Erroll Barker: Lead Frontend UX/UI**
- **Bae Meh: Backend**
- **Om Sanghvi: Backend**

Weekly Summary

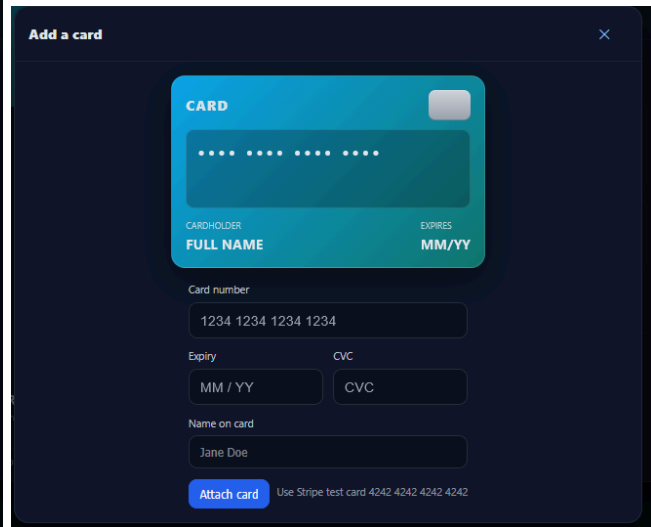
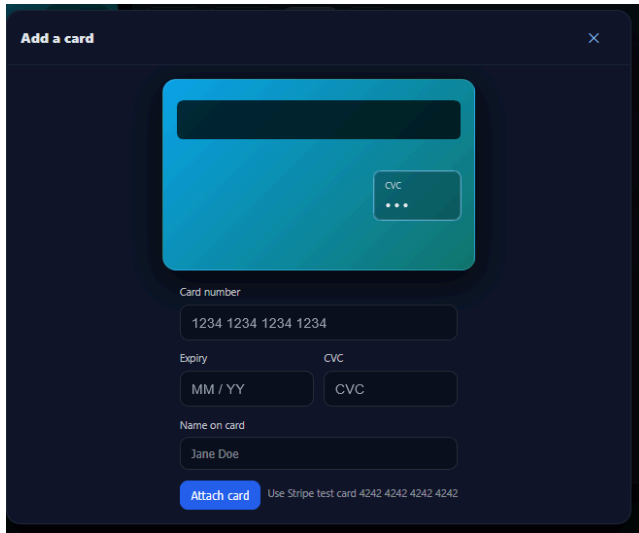
- o ***Our team made major progress across the core parts of the system as we moved closer to a demo-ready version of Renova. The moodboard canvas reached full functionality with the addition of new crop, transform, shadow, and undo/redo features. The Stripe payment flow advanced significantly, with front-end integration tested through a mock backend and corresponding backend tables and endpoints prepared. We continued refining authentication and token logic, reviewed Seedream's API documentation for upcoming AI integration, and expanded testing plans for the moodboard toolbar. On the infrastructure side, we improved VM deployment stability and advanced CI/CD automation, resolving several issues in the automated pipeline. Frontend development progressed through account-page polish, UX improvements, and further development of the Explore page structure and components. Overall, the system is becoming more integrated and stable across frontend, backend, and deployment environments.***

Past Week Accomplishments

- **Prakeerth Regunath:** Throughout the break, I have reviewed the API documentation for Seedream 4.0. More specifically, it's a basic JSON body response, along with the API endpoint used and the parameters available for use. Additionally, I have thought of a few ideas for test cases that I will create for the end-to-end testing of the moodboard's functionality.
- **Onur Onal:** Fully developed the moodboard canvas. Development includes implementation of crop HUD, crop logic, 2D vector transforms for space mapping between HUD space and pixel space, implementation of shadows on items, corrected offset calculations and Transformer logic on previously implemented item mirroring feature, and implemented board store history tracking to implement undo/redo operations.
- **Om Sanghvi:** Made significant progress toward full CI/CD automation by resolving deployment issues and debugging failures on the Linux VM. Continued refining the automated workflow so updates push smoothly from the main branch to the live production environment.
- **Erroll Barker:** Integrated Stripe APIs into the frontend and validated flows with a Mirage.js mock backend. Produced and shared implementation docs for the backend team. Fixed several account-page glitches and shipped UX improvements (cleaner layout, consistent sizing, and a smoother billing/add-card experience).
- **Kemal Yavuz:** Over the past few weeks, I completed the backend integration for Stripe payments by finalizing controller endpoints and database logic for invoices, plans, and tokens. I also connected the backend logic to the frontend's account and payment pages to ensure secure communication and smooth data handling.
- **Bae Meh:** This week, I continued developing the Explore page on the front end. I added more detailed content, improved the layout, and began implementing core components to make the page functional and visually organized. Alongside this, I refined some of the UI logic to ensure the Explore page interacts smoothly with existing features.

Rough Sketches/Drafts

- Creditcard screen



- Stripe API

Workbench

Overview Webhooks **Events** Logs Health Inspector Blueprints Shell

Find event by ID... Date Status Event type Resource Payload type

Nov 15, 2025 Updated today 2:50:10 AM UTC Refresh

Event	Time
account.updated Your account information was updated	7:52:00 AM
account.updated Your account information was updated	7:50:26 AM
account.updated Your account information was updated	7:50:25 AM

Event

account.updated

Event ID: evt-1S1eH77XfxcK2Pnl9cClo9n8

Origin date: Nov 15, 2025, 7:52:00 AM UTC

Source: Automatic

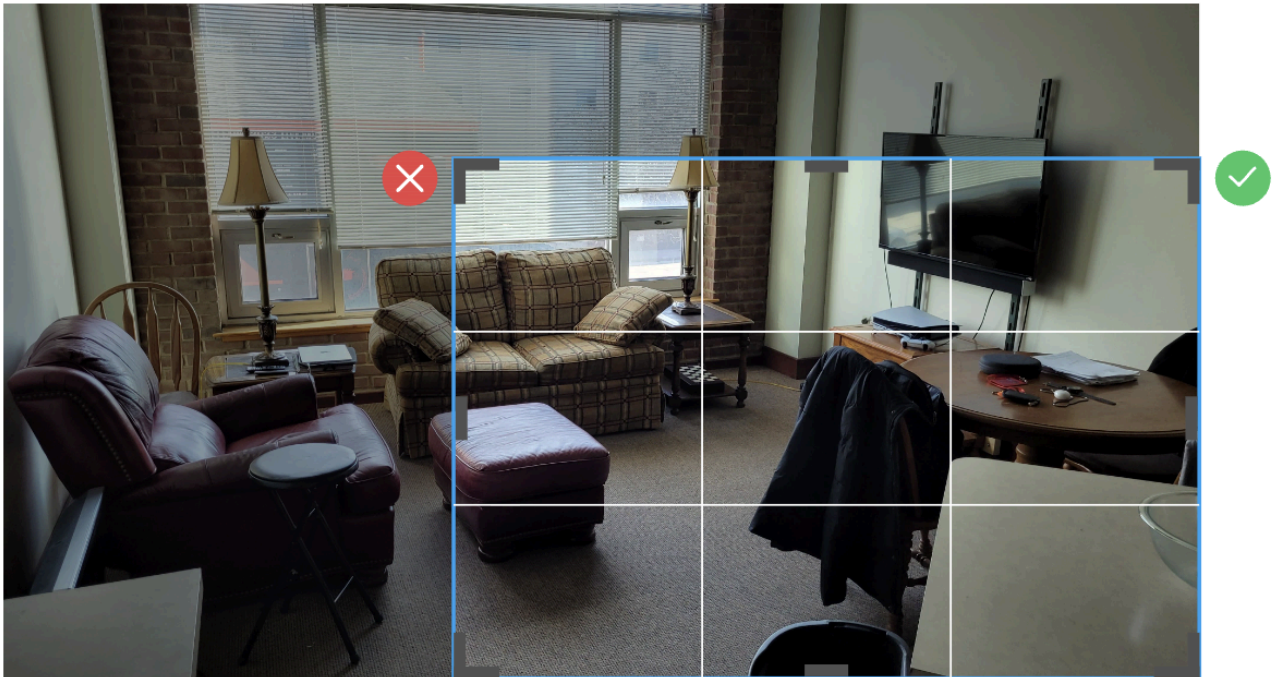
API version: 2025-10-29, clover

Description: Your account information was updated

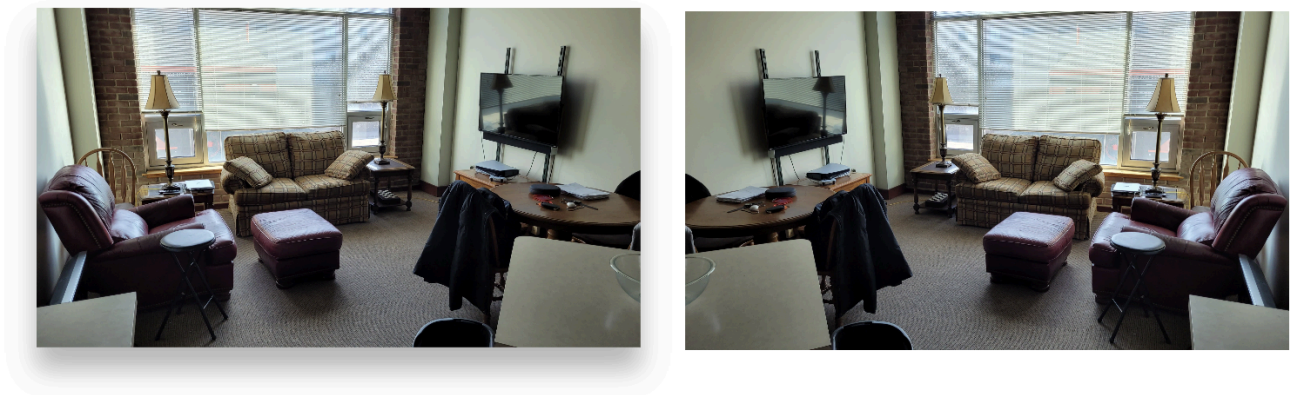
Deliveries Limited data

Delivery attempt records are only kept for 15 days.

- Crop HUD



- Shadow and mirror



Pending issues

- 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. (Last week)
- Running into a couple of issues with the Stripe servers (NEW)
 - It appears that their test environment differs from their production environment — they use different call functions, and there are two separate pages that manage these environments. I just need to go through the documentation more thoroughly to sort this out.
- A few remaining automation bugs on the Linux machine need to be resolved to ensure that Docker services restart reliably without manual intervention.

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	Learned about Seedream and its API Functionality.	7	66
Om Sanghvi	Debugged CI/CD automation on Linux machine and refined automated deployment pipeline.	8	52
Erroll Barker	Integrated straight API, finished the mock backend, finished up the general function about the account page	~20	125
Onur Onal	Fully developed moodboard canvas features.	33	138
Kemal Yavuz	Finalized Stripe backend endpoints and database logic; connected backend to frontend for account/payments; assisted moodboard integration and testing.	8	59
Bae Meh	Implemented core components and refined UI logic Ensured smooth interaction between the Explore page and existing features	6	54

Plans for the upcoming week

- **Prakeerth Regunath:** For the upcoming weeks, I plan to create and write more unit and end to end tests for the moodboard canvas toolbar, as it has quite a few complicated features for me to look over and work through on the Frontend.
- **Onur Onal:** We have our presentation next Tuesday so I plan on connecting the moodboard to its backend and then implementing the AI Gen sidebar in the moodboard page and connecting the Seedream API to it. Once finished, I'll either work on the moodboard list view or help out other team members finalize their work.
- **Om Sanghvi:** Prepare to demo the full project and verify that all services, deployments, and user flows function correctly. Ensure the automated pipeline is fully stable before the final demonstration.
- **Bae Meh:** I plan to continue developing the Explore page by adding more functionality, polishing the UI, and connecting it to live backend data. I'll work on implementing any needed filtering or search features and begin testing the front-end components to ensure everything behaves as expected.
- **Kemal Yavuz:** For the upcoming week, I plan to begin implementing the list view feature for moodboards, which will display all boards a user owns and connect directly to the backend. Once completed, I'll move forward with AI integration testing to ensure proper request handling and secure token validation between the frontend and backend.
- **Erroll Barker:** Next week, I'll partner with Onur to tidy up the frontend, fix any glitches/bugs, and ensure the site is fully responsive so it looks and works great on mobile. I'll polish the UI for presentation (consistent spacing, typography, and interactions), and run end-to-end tests once the backend ships the account-page endpoints to verify everything integrates correctly. Time permitting, I'll also update our senior design website to reflect our current progress and demos.

Summary of Weekly Advisor Meeting

We had to postpone our meeting with Professor Maruf before the break to this Thursday. We plan on having a semi-finished product by then and hope to show him a demo.