



**SPRINT 2**  
**CYRUS**  
**(Collaborative Art Board)**

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## **Index:**

- 1. Introduction**
- 2. Personas & Scenarios**
- 3. User Stories**
  - 3.1. Authentication**
  - 3.2. Canvas Interaction**
  - 3.3. Artworks & Gallery**
  - 3.4. Pixel & History Tracking**
  - 3.5. User Management**
- 4. Use Case Descriptions / Use Case Diagram**
- 5. Activity Diagram**
- 6. Sequence Diagrams**
- 7. User Flow Diagram**
- 8. Wireframes**
- 9. Task Board**
- 10. Conclusion**

## **1. Introduction**

The purpose of Sprint 2 is to expand the requirements for the Cyrus collaborative pixel art application by defining user stories, designing system behaviours, and preparing essential diagrams that capture user interaction and system flows. This sprint focuses on converting initial ideas into detailed software requirements using Agile methodology. It also includes creating personas, scenarios, wireframes, use case diagrams, user flows, activity diagrams, and sequence diagrams to illustrate how users and the system interact. The outcome of this sprint is a complete set of design documents that form the foundation for development in Sprint 3.

## **2. Personas & Scenarios**

### **Persona 1: Abigail the Artist/Art Student**

**Age:** 25

**Gender:** Female

**Occupation:** Art & Design Student

**Tech Skill Level:** Intermediate

#### **Goals:**

- Collaborate with peers in a shared creative space.
- Produce aesthetic pixel art.
- View and share finished artworks.

#### **Frustrations:**

- Complicated or cluttered digital art tools.
- Platforms that lag during drawing.
- Tools that don't support real-time collaboration.

#### **Motivations:**

- Expressing creativity through simple tools.
- Being part of a creative community.
- Seeing her contributions valued.

#### **Technology Usage Behaviour:**

- Uses a laptop for detailed drawing and an iPad for casual work.
- Comfortable with design tools like Figma, Procreate, and Canva.
- Prefers clean UI layouts with high visual clarity.
- Often multitasks: listens to music while drawing.
- Logs in daily and participates in community chats.

#### **Scenario:**

After finishing her design class, Abigail logs into Cyrus to participate in a community canvas session. She quickly claims a region and selects soft, pastel tones from the limited palette. As she draws, she can see pixel updates from others instantly, which fuels her creativity.

When she accidentally misclicks, she uses the undo option to fix the pixel.

After completing her section, she saves her contribution and later browses the gallery to see the final artwork from different angles. She checks her profile to review how many total pixels she contributed across sessions.

Abigail leaves feedback on other artworks and receives a notification when someone comments on hers, strengthening her sense of community.

## **Persona 2: Swaraj the System Administrator**

**Age:** 23

**Gender:** Male

**Occupation:** System Administrator

**Tech Skill Level:** Advanced

**Goals:**

- Maintain a stable and reliable drawing system.
- Ensure real-time performance under high user load.
- Monitor user activity for security.

**Frustrations:**

- Unoptimized database queries that cause lag.
- Inappropriate or low-quality user submissions.
- Lack of automated tools to help moderation.

**Motivations:**

- Building scalable and efficient systems.
- Supporting creative expression via good infrastructure.
- Preventing downtime or performance issues.

**Technology Usage Behaviour:**

- Uses a laptop for detailed drawing and an iPad for casual work.
- Comfortable with design tools like Figma, Procreate, and Canva.
- Prefers clean UI layouts with high visual clarity.
- Often multitasks: listens to music while drawing.
- Logs in daily and participates in community chats.

**Scenario:**

During a busy afternoon session, Swaraj logs into the admin dashboard to monitor system performance. He reviews logs of real-time pixel changes to ensure there's no suspicious behaviour or API abuse.

He receives a flag about an inappropriate artwork in the gallery, so he quickly inspects and deletes it. Later, he resets the canvas for a new drawing session and performs a routine check on Docker

container memory usage.

His goal is to ensure users, including Abigail, experience smooth drawing and instant pixel sync without disruptions.

### **Persona 3: Jordan the Casual Creator**

**Age:** 19

**Gender:** Male

**Occupation:** First-Year University Student (Business & Media)

**Tech Skill Level:** Beginner

**Location:** Student accommodation, London

**Personality Traits:** Playful, spontaneous, highly social, low attention span

#### **Goals:**

- Contribute small, fun elements to the community canvas without deep skill.
- Participate in real-time drawing sessions casually.
- Explore artwork made by others for inspiration.
- Share completed artworks on social media for fun.

#### **Frustrations:**

- Tools that require too much setup or instructions.
- Platforms that need high skill to participate.
- Slow loading times or lag during drawing.
- Complex menus or multi-step actions.

#### **Motivations:**

- Wants creativity without commitment or pressure.
- Enjoys being part of a friendly online community.
- Likes seeing immediate results from his contributions.
- Loves sharing unique or funny artwork on Instagram/Snapchat.

#### **Technology Usage Behaviour:**

- Uses laptop occasionally but mostly mobile/tablet.
- Prefers simple UIs, large buttons, minimal text.
- Reacts well to notifications — they bring him back to the app.

#### **Scenario:**

After finishing an online lecture, Jordan opens Cyrus on his tablet while lounging on his bed. He logs in and joins an active canvas session without reading instructions — he just wants to explore.

He zooms around the canvas, notices empty regions, and quickly claims a small 5x5 area. Jordan picks a bright color and adds a few fun pixels, maybe a smiley face or a random design.

He checks the gallery to browse artworks created by others and likes how polished they look. He saves a couple to his device and shares them in his group chat saying, "Look what people made in this session."

Later, he receives a notification saying someone commented on the artwork he contributed to. This motivates him to join again next weekend.

Cyrus keeps him engaged even though he's not a serious artist — and that's exactly the value he brings as a persona.

### **3. User Stories**

A total of 25 user stories were identified, grouped by functionality:

#### **3.1. Authentication:**

1. As a new user, I want to register an account so that I can access the collaborative canvas.
2. As a user, I want to log in securely so that I can access my profile and artwork.
3. As a user, I want to reset my password so that I can recover access if I forget it.
4. As a user, I want to log out so that my account remains secure.
5. As an admin, I want to disable suspicious accounts so that the platform remains safe.
6. As a user, I want to update my profile details so that my identity is reflected accurately.

#### **3.2. Canvas Interaction:**

7. As a user, I want to claim a region of the canvas so that I can draw without interference.
8. As a user, I want to draw a pixel in my claimed region so that I can contribute artwork.
9. As a user, I want to select a color from a limited palette so that I can design creatively.
10. As a user, I want to undo my previous pixel action so that I can fix mistakes.
11. As a user, I want to view other users' drawing actions live so that collaboration feels real-time.
12. As an admin, I want to reset the entire canvas so that a fresh session can begin.
13. As a user, I want to zoom in/out on the canvas so that I can draw accurately.

#### **3.3. Artworks & Gallery:**

14. As a user, I want to save the current canvas as an artwork so that I can preserve the session.
15. As a user, I want to view all completed artworks in a gallery so that I can explore community creativity.
16. As a user, I want to filter gallery artworks by date so that I can find recent creations.

17. As an admin, I want to delete inappropriate artworks so that the gallery remains safe.

18. As a user, I want to download final artworks so that I can share them online.

### 3.4. Pixel & History Tracking:

19. As a user, I want to see the pixel history of an artwork so that I understand who contributed.

20. As a user, I want to track my own pixel contributions so that I know my impact.

21. As an admin, I want to audit pixel changes so that suspicious activity can be reviewed.

22. As a user, I want to view author names when hovering on pixel history so that credits are visible.

### 3.5. User Management:

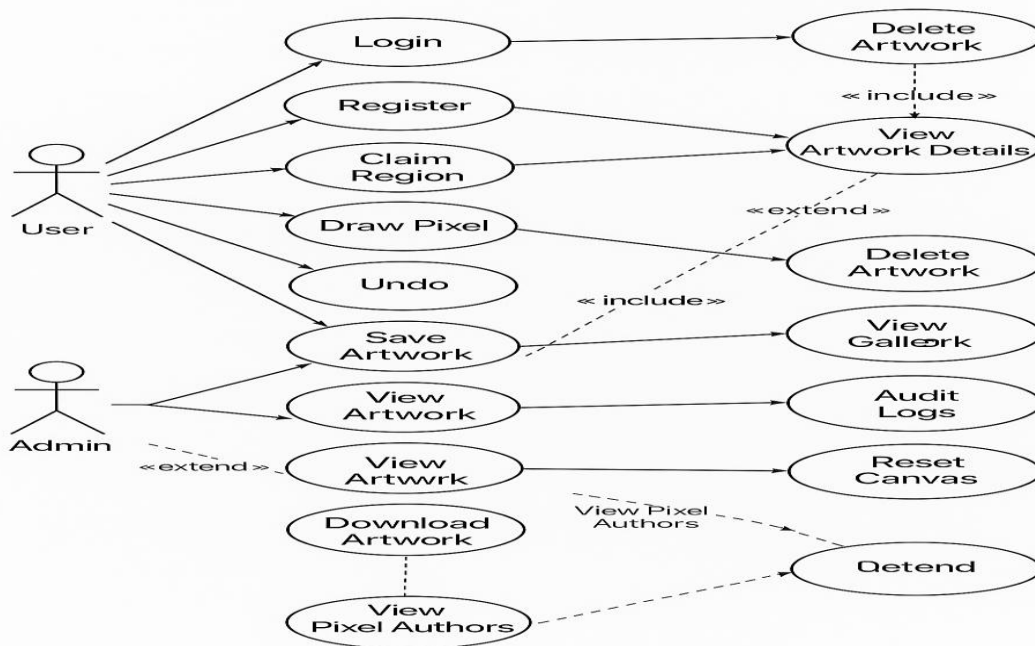
23. As a user, I want to view my past artworks so that I can reflect on my progress.

24. As an admin, I want to view all users so that I can manage accounts.

25. As a user, I want notifications when someone replies/comments on my artwork so that I stay engaged.

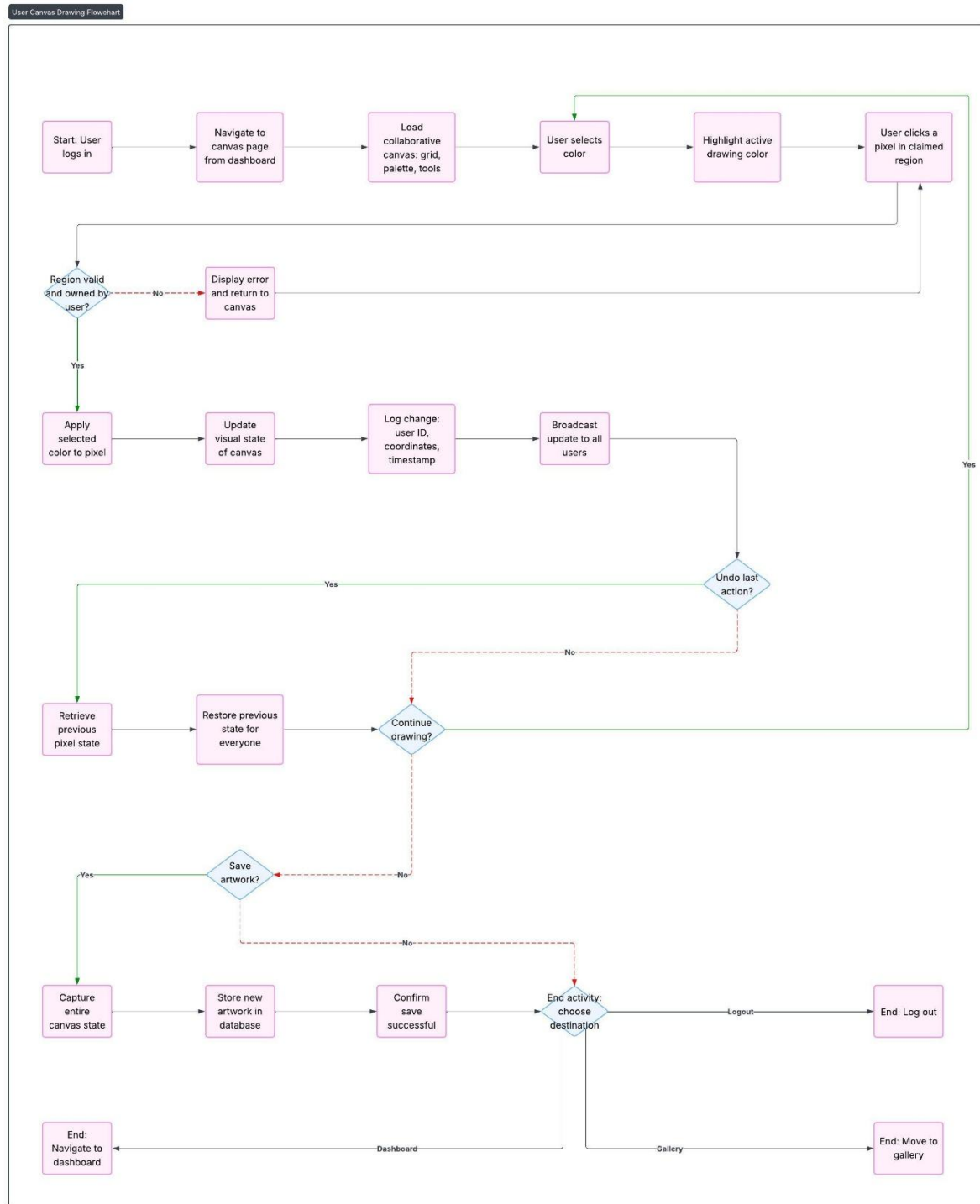
## 4. Use Case Descriptions / Use Case Diagram:

The Cyrus system includes authentication features such as registration, login, logout, password reset, profile updates, and admin ability to disable accounts. Core canvas actions allow users to claim regions, draw pixels, select colors, undo actions, zoom, and see real-time updates, while admins can reset the canvas. Artwork management supports saving, viewing, filtering, downloading, and admin deletion of artworks. Pixel history tools let users view change logs, their contributions, and pixel authors, with admins able to audit logs. Users can also view their personal artwork collection and receive notifications. These use cases define the platform's functional requirements clearly and efficiently.



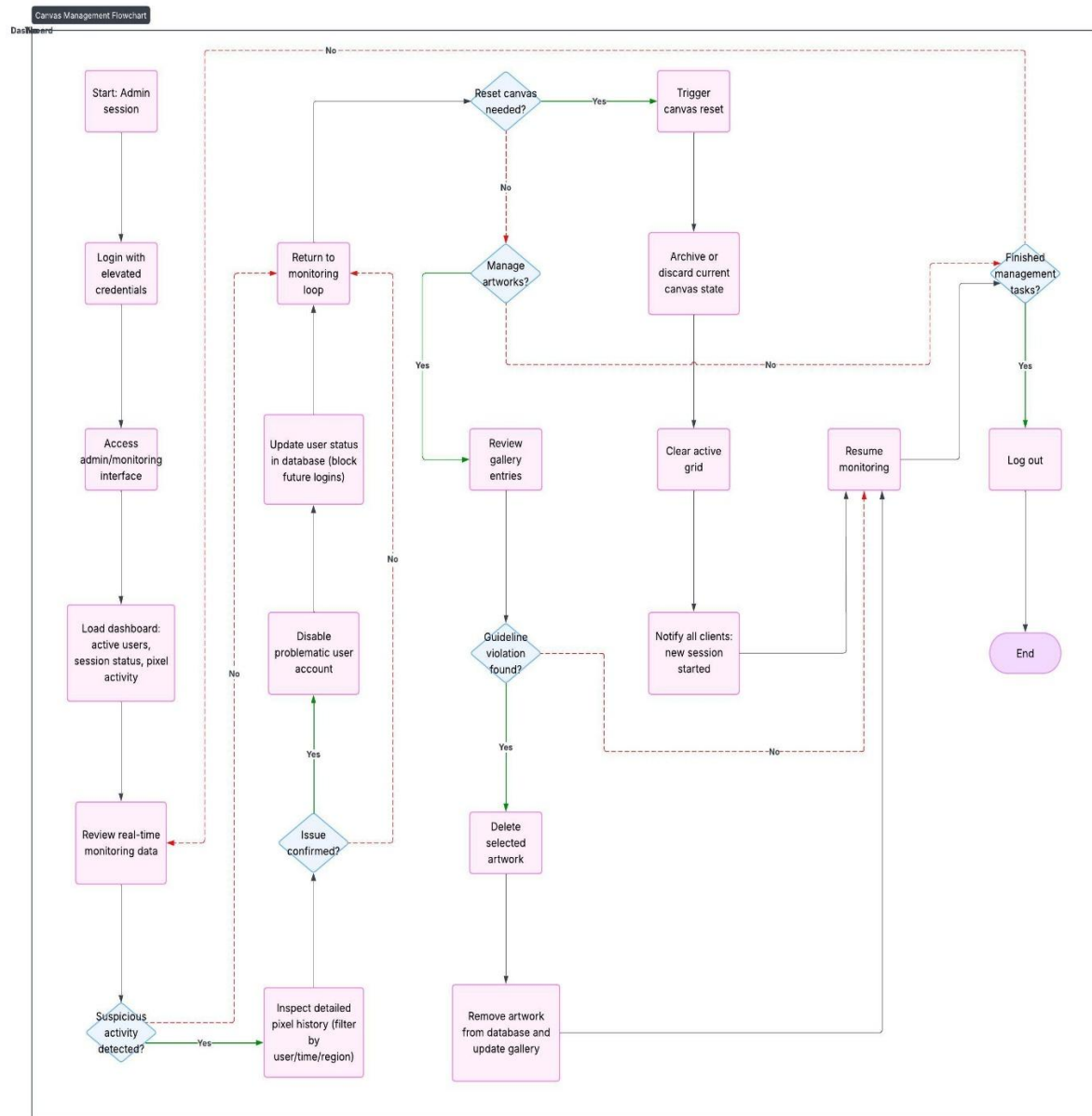
## 5. Activity Diagram:

### User Activity Diagram:

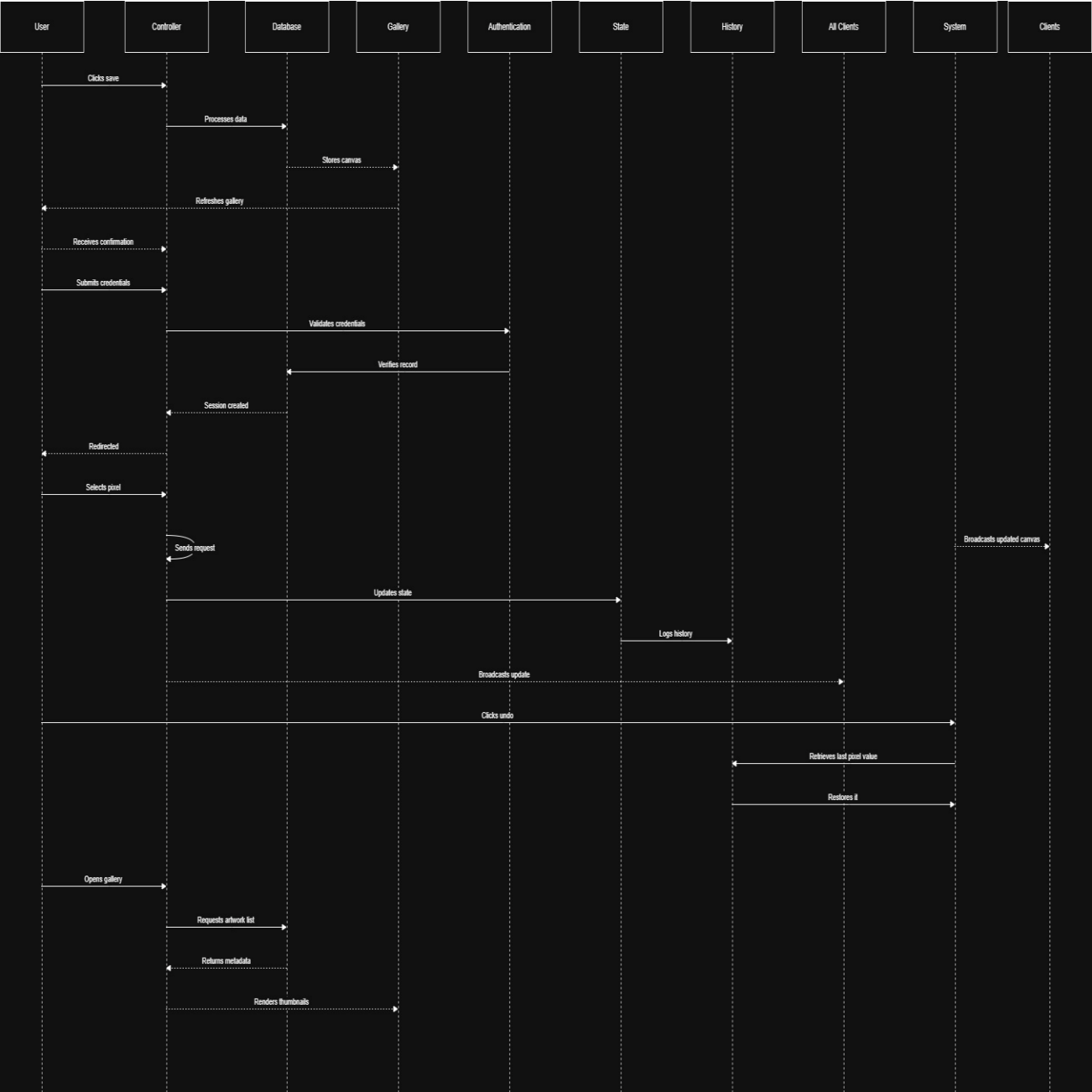




## Admin Activity Diagram:

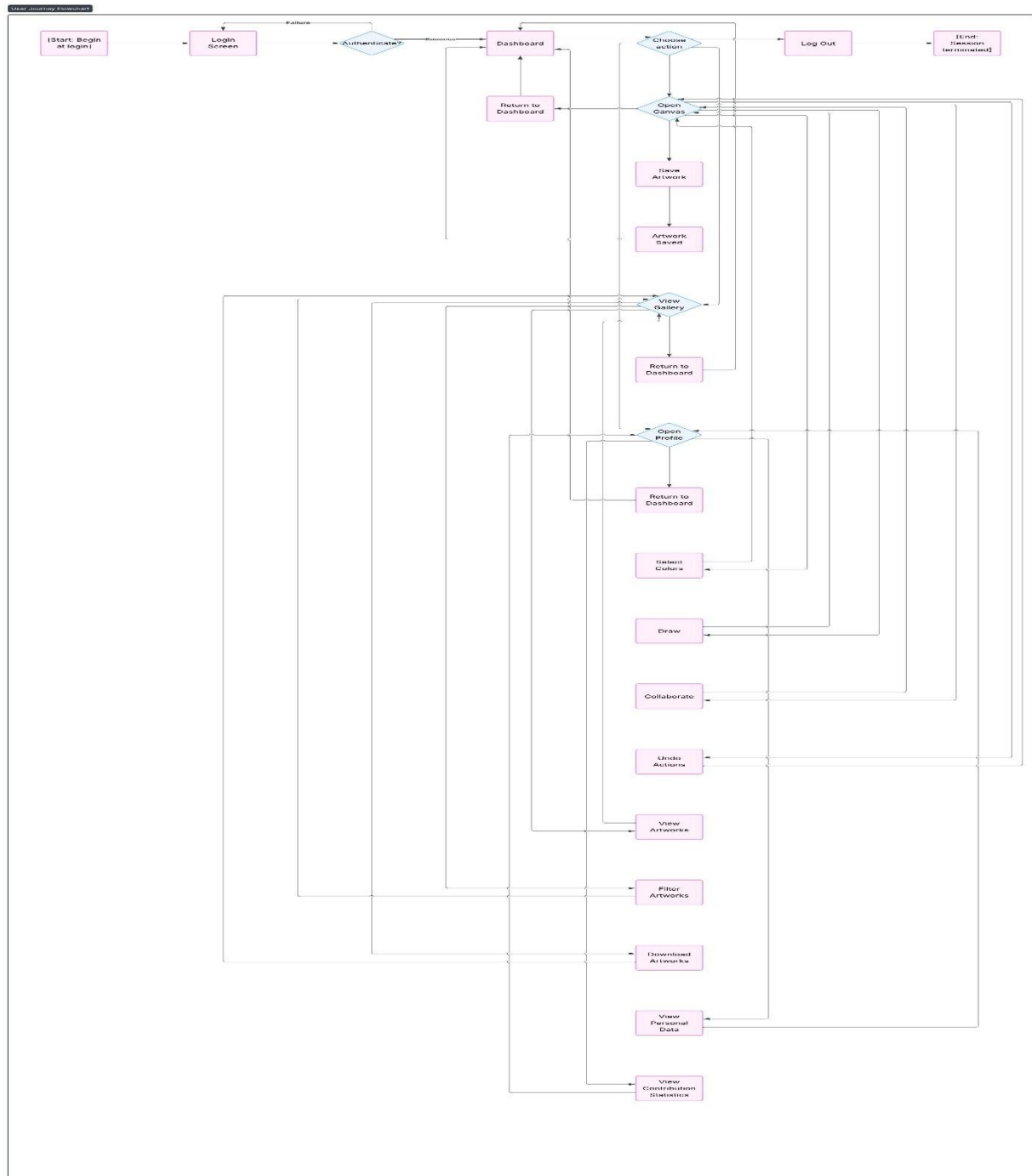


6. Sequence Diagrams:



## 7. User Flow Diagram:

The user begins at the login screen, authenticates, and accesses the dashboard. From here, they may open the canvas to draw and collaborate, or view the gallery to browse saved artworks. On the canvas, they can select colors, draw, undo actions, save the artwork, or return to the dashboard. In the gallery, the user views, filters, or downloads artworks. The profile page displays personal data and contribution statistics. The flow ends when the user logs out and the session terminates.



## 8. Wireframes:

### Login Screen



The login screen wireframe is titled "CYRUS Collaborative Art Board" with a placeholder for an app logo. It features two input fields: "Email Address" with the example "user@example.com" and "Password" with masked characters. A green "Sign In" button is positioned below the password field. A link "Sign up here" is provided for users without an account. The footer includes the text "LOGIN SCREEN WIREFRAME" and "Design Layout Preview".

**CYRUS**  
Collaborative Art Board  
[APP LOGO AREA]

Email Address  
user@example.com  
[EMAIL INPUT FIELD]

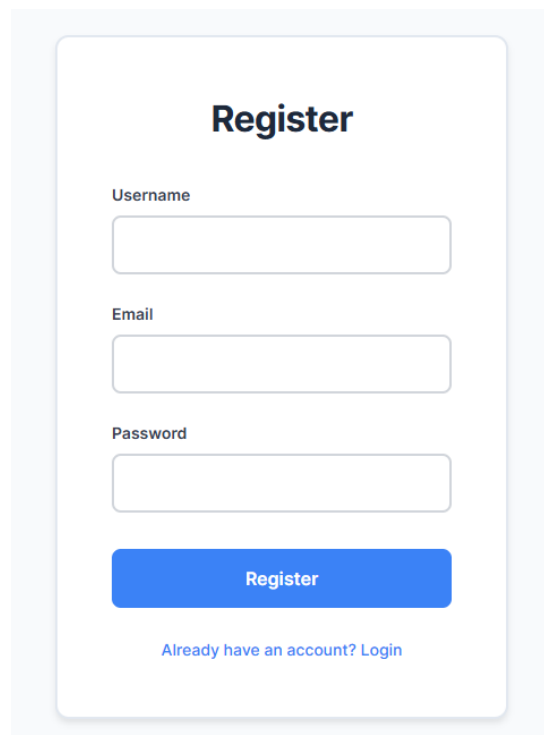
Password  
.....  
[PASSWORD INPUT FIELD]

Sign In  
[LOGIN BUTTON]

Don't have an account? [Sign up here](#)  
[REGISTER LINK]

LOGIN SCREEN WIREFRAME  
Design Layout Preview

### Register Screen



The register screen wireframe is titled "Register" and contains three input fields: "Username", "Email", and "Password". A blue "Register" button is located below the password field. At the bottom, there is a link "Already have an account? Login".

**Register**

Username  
[INPUT FIELD]

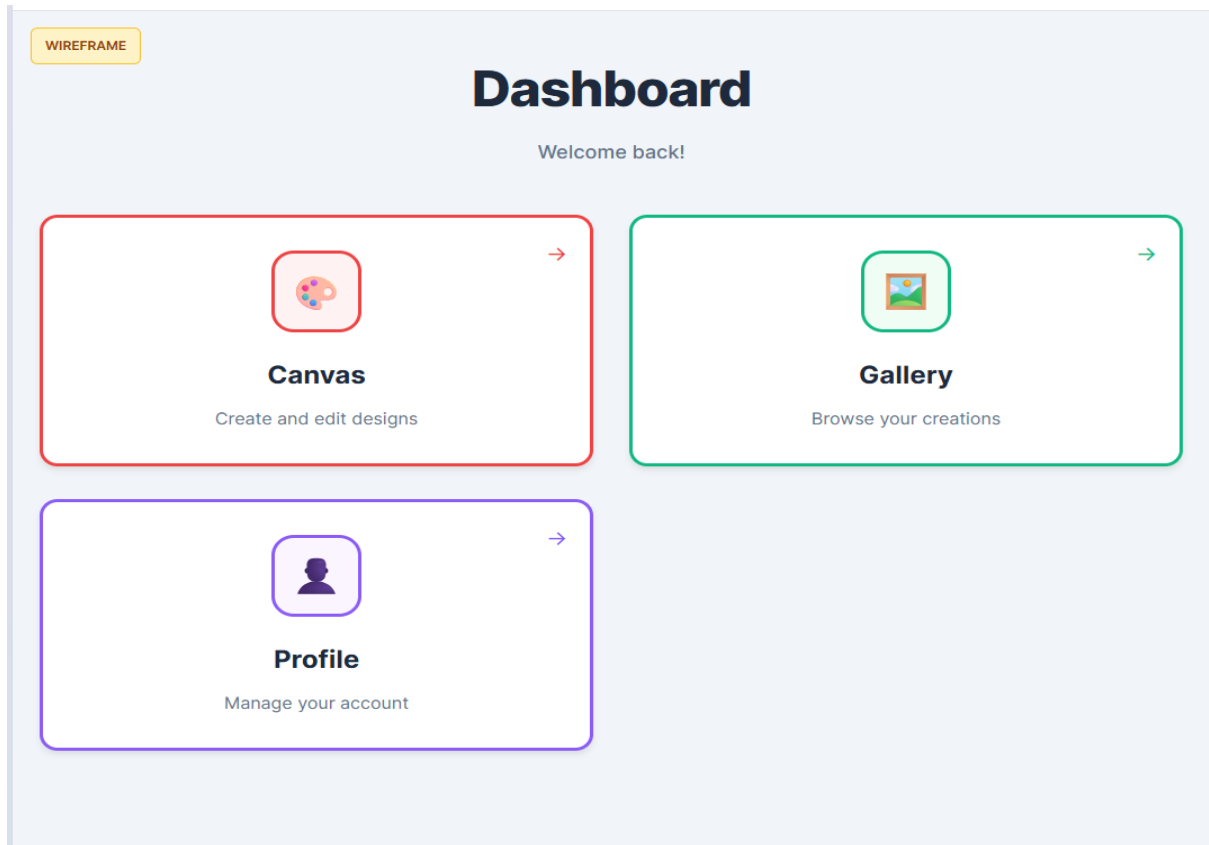
Email  
[INPUT FIELD]

Password  
[INPUT FIELD]

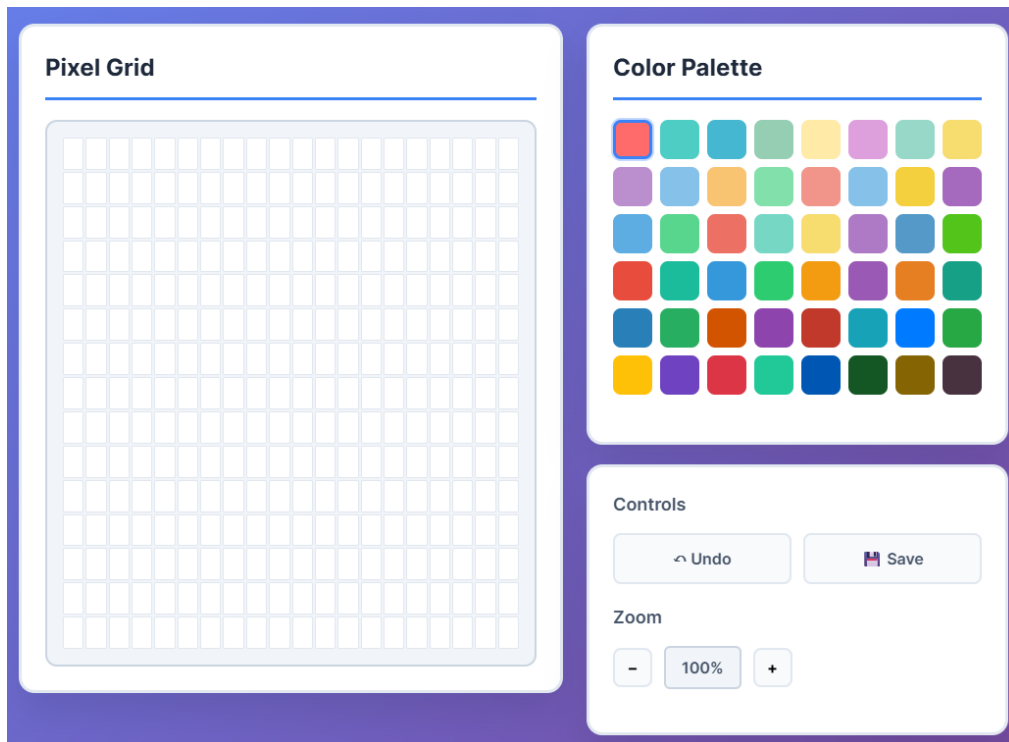
Register

Already have an account? [Login](#)

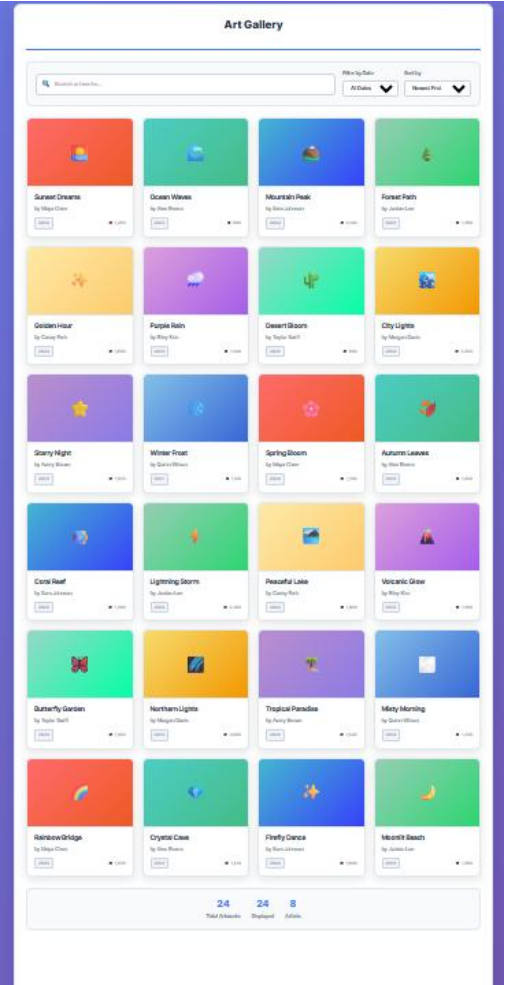
## Dashboard



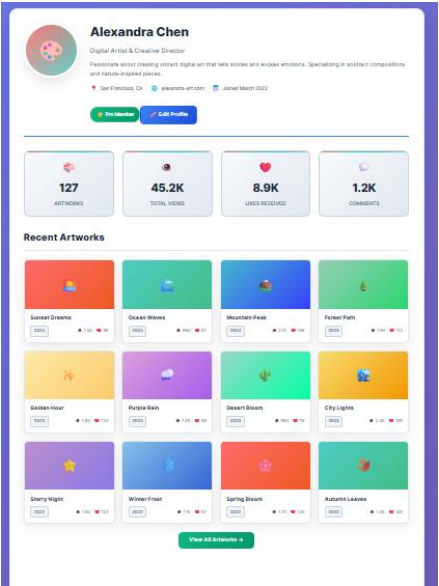
## Canvas View



# Gallery View



# Profile Page



## 9. Task Board:

Task\_board\_link: <https://rapakavivek6.atlassian.net/jira/software/projects/SCRUM/summary?atlOrigin=eyJpIjoiZmRhOTQ2MzVjZjg1NGNmZGFkODVhNjU2YjExY2Y1YWUiLCJwIjoiajJ9>

GITHUB link: <https://github.com/rapakavivek6-sys/Cyrus.git>

## 10. Conclusion:

Sprint 2 successfully establishes the full design and requirement structure for the Cyrus collaborative drawing application. User stories, diagrams, wireframes, and system flows were produced to ensure a robust foundation for development. These outputs will guide Sprint 3, where implementation begins with database integration, template development, and initial dynamic content rendering.