



School of Information Technologies
Faculty of Engineering & IT

ASSIGNMENT/PROJECT COVERSHEET - GROUP ASSESSMENT

Unit of Study: SOFT2412

Assignment name: SPRINT 31

Tutorial time: Thursday 12 Tutor name: Vinit Iyer

DECLARATION

We the undersigned declare that we have read and understood the *University of Sydney Student Plagiarism: Coursework Policy and Procedure*, and except where specifically acknowledged, the work contained in this assignment/project is our own work, and has not been copied from other sources or been previously submitted for award or assessment.

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We realise that we may be asked to identify those portions of the work contributed by each of us and required to demonstrate our individual knowledge of the relevant material by answering oral questions or by undertaking supplementary work, either written or in the laboratory, in order to arrive at the final assessment mark.

Project team members				
Student name	Student ID	Participated	Agree to share	Signature
1. <u>Jainil Chauhan</u>	<u>530773258</u>	<u>Yes</u> / No	<u>Yes</u> / No	<u>Jainil</u>
2. Anand Aggarwal	530224772	<u>Yes</u> / No	<u>Yes</u> / No	<u>Anand</u>
3. <u>Adhiraj Dogra</u>	<u>530784117</u>	<u>Yes</u> / No	<u>Yes</u> / No	<u>Adhiraj</u>
4. <u>Nick Gunning</u>	<u>510430117</u>	<u>Yes</u> / No	<u>Yes</u> / No	<u>Nick Gunning</u>
5.		Yes / No	Yes / No	<u>V</u>
6.		Yes / No	Yes / No	
7.		Yes / No	Yes / No	
8.		Yes / No	Yes / No	
9.		Yes / No	Yes / No	
10.		Yes / No	Yes / No	

Report: Sprint 3

Vinit Lab15 : Group02

Github link:

https://github.sydney.edu.au/SOFT2412-COMP9412-2024Sem2/Vinit_Lab15_Group02_Assingment2.git

Contribution video via Gource:

<https://drive.google.com/file/d/1qdYZ7pmhUXHiRDYo7Jvayc0rVTwM9XG0/view?usp=sharing>

Part 1 : Roles and responsibilities:

Member 1: Nick Gunning [ngun0240]

Role: Scrum master

Responsibility: Reviewing the code, making any changes as per the requirement, working on the feedback given by the product manager.

Member 2: Anand Kripal Aggarwal [aagg9744]

Role: Product manager

Responsibility: Defining the product roadmap, managing the project backlog, monitoring product performance, and giving feedback for improvement.

Member 3: Adhiraj Dogra [adog0180]

Role: Software Developer

Responsibility: Writing the code, designing solutions, debugging and troubleshooting, working on the feedback given by the scrum master.

Member 4: Jainil Chauhan [jcha0635]

Role: Software Developer

Responsibility: Writing the code, designing solutions, debugging and troubleshooting, working on the feedback given by the scrum master.

Part 2: Sprint Goal:

- In Sprint 2 we added login, signup, guest login functions and some of the logged in users. In the sprint 3 our goal was to add the functionalities that were left for logged in user, add admin profile and its specific features, back button and make sure the edge cases were working and presenting the final product at the end of the sprint :

Allow Scrolls to Support Any Characters

- Modify the file handling functionality to allow users to upload and edit scrolls using any characters, not limited to binary (0's and 1's). Ensure the file extension remains .bin.

Implement Back Button Functionality

- Add navigation functionality that allows users to toggle back and forth between pages after login, whether they log in as a guest or with a username/password. This includes adding a "Back" button to relevant screens.

Admin Functionality

- Implement a single admin profile with the following capabilities:
 - View a list of all users and their profiles.
 - Add and delete users.
 - View stats on the number of uploads and downloads for each scroll.
- View a log file that records every action taken in the program

Scroll Name Validation

- Ensure that scroll names are unique to avoid confusion for users. Validate the scroll name upon upload to prevent duplication.

Allow Scrolls with Duplicate Content

- Modify the system to allow different scrolls to have the same content. This means the content of a scroll does not need to be unique across the system.

Auto-Generated Scroll IDs

- Disable user customization of scroll IDs. Ensure the system automatically generates scroll IDs to avoid chaotic naming structures and maintain consistency.

Ability to Change Scroll Names

- Implement a feature to allow users to change the name of a scroll independent of its file name. The scroll name should be editable without needing to re-upload the scroll.

Download Scrolls Without Leaving the View Scrolls Screen

- Implement a feature that allows users to download scrolls directly from the "View Scrolls" screen without navigating away from the page. This improves user convenience and streamlines the process.

Preview Scrolls Before Download

- Allow users to preview scrolls before downloading them. This will enable users to inspect the scroll's content or details and ensure it meets their needs before initiating the download.

Permanent Deletion of Scrolls

- Remove the archive method currently in place and implement a functionality where deleting a scroll results in permanent deletion. No scroll should remain in the system once deleted.

Add Search Filters

- Enhance the search functionality by adding filters to refine searches based on:
 - Uploader ID
 - Scroll ID
 - Scroll Name
 - Upload Date

Add Profile Photo Functionality

- Allow users to add profile photos to personalise their profiles. This feature should be available during profile creation and editable afterward.

Create Log File for User Activity

- Implement a log file to track all actions completed within the system. For example, record actions such as "user_name uploaded a scroll" or "user_name downloaded a scroll" for accountability and auditing purposes.

Restrict ID Key Customization

- Restrict customization of the user's ID Key to the registration process only. After registration, the ID key should become immutable, as it serves as the primary key for the user's profile.

Make sure all edge cases work

- Make sure that incorrect user inputs are met with proper error messages and information to correct the input

Make sure that every type of user should have appropriate access

Part 3: Product and Sprint Backlog for Sprint 3

The product backlog included the client-defined epics and user stories that formed the foundation for development. Each user story addressed specific features and functionalities requested by the client.

SCRUM-19

As an admin, I want to view a list of users, so that I can manage user access to the system.

Acceptance Criteria:

- An Admin can view a list of all users.
- The list should display the username, date created and user ID for each user.
- The admin should be able to add and remove users.

SCRUM-31

As an admin, I want to view upload/download statistics for each scroll, so that I can monitor the activity and usage of files in the system.

Acceptance Criteria:

- The admin can view upload/download statistics for each scroll.
- The statistics should include the total number of uploads and downloads.
- The admin should be able to filter the statistics by date range.

SCRUM-51

As a user, I should not be able to edit my ID key after I have made an account.

Acceptance Criteria:

- Once a user creates an account, the ID key should become a text field
- The ID key is visible but not editable in the user profile.

SCRUM-50

As an admin, I want to have access to a log file that gets written to every single time a task is completed.

Acceptance Criteria:

- A log file is edited every completed task.
- Only the admin can view the log file

- Any specific user action is added to the log file with specific information on that user

SCRUM-42

As a user, I want to be able to navigate back to the login/registration page from the scroll view page or user profile page.

Acceptance Criteria:

- A button should be available on both the scroll view and user profile pages.
- The button should navigate back to the login page without losing any specific user data.

SCRUM-44

As a user, I want to be able to add scrolls with the same content with different names so that they aren't flagged as the same.

Acceptance Criteria:

- Users can upload scrolls with identical content but different file names.
- Only if a user uploads a scroll with the same name should it be flagged as the same

SCRUM-43

As a user/admin, I want to be able to edit the files with any character, not just 1s and 0s.

Acceptance Criteria:

- Users and admins can edit files using any character set.
- The editing window should support alphanumeric characters and special symbols.
- Changes should be saved after they add specific data

SCRUM-46

As a user, I want to be able to search by upload date.

Acceptance Criteria:

- Users and admin can search scrolls by upload date.
- Scrolls are updated automatically as they type into the search field

SCRUM-45

As a user, I want to be able to search by uploader ID.

Acceptance Criteria:

- Users and admin can search for scrolls based on the uploader's ID.
- Scrolls are updated automatically as they type into the search field

SCRUM-48

As a user, I want to be able to search by scroll ID.

Acceptance Criteria:

- Users and admin can search for scrolls using the scroll ID.
- Scrolls are updated automatically as they type into the search field

SCRUM-47

As a user, I want to be able to search by name.

Acceptance Criteria:

- Users can admin search for scrolls by name.
- Scrolls are updated automatically as they type into the search field

SCRUM-49

As a user, I want to be able to add photos to my account.

Acceptance Criteria:

- Users can upload photos to their account profile.
- The system should support all popular image formats
- Uploaded photos should be saved in a folder in the system.
- References are saved for which profile picture belongs to which particular account

SCRUM-27

As a user, I want to download scrolls from the platform, so that I can access the files locally on my device.

Acceptance Criteria:

- Users can download scrolls from the platform.

- Scrolls should be stored in a designated folder

SCRUM-29

As a user, I want to preview scrolls before downloading them, so that I can check if the file is useful before downloading.

Acceptance Criteria:

- Users/Admin can preview scrolls before downloading.
- An option window will appear to download the scroll after previewing.
- Saving scrolls needs to update the download stats for the account.

SCRUM-52

As an admin, I want to add users, so that I can manage user access to the system.

Acceptance Criteria:

- The admin can add new users through the same login page that users are.
- The admin should not be bound to specific login requirements that users are bound to.

SCRUM-53

As an admin, I want to delete users, so that I can manage user access to the system.

Acceptance Criteria:

- The admin can delete users from the system.
- A confirmation prompt should appear before deletion.
- After a user is deleted they are removed from the database accordingly

SCRUM Sprint 4 18 Oct – 26 Oct (16 issues)		0	0	44	Complete sprint	...
<input type="checkbox"/>	SCRUM-29 As a user, I want to preview scrolls before downloading them, So that I can see what I am getting.	SCROLL SEE...	DONE	3	JC	
<input checked="" type="checkbox"/>	SCRUM-44 As a user, I want to be able to add scrolls with the same content...	DONE	DONE	3	AD	
<input type="checkbox"/>	SCRUM-27 As a user, I want to download scrolls from the platform, So that I can share them with others.	SCROLL SEE...	DONE	4	NG	
<input type="checkbox"/>	SCRUM-31 As an admin, I want to view upload/download statistics for each scroll.	ADMIN FEAT...	DONE	3	NG	
<input checked="" type="checkbox"/>	SCRUM-51 As a user, I should not be able to edit my ID key after I have made it.	DONE	DONE	2	NG	
<input type="checkbox"/>	SCRUM-52 As an admin, I want to add, So that I can manage user access to the system.	ADMIN FEAT...	DONE	3	AA	
<input checked="" type="checkbox"/>	SCRUM-42 As a user, I want to be able to navigate back to the login/registration page.	USER MANA...	DONE	4	AA	
<input type="checkbox"/>	SCRUM-53 As an admin, I want to delete users, So that I can manage user accounts.	ADMIN FEAT...	DONE	3	AA	
<input checked="" type="checkbox"/>	SCRUM-43 As a user/admin, I want to be able to edit the files with any character.	DONE	DONE	2	NG	
<input checked="" type="checkbox"/>	SCRUM-45 As a user, I want to be able to search by Uploader ID	DONE	DONE	2	JC	
<input checked="" type="checkbox"/>	SCRUM-46 As a user, I want to be able to search by upload Date	DONE	DONE	2	JC	
<input checked="" type="checkbox"/>	SCRUM-47 As a user, I want to be able to search by name	DONE	DONE	2	JC	
<input checked="" type="checkbox"/>	SCRUM-48 As a user I want to be able to search by scroll ID	DONE	DONE	2	JC	
<input type="checkbox"/>	SCRUM-19 As an admin, I want to view a list of users,So that I can manage them.	USER MANA...	DONE	3	AA	
<input checked="" type="checkbox"/>	SCRUM-49 As a user, I want to be able to add photos to my account	DONE	DONE	3	AD	
<input type="checkbox"/>	<input checked="" type="checkbox"/> SCRUM-50 As an admin, I want to have access to a log file that gets written...	DONE	DONE	3	AA	

+ Create issue

Part 4: Scrum Events and Artefacts

Sprint Coordination:

Nick (Scrum Master) took charge of organising and managing the Scrum process. His main role was to ensure that the team adhered to Agile practices throughout the sprint.

Established clear sprint goals, which focused on implementing the functions which we had created the structure for in the previous sprint .

Anand managed the sprint backlog, which contained a refined list of tasks and user stories that the team committed to completing during the sprint.

Nick held stand-up meetings to ensure all team members understood their responsibilities and the timeline for achieving the sprint goals and maintained open communication channels between the Product Manager and developers to address any questions or adjustments needed during the sprint.

Standups

SCRUM Sprint 4 18 Oct - 25 Oct (14 issues)	
<input type="checkbox"/> SCRUM-29	As a user, I want to preview scrolls before downloading them, So that I can check if the file is useful before downloading.
<input type="checkbox"/> SCRUM-27	As a user, I want to download scrolls from the platform, So that I can access the files locally on my device.
<input checked="" type="checkbox"/> SCRUM-42	As a user, I want to be able to navigate back to the login/registration page from the scroll view page or user profile page.
<input checked="" type="checkbox"/> SCRUM-43	As a user/admin, I want to be able to edit the files with any character not just Ts and Os
<input checked="" type="checkbox"/> SCRUM-44	As a user, I want to be able to add scrolls with the same content with different names so that they aren't flagged as the same
<input checked="" type="checkbox"/> SCRUM-45	As a user, I want to be able to search by Uploader ID
<input checked="" type="checkbox"/> SCRUM-46	As a user, I want to be able to search by upload Date
<input checked="" type="checkbox"/> SCRUM-47	As a user, I want to be able to search by name
<input checked="" type="checkbox"/> SCRUM-48	As a user I want to be able to search by scroll ID
<input checked="" type="checkbox"/> SCRUM-49	As a user, I want to be able to add photos to my account
<input checked="" type="checkbox"/> SCRUM-50	As an admin, I want to have access to a log file that gets written to every single time a task is completed
<input checked="" type="checkbox"/> SCRUM-51	As a user, I should not be able to edit my ID key after I have made an account.
<input type="checkbox"/> SCRUM-19	As an admin, I want to view a list of users, add, and delete users, So that I can manage user access to the system.
<input type="checkbox"/> SCRUM-31	As an admin, I want to view upload/download statistics for each scroll, So that I can monitor the activity and usage of files in the system.
	USER MANAGEMENT
	ADMIN FEATURES



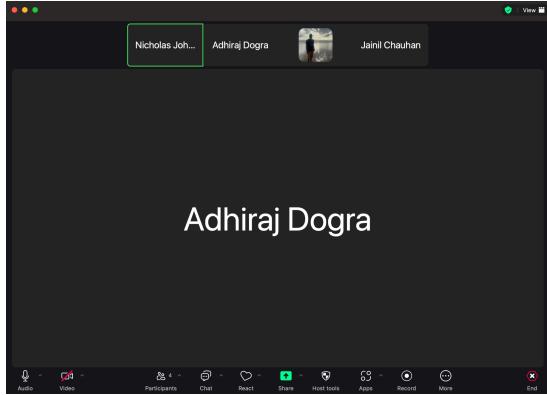
Backlog for sprint 4 (With User Roles)

Group Call

Standup 1 18/10/24

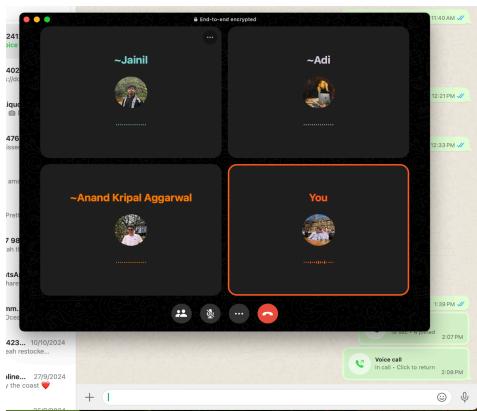
In this standup the group brokedown the feedback given from Sprint 2. The group was overall proud of how we performed however, we understood that we had significant progress to make. During this sprint we delegated all the tasks given by the tutor. The tutor during the sprint demonstration had given a list of functionalities we were missing including a list of additional features we have to implement. We

converted this list of needs into user stories (done by our product manager Anand), we then allocated these tasks across all our group members using Jira by adding them to the backlog.



Standup 2 20/10/24:

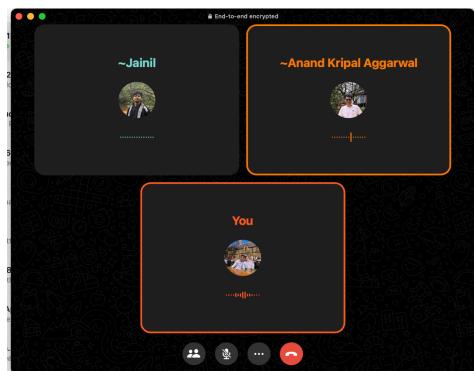
For this sprint we went through the work that had already been completed. We each demonstrated features that we had currently implemented. By this meeting Nick had fixed the edit file functionality so that additional characters could be inputted not just 0s and 1s. He also updated the code so that upload and download stats were viewable for each scroll. In addition to this, Anand had completed the list user pane for the admin, Adhiraj had fixed the scroll save feature, and Janil had updated the code with additional testing. We each demonstrated our changes and discussed which work had to still be done. We planned to get the majority of the functions completed by our next meeting.



Standup 3 22/10/24:

During the development of all the admin features, we encountered several bugs, specifically trying to add the privileges of a user to the admin without having to re-write all the code. During this meeting we all worked together trying to fix the code and complete all the admin features. During the meeting we decided that the admin could still remain a user except added parameters would allow it to view additional information. Using the tab feature in Java Swing, it allowed us to add additional

pages only viewable by the admin. The call lasted nearly 2 hours and we ended up being able to complete all the features for admin (Log file, manage users, make accounts etc). By this point most of the user stories had been completed, the only ones left were the photo upload feature to be completed by Nick, The preview scrolls before download (Janil), the differentiating scroll features by (Ananad) and finally some of the testing to be which was to be completed by Adriaj. These were to be completed by our next meeting so we could spend the last couple days doing error testing.



Standup 4 23/10/24:

Last stand up before sprint 2 demonstration, everyone discussed the potential corrections in the code. We had now completed all the desired functionality and were trying to error test it as much as possible. One error we discovered was that if a user had uploaded scrolls and then changed their username, the program would not let them edit their previous scrolls because the usernames did not match, this was quite a large issue and required some additional functionality, as a group we decided that the best solution was to simply scan through the usernames in a new function and change all the old usernames to the new usernames. This function was run only if a user had previous scrolls uploaded and then decided to change their name. After this standup all of the functionality was completed before our demo the next day.

Sprint Review



Standup 5 24/10/24

This was the final meeting which occurred right after the demonstration, we ran a sprint retrospective and discussed how the sprint went and what we could improve on. Overall the team was very pleased with how we went during the demonstration. We spent a short time together finalising the report and how we would complete it before the submission.

Sprint Retrospective:

What Went Well:

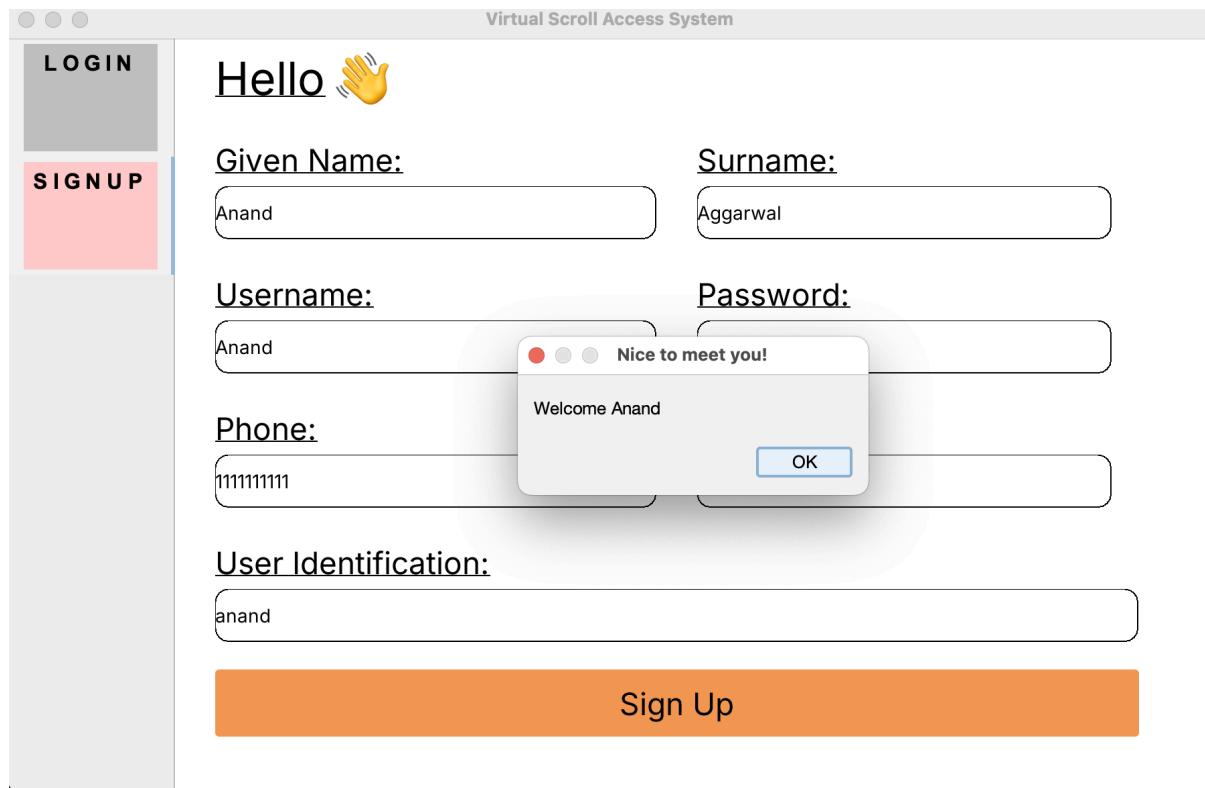
1. **Functionality Delivery:** We successfully implemented all of the core functionalities required for the program. This includes the added features given to us by our tutor. We were able to successfully do these as well.
2. **Responsiveness to Feedback:** We were able to adapt and respond swiftly to the client's initial feedback. This ability to pivot and improve was a strength that helped ensure we delivered a product that closely aligned with the client's expectations.

What Could Be Improved:

1. One feature was the absence of a binary save feature that saved the scrolls directly to the user's machine. While we did implement a save feature, unfortunately it saved a binary file to the code workspace which was apparently incorrect according to the specifications.

USER MANUAL

Successful Sign Up



Sign-Up with Empty Username Field

Virtual Scroll Access System

LOGIN

SIGN UP

Hello 

Given Name:

Surname:

Username:

Password:

Phone:

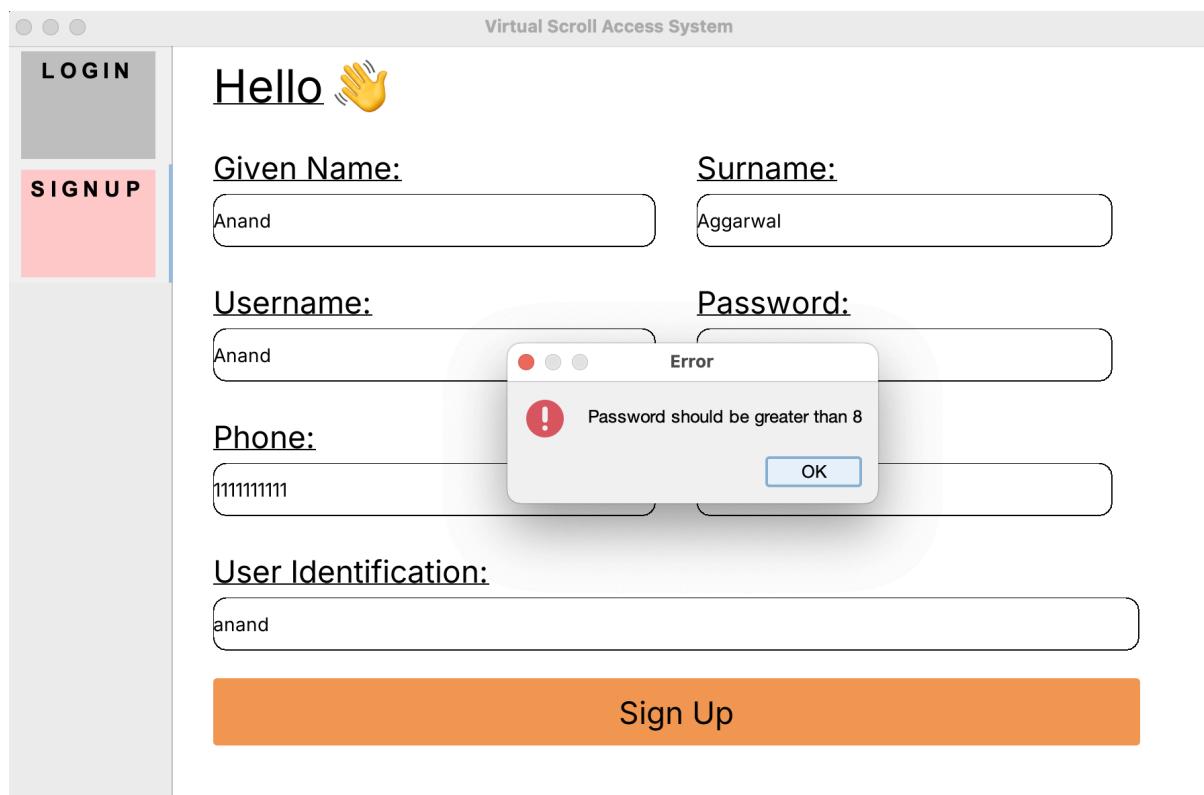

given name is required

User Identification:

Sign Up

Similarly if any of the fields is empty similar pop up will come up

Sign-Up with Password Shorter than 8 Characters



Sign-Up with Invalid Email Format

Virtual Scroll Access System

LOGIN

SIGNUP

Hello 

Given Name: Anand

Surname: Aggarwal

Username: Anand

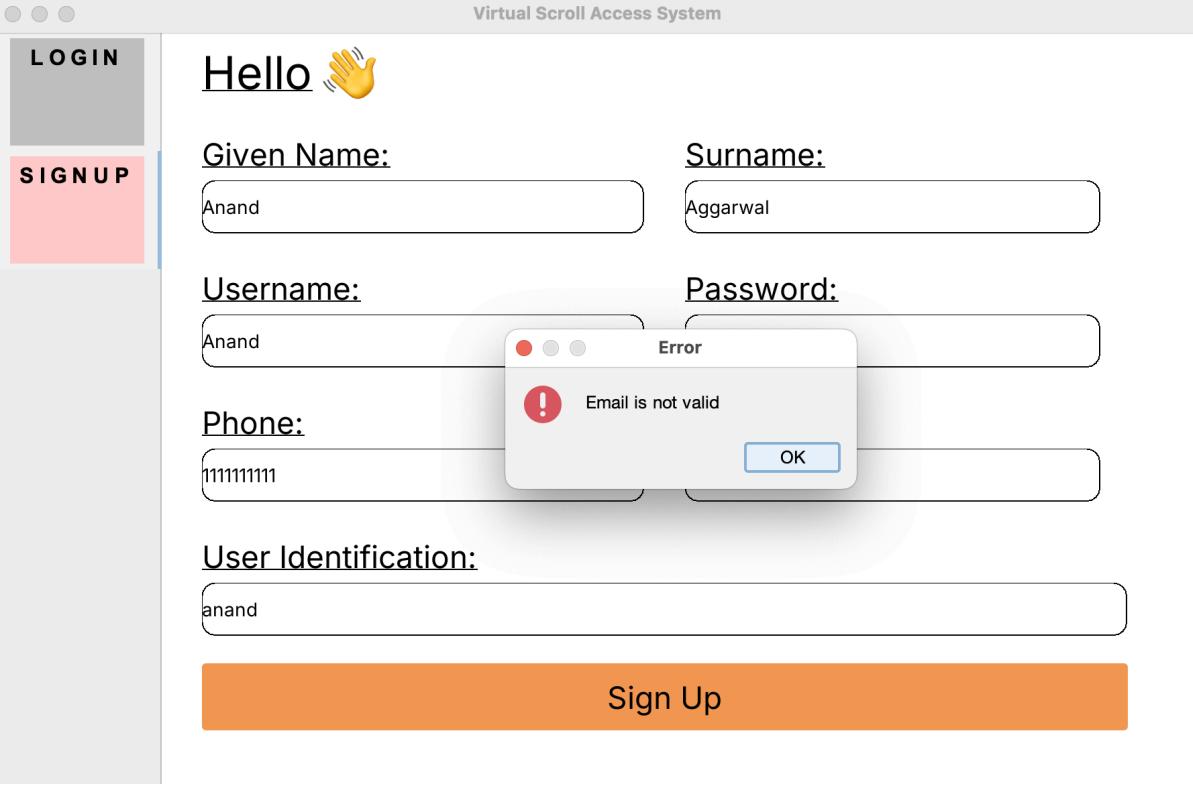
Password:

Phone: 1111111111

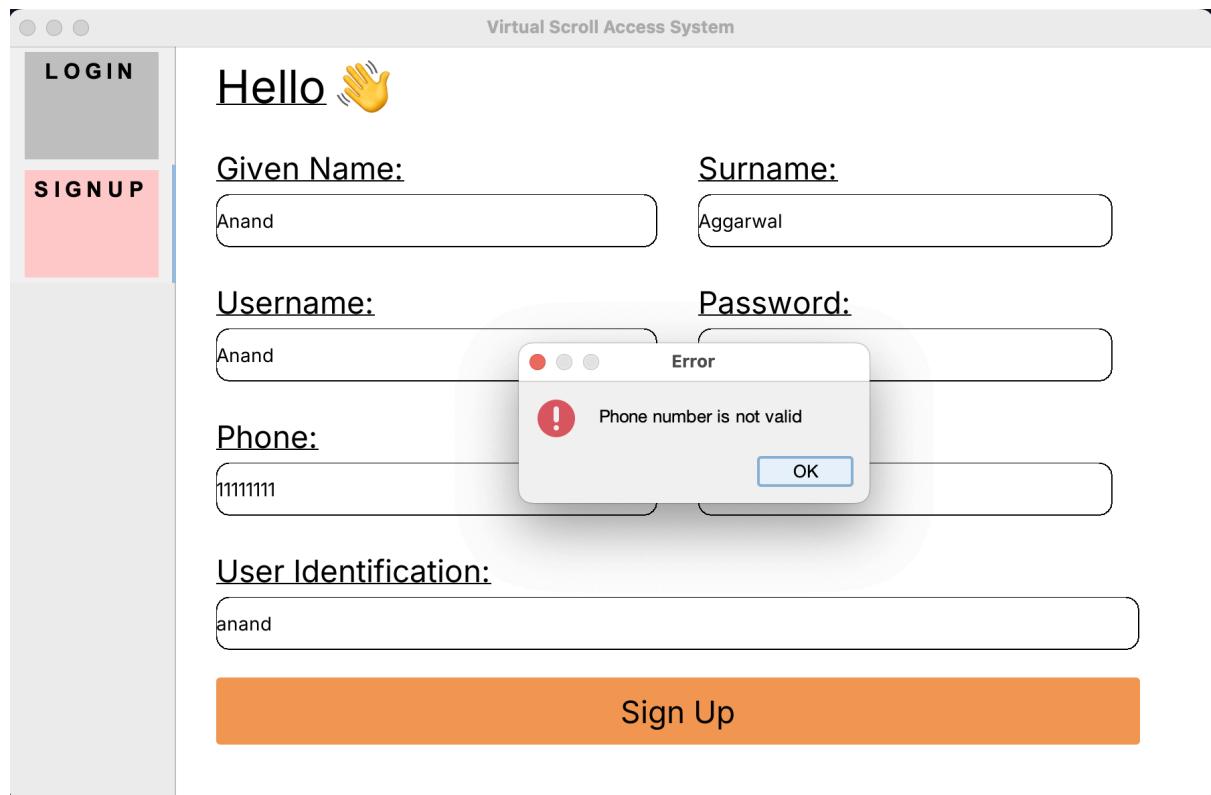
User Identification: anand


Email is not valid

Sign Up



Sign-Up with Invalid Phone Number



If the username already exists

Virtual Scroll Access System

LOGIN

SIGN UP

Hello 

Given Name: Anand

Surname: Aggarwal

Username: Anand

Password: 

Phone: 1234567890

User Identification: Anand


Error
Missing or incorrect fields
OK

Sign Up

Login



LOGIN

SIGNUP

Welcome Back 

User Name

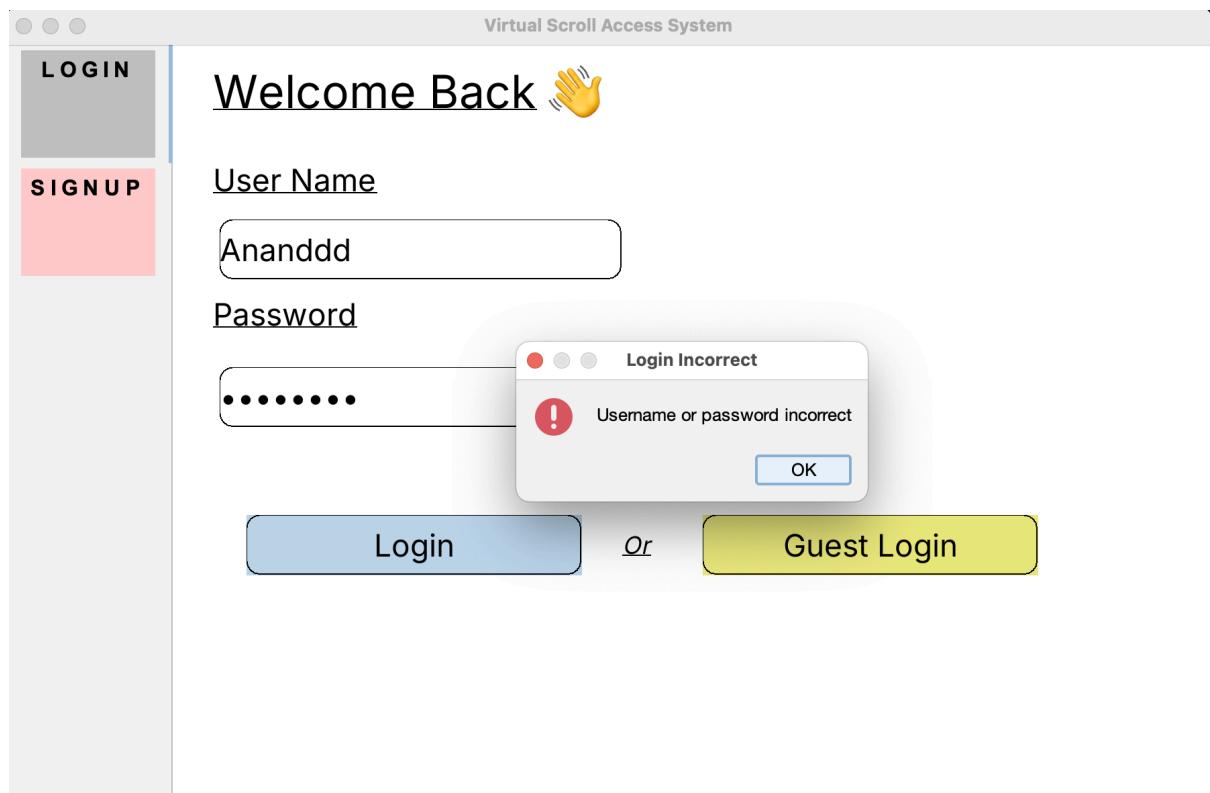
Password

Login

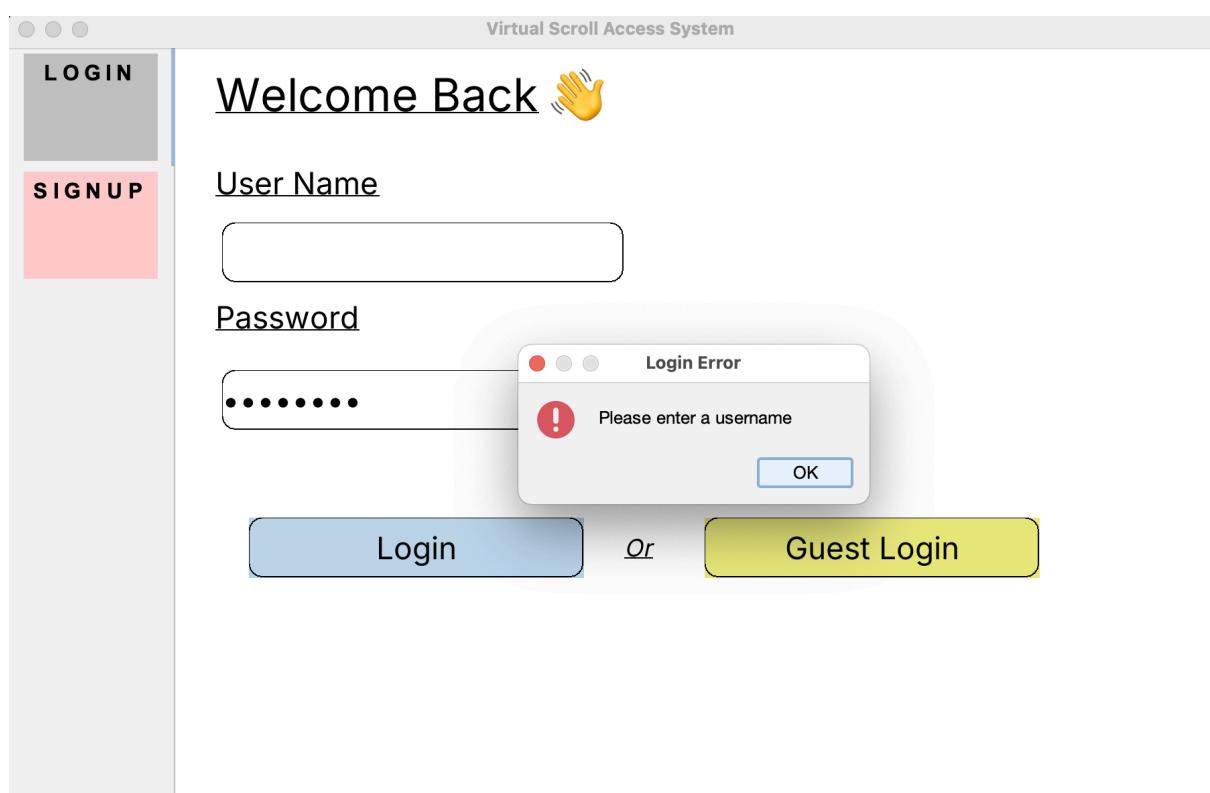
Or

Guest Login

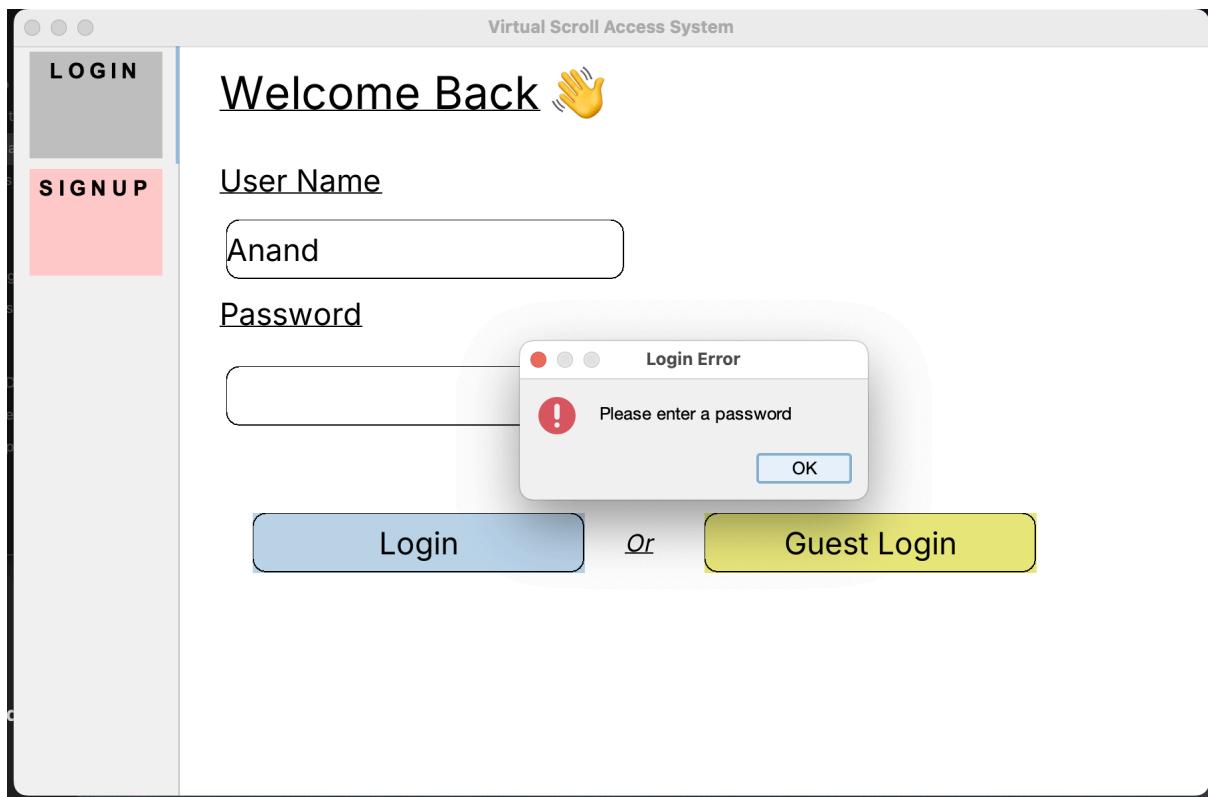
Incorrect login or password



Empty username



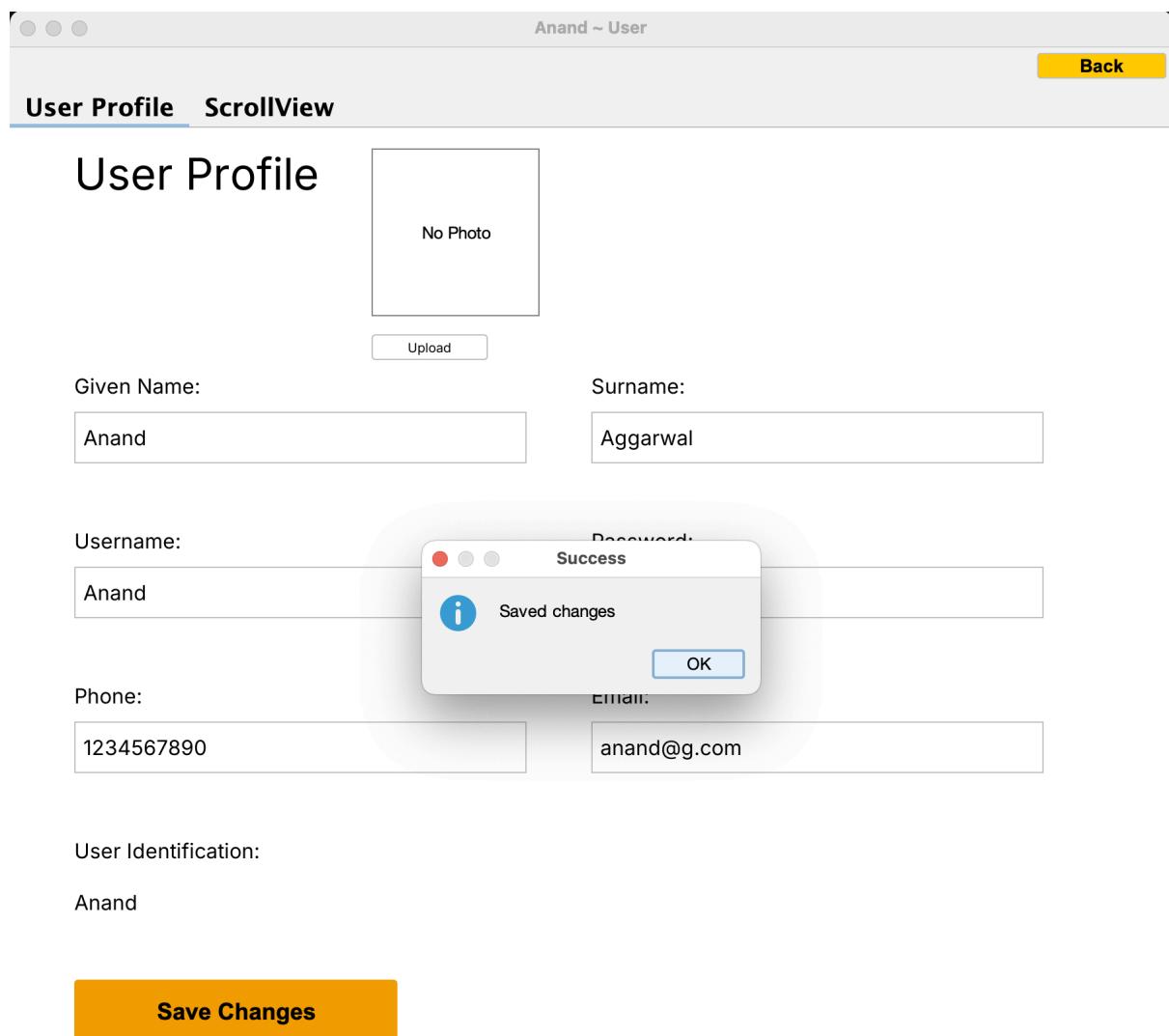
Empty Password



Successful Login

The screenshot shows a mobile application interface titled "User Profile" within a "ScrollView". At the top, there is a placeholder image labeled "No Photo" with an "Upload" button below it. Below the image, there are two text input fields: "Given Name: Anand" and "Surname: Aggarwal". Further down, there are two more text input fields: "Username: Anand" and "Password: [redacted]". Below these, another pair of text input fields is shown: "Phone: 1234567890" and "Email: anand@g.com". At the bottom left, the text "User Identification:" is followed by the name "Anand". A large orange button at the bottom center contains the text "Save Changes". The top right corner of the screen has a "Back" button.

Changing fields



Error message and constraints are the same as the sign up

Anand ~ User

Back

User Profile ScrollView

User Profile

No Photo

Upload

Given Name: Anand

Surname: Aggarwal

Username: Anand

Phone: 1234567

Email: anand@g.com

Incorrect telephone number

OK

User Identification: Anand

Save Changes

Uploading Photo

Anand ~ User

User Profile ScrollView

User Profile

No Photo

Upload

Given Name: Anand

Username: Anand

Phone: 1234567

User Identification: Anand

Save Changes

Open

Look In: anandaggarwal

Downloads eclipse workspace encryption gittag IdeaProjects Library Movies

Music my-paste myfetch opt Pictures process-wrangling Public reset_example

scroll skills templates text-processing translate Vinit_Lab15_Group02

File Name:

Files of Type: Image Files (*.png, *.jpg, *.jpeg)

Open Cancel

**User Profile** ScrollView

User Profile

[Upload](#)

Given Name:

Surname:

Username:

Password:

Phone:

Email:

User Identification:

Anand

Save Changes

ScrollView

Anand ~ User

User Profile ScrollView

Available Scrolls



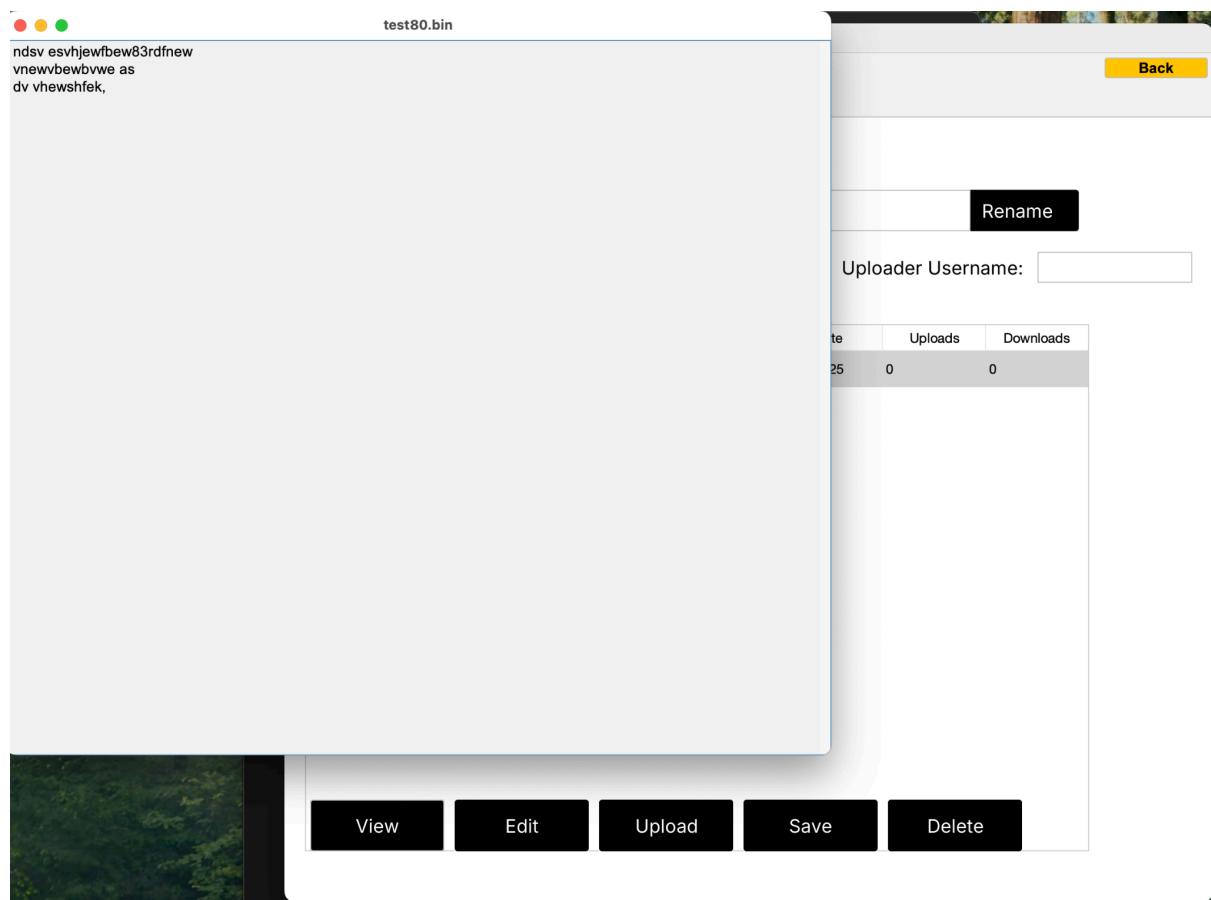
Search by scroll name: New Name: **Rename**

Scroll ID: Name: Uploader Username:

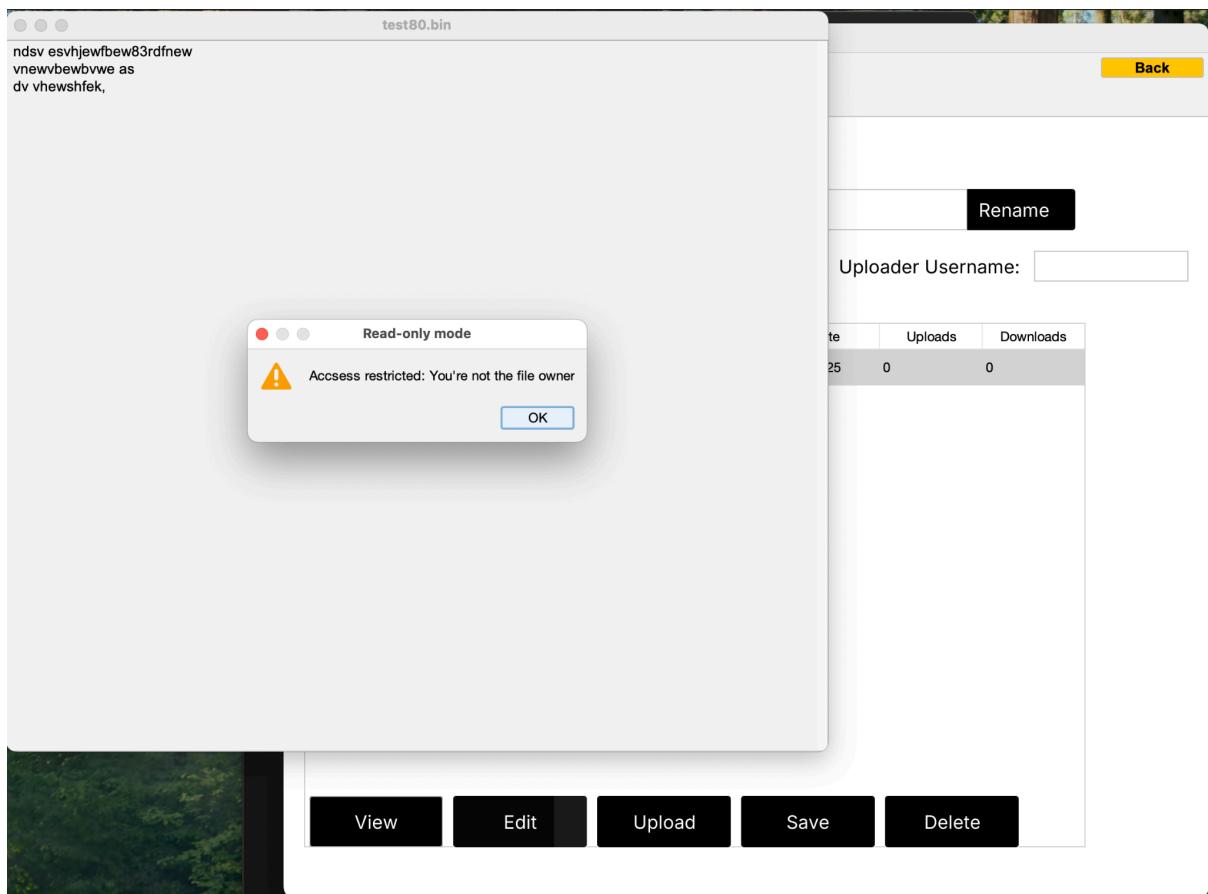
Scroll Name	Scroll ID	Username	Date	Uploads	Downloads
test80.bin	test1	Nick	2024/10/25	0	0

View **Edit** **Upload** **Save** **Delete**

View



Edit when not your own file



Delete when not your own file

Anand ~ User

Back

User Profile ScrollView

Available Scrolls

Search by scroll name: New Name: **Rename**

Scroll ID: Name: Uploader Username:

Scroll Name	Scroll ID	Username	Date	Uploads	Downloads
test80.bin	test1	Nick	2024/10/25	0	0

Deletion Failed

 Access denied: Not the file owner

OK

View **Edit** **Upload** **Save** **Delete**

Rename when not your file

Anand ~ User

Back

User Profile ScrollView

Available Scrolls

Search by scroll name: New Name: **Rename**

Scroll ID: Name: Uploader Username:

Scroll Name	Scroll ID	Username	Date	Uploads	Downloads
test80.bin	test1	Nick	2024/10/25	0	0

Unable to rename

You are not the file owner

OK

View **Edit** **Upload** **Save** **Delete**

Upload a file

Anand ~ User

User Profile ScrollView

Available Scrolls



Search by scroll name: New Name: Rename

Scroll ID: Name: Uploader Username:

Open

Look In: anandaggarwal

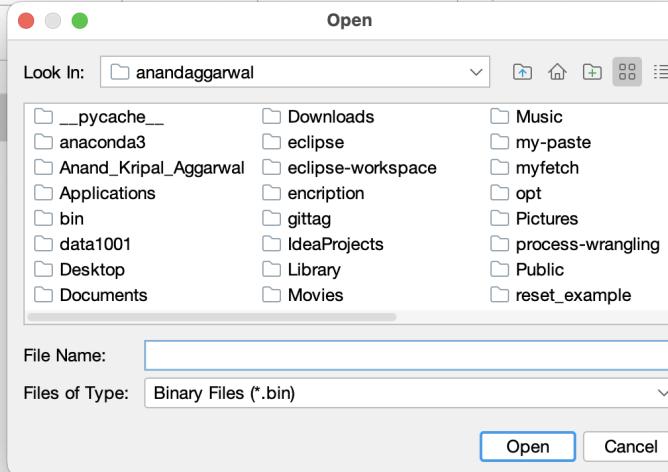
Scroll Name
test80.bin

File Name:

Files of Type: Binary Files (*.bin)

Open Cancel

View Edit Upload Save Delete



The screenshot shows a file selection dialog box titled "Open". The "Look In:" field is set to "anandaggarwal". The file list contains several items, including "__pycache__", "anaconda3", "Anand_Kripal_Aggarwal", "Applications", "bin", "data1001", "Desktop", "Documents", "Downloads", "eclipse", "eclipse-workspace", "encription", "gittag", "IdeaProjects", "Library", "Movies", "Music", "my-paste", "myfetch", "opt", "Pictures", "process-wrangling", "Public", and "reset_example". Below the file list are fields for "File Name:" and "Files of Type:", both currently set to their defaults. At the bottom are "Open" and "Cancel" buttons.

Anand ~ User

Back

User Profile ScrollView

Available Scrolls

Search by scroll name: New Name: **Rename**

Scroll ID: Name: Uploader Username:

Scroll Name	Scroll ID	Username	Date	Uploads	Downloads
test80.bin	test1	Nick	2024/10/25	0	0

Input

? Enter new scroll ID:

Cancel OK

View **Edit** **Upload** **Save** **Delete**

Anand ~ User

User Profile ScrollView

Available Scrolls

Search by scroll name: New Name: **Rename**

Scroll ID: Name: Uploader Username:

Scroll Name	Scroll ID	Username	Date	Uploads	Downloads
test80.bin	test1	Nick	2024/10/25	0	0
test85.bin	Anand1	Anand	2024/10/25	0	0

Message

 File successfully uploaded

OK

View **Edit** **Upload** **Save** **Delete**

Save

Anand ~ User

Back

User Profile ScrollView

Available Scrolls

Search by scroll name: New Name: **Rename**

Scroll ID: Name: Uploader Username:

Scroll Name	Scroll ID	Username	Date	Uploads	Downloads
test80.bin	test1	Nick	2024/10/25	0	0
test85.bin	Anand1	Anand	2024/10/25	0	0

Preview Option

Would you like to preview the scroll before saving?

No Yes

View Edit Upload Save Delete

Preview

The screenshot shows a desktop application window titled "User Profile ScrollView". Inside, there's a section titled "Available Scrolls" featuring a small icon of a scroll. Below it is a search bar with fields for "Search by scroll name:" and "New Name:", and input fields for "Scroll ID:" and "Name:". A table lists two scrolls: "test80.bin" and "test85.bin". At the bottom are buttons for "View", "Edit", "Upload", "Save", and "Delete". A modal dialog titled "Confirm Save" is overlaid on the window, asking "Do you want to save this scroll?" with "No" and "Yes" buttons. The background of the main window shows a blurred image of a forest.

Scroll Name	Scroll ID	Username	Date	Uploa
test80.bin	test1	Nick	2024/10/25	0
test85.bin	Anand1	Anand	2024/10/25	0

Saving it

Anand ~ User

User Profile ScrollView

Available Scrolls 

Search by scroll name: New Name: **Rename**

Scroll ID: Name: Uploader Username:

Scroll Name	Scroll ID	Username	Date	Uploads	Downloads
test80.bin	test1	Nick	2024/10/25	0	0
test85.bin	Anand1	Anand	2024/10/25	0	1

Message

 File saved successfully to 'saved_scrolls/' directory

OK

View **Edit** **Upload** **Save** **Delete**

Rename When no file selected

Anand ~ User

Back

User Profile ScrollView

Available Scrolls



Search by scroll name: New Name: **Rename**

Scroll ID: Name: Uploader Username:

Scroll Name	Scroll ID	Username	Date	Uploads	Downloads
test80.bin	test1	Nick	2024/10/25	0	0
test85.bin	Anand1	Anand	2024/10/25	0	1

Unable to rename

Choose 1 scroll to change ID and name

OK

View **Edit** **Upload** **Save** **Delete**

Rename successful

Anand ~ User

Back

User Profile ScrollView

Available Scrolls

Search by scroll name: New Name: **Rename**

Scroll ID: Name: Uploader Username:

Scroll Name	Scroll ID	Username	Date	Uploads	Downloads
test80.bin	test1	Nick	2024/10/25	0	0
Anand1.bin	Anand1	Anand	2024/10/25	0	1

Message

 Rename scroll name successful

OK

View **Edit** **Upload** **Save** **Delete**

[User Profile](#) [ScrollView](#)

Available Scrolls

Search by scroll name: New Name: [Rename](#)Scroll ID: Name: Uploader Username:

Scroll Name	Scroll ID	Username	Date	Uploads	Downloads
test80.bin	test1	Nick	2024/10/25	0	0
Anand.bin	Anand	Anand	2024/10/25	0	1

[View](#)[Edit](#)[Upload](#)[Save](#)[Delete](#)

Delete

Anand ~ User

Back

User Profile ScrollView

Available Scrolls



Search by scroll name: New Name: Rename

Scroll ID: Name: Uploader Username:

Scroll Name	Scroll ID	Username	Date	Uploads	Downloads
test80.bin	test1	Nick	2024/10/25	0	0
Anand.bin	Anand	Anand	2024/10/25	0	1

Confirm Delete

 Are you sure you want to permanently delete the scroll 'Anand.bin'?

No Yes

View **Edit** **Upload** **Save** **Delete**

When no is said

Anand ~ User

User Profile ScrollView

Available Scrolls 

Search by scroll name: New Name:

Scroll ID: Name: Uploader Username:

Scroll Name	Scroll ID	Username	Date	Uploads	Downloads
test80.bin	test1	Nick	2024/10/25	0	0
Anand.bin	Anand	Anand	2024/10/25	0	1

 Message

Deletion canceled.

When yes is said

Anand ~ User

Back

User Profile ScrollView

Available Scrolls

Search by scroll name: New Name: **Rename**

Scroll ID: Name: Uploader Username:

Scroll Name	Scroll ID	Username	Date	Uploads	Downloads
test80.bin	test1	Nick	2024/10/25	0	0

Message

 File 'Anand.bin' removed successfully

OK

View **Edit** **Upload** **Save** **Delete**

Guest Login

The screenshot shows a mobile application interface. At the top, there are three small circular icons (red, yellow, and grey) on the left, and the text "Guest" with a tilde (~) on the right. To the right of the guest text is a yellow rectangular button with the word "Back". Below this header, the word "ScrollView" is written in bold black text. Underneath it, the title "Available Scrolls" is displayed in large black font, accompanied by a small icon of a scroll. A search bar follows, containing the placeholder text "Search by scroll name:" and a blank input field. Below the search bar are three text input fields: "Scroll ID:" with a placeholder of "test1", "Name:" with a placeholder of "Nick", and "Uploader Username:" with a placeholder of "2024/10/25". A table below these fields lists scroll details:

Scroll Name	Scroll ID	Username	Date	Uploads	Downloads
test80.bin	test1	Nick	2024/10/25	0	0

At the bottom of the scroll view, there is a black rectangular button with the word "View" in white.

View and search bar works the same

Admin login

To login for admin the username is admin and the password is admin

admin ~ Admin

User Profile Manage Users Add User Logs ScrollView Back

User Profile

No Photo

Upload

Given Name: Admin

Surname: User

Username: admin

Password:

Phone: 1234567890

Email: admin@example.com

Save Changes

User profile and scroll view works the same

Manage users

admin ~ Admin

User Profile Manage Users Add User Logs ScrollView

Username	UserID	First Name	Last Name	Email	Telephone	Privilege
Anand	Anand	Anand	Aggarwal	anand@g.com	1234567890	User
Nick	Nick	Nick	fdsxbnzdgte	wjjwn@jnjin.ckdkkd	1111111111	User

Delete

Delete User no user is selected

admin ~ Admin

Back

User Profile Manage Users Add User Logs ScrollView

Username	UserID	First Name	Last Name	Email	Telephone	Privilege
Anand	Anand	Anand	Aggarwal	anand@g.com	1234567890	User
Nick	Nick	Nick	fdsxbnzdgte	wjjwn@jnjin.ckdkkd	1111111111	User

No Selection

Please select a user to delete.

OK

Delete

Delete user

admin ~ Admin

Back

User Profile Manage Users Add User Logs ScrollView

Username	UserID	First Name	Last Name	Email	Telephone	Privilege
Anand	Anand	Anand	Aggarwal	anand@g.com	1234567890	User
Nick	Nick	Nick	fdsxbnzdgte	wjjwn@njnjn.ckdkkd	1111111111	User

Delete Confirmation

Are you sure you want to delete user: Anand?

No Yes

Delete

admin ~ Admin

Back

User Profile Manage Users Add User Logs ScrollView

Username	UserID	First Name	Last Name	Email	Telephone	Privilege
Nick	Nick	Nick	fdsxbnzdgte	wjjwn@jnjin.ckdkkd	1111111111	User

Message

i User Anand has been successfully deleted.

OK

Delete

Add User

The screenshot shows a mobile application interface for adding a user. At the top, there is a navigation bar with three dots on the left and the text "admin ~ Admin" in the center. On the right side of the bar is a yellow "Back" button. Below the navigation bar, there is a horizontal menu with five items: "User Profile", "Manage Users", "Add User" (which is underlined, indicating it is the active screen), "Logs", and "ScrollView".

The main content area contains several input fields:

- Given Name:** An input field with a blue border.
- Surname:** An input field with a white border.
- Username:** An input field with a white border.
- Password:** An input field with a white border.
- Phone:** An input field with a white border.
- Email:** An input field with a white border.
- User Identification:** A large input field consisting of four stacked lines.

At the bottom of the screen is a large orange rectangular button with the text "Add User" centered in white.

admin ~ Admin

Back

User Profile Manage Users Add User Logs ScrollView

Given Name: Anand Surname: Aggarwal

Username: Anand Password:

Phone: 1234567890 Email:

User Identification: Anand

Success

User Anand added successfully!

OK

Add User

It has the same constraints as sign up and works in the same manner

Logs

The screenshot shows a web application window with a title bar "admin ~ Admin". Below the title bar is a navigation menu with links: "User Profile", "Manage Users", "Add User", "Logs" (which is underlined, indicating it is the active page), and "ScrollView". In the main content area, there is a large block of log text. The log entries are as follows:

```
\ProfilePane initialized for user: admin
User list panel initialized with 0 users.
ProfilePane initialized for user: Anand
ProfilePane initialized for user: Anand
ProfilePane initialized for user: Anand
Save button clicked for user: Anand
Profile changes saved successfully for user: Anand
Save button clicked for user: Anand
Failed attempt to save profile changes: phone number less than 10.
Profile photo updated for user: Anand
ProfilePane initialized for user: Nick
Uploaded file: test80.bin by Nick
ProfilePane initialized for user: Anand
Edited scroll: test80.bin by Anand
Uploaded file: test85.bin by Anand
Saved scroll: test85.bin by Anand
Renamed scroll: test85.bin to Anand.bin by Anand
Renamed scroll: Anand.bin to Anand1.bin by Anand
Renamed scroll: Anand1.bin to Anand.bin by Anand
Renamed scroll: Anand.bin to Anand1.bin by Anand
Renamed scroll: Anand1.bin to Anand.bin by Anand
ProfilePane initialized for user: admin
User list panel initialized with 2 users.
```

Search bar

[User Profile](#) [Manage Users](#) [Add User](#) [Logs](#) [ScrollView](#)

Available Scrolls

Search by scroll name:

New Name:

Rename

Scroll ID:

Name:

Uploader Username:

Scroll Name	Scroll ID	Username	Date	Uploads	Downloads
test80.bin	test1	Nick	2024/10/25	0	0
test86.bin	test2	admin	2024/10/25	0	0
test90.bin	admin	admin	2024/10/25	0	0

View

Edit

Upload

Save

Delete

Search by scroll name

admin ~ Admin

Back

User Profile Manage Users Add User Logs ScrollView

Available Scrolls

Search by scroll name: New Name: Rename

Scroll ID: Name: Uploader Username:

Scroll Name	Scroll ID	Username	Date	Uploads	Downloads
test90.bin	admin	admin	2024/10/25	0	0

View **Edit** **Upload** **Save** **Delete**

Search by Scroll Id

admin ~ Admin

Back

User Profile Manage Users Add User Logs ScrollView

Available Scrolls

Search by scroll name: New Name: Rename

Scroll ID: Name: Uploader Username:

Scroll Name	Scroll ID	Username	Date	Uploads	Downloads
test80.bin	test1	Nick	2024/10/25	0	0
test86.bin	test2	admin	2024/10/25	0	0

View **Edit** **Upload** **Save** **Delete**

Search by uploader username

admin ~ Admin

Back

User Profile Manage Users Add User Logs ScrollView

Available Scrolls

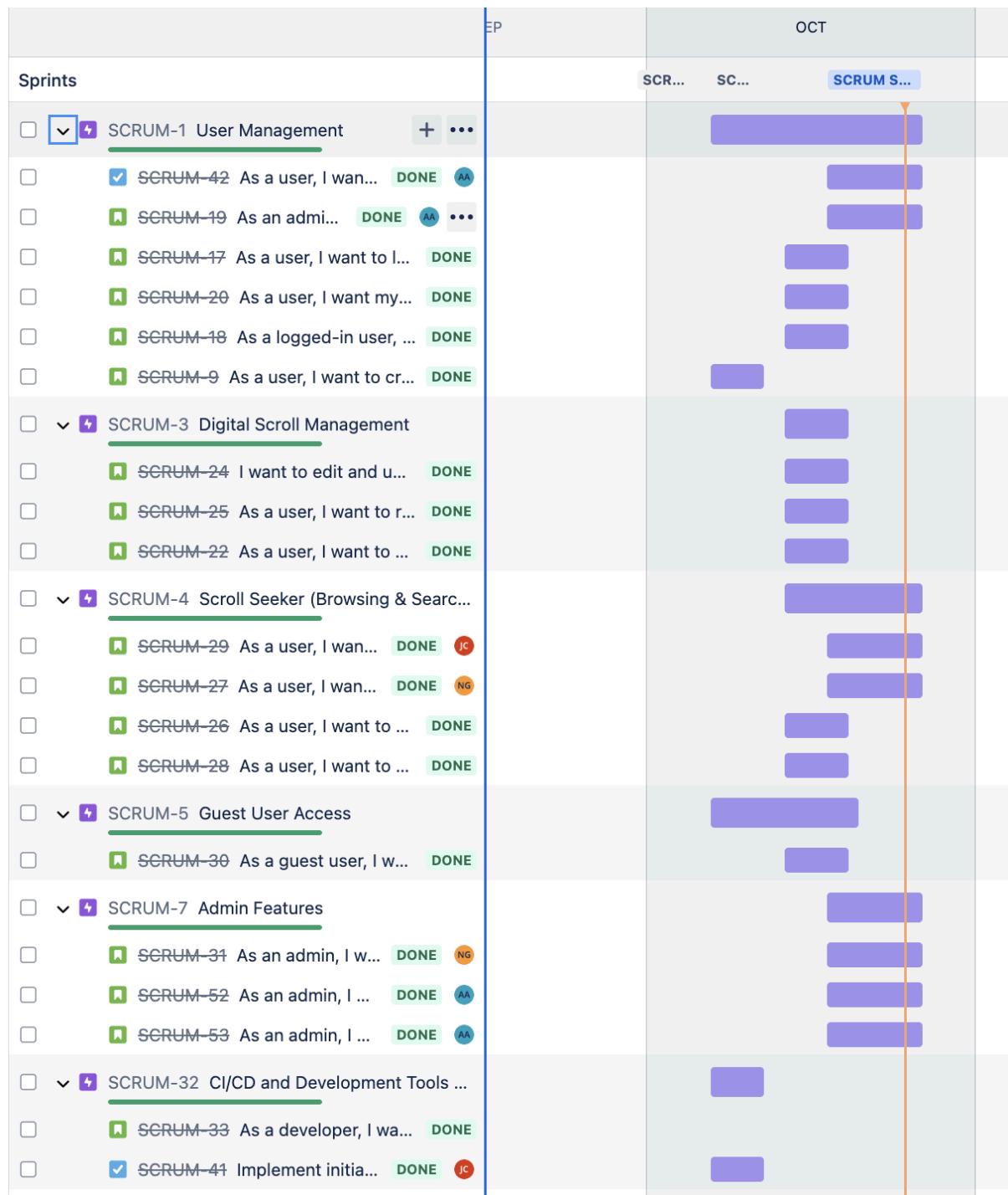
Search by scroll name: New Name: Rename

Scroll ID: Name: Uploader Username:

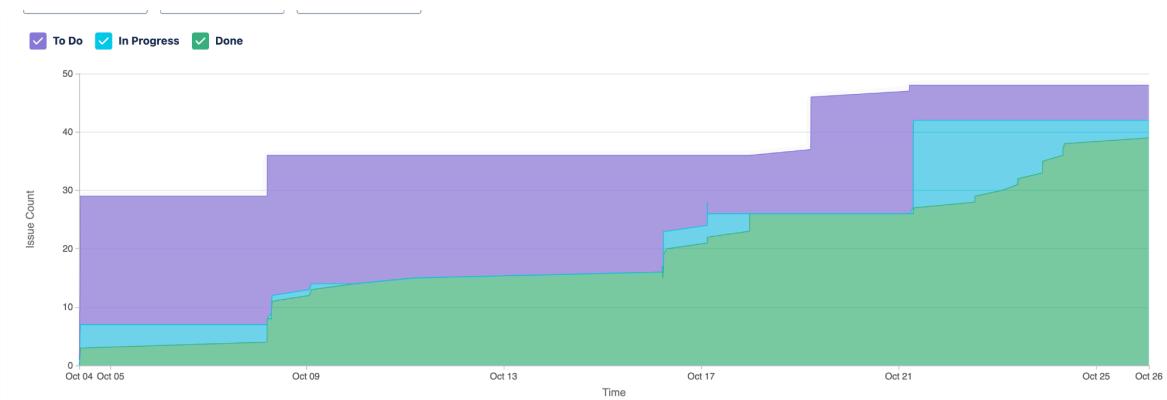
Scroll Name	Scroll ID	Username	Date	Uploads	Downloads
test80.bin	test1	Nick	2024/10/25	0	0

View **Edit** **Upload** **Save** **Delete**

Timeline

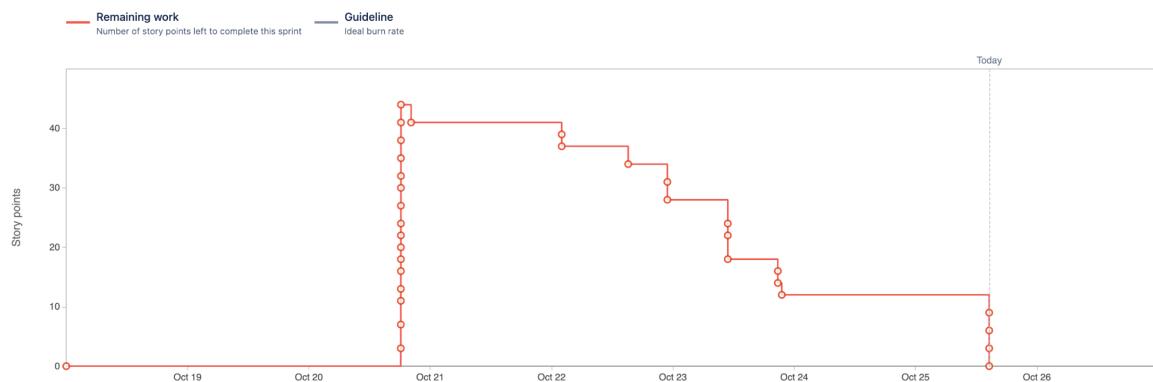


Cumulative flow diagram



Sprint burndown chart

Date - October 18th, 2024 - October 26th, 2024



Burnup report

Date - October 18th, 2024 - October 26th, 2024



Part 5: App Development

We utilised the following tools and practices to ensure Agile development and continuous integration:

- **GitHub:** Used for version control, all code was regularly pushed, and we followed branching strategies for feature development.
- **Jenkins:** Integrated Jenkins to automate builds and run tests whenever code was pushed to the repository.
- **JUnit:** Unit tests were written for all major components, achieving a code coverage of **57%** by the end of the sprint.
- **Gradle:** We used Gradle to manage dependencies and automate the build process. There are 3 versions of the project out of which the latest one (**v3.2.0**).
- **NGROK:** We used NGROK to expose the local machine to the internet. Set up a webhook so that each push in GitHub can be recognized, and Jenkins can automate the tests.

We enabled the email notification feature in Jenkins to ensure that if a build fails or is unstable the participants get an email informing them.

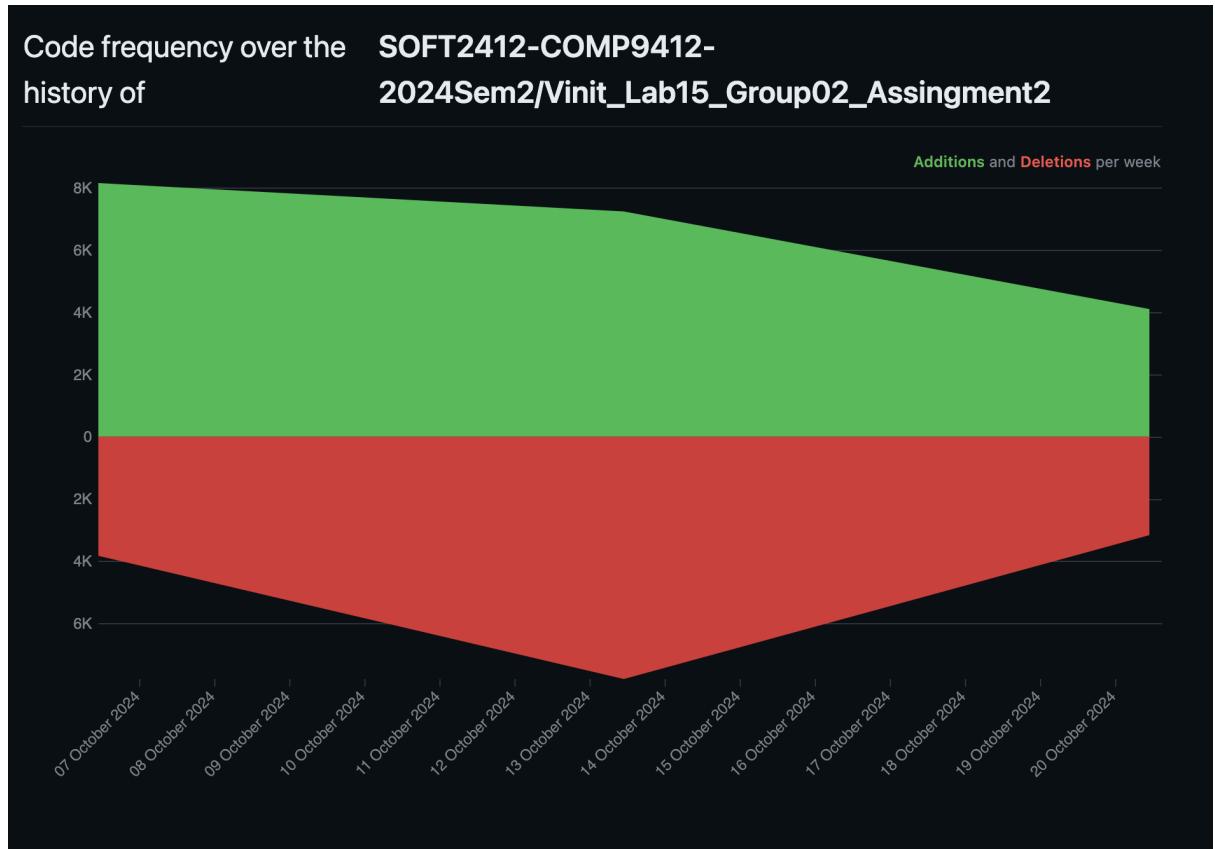
Git : Version control

Over the course of 3 sprints we had multiple versions of the code out of which the final file submitted is version v3.2.0.

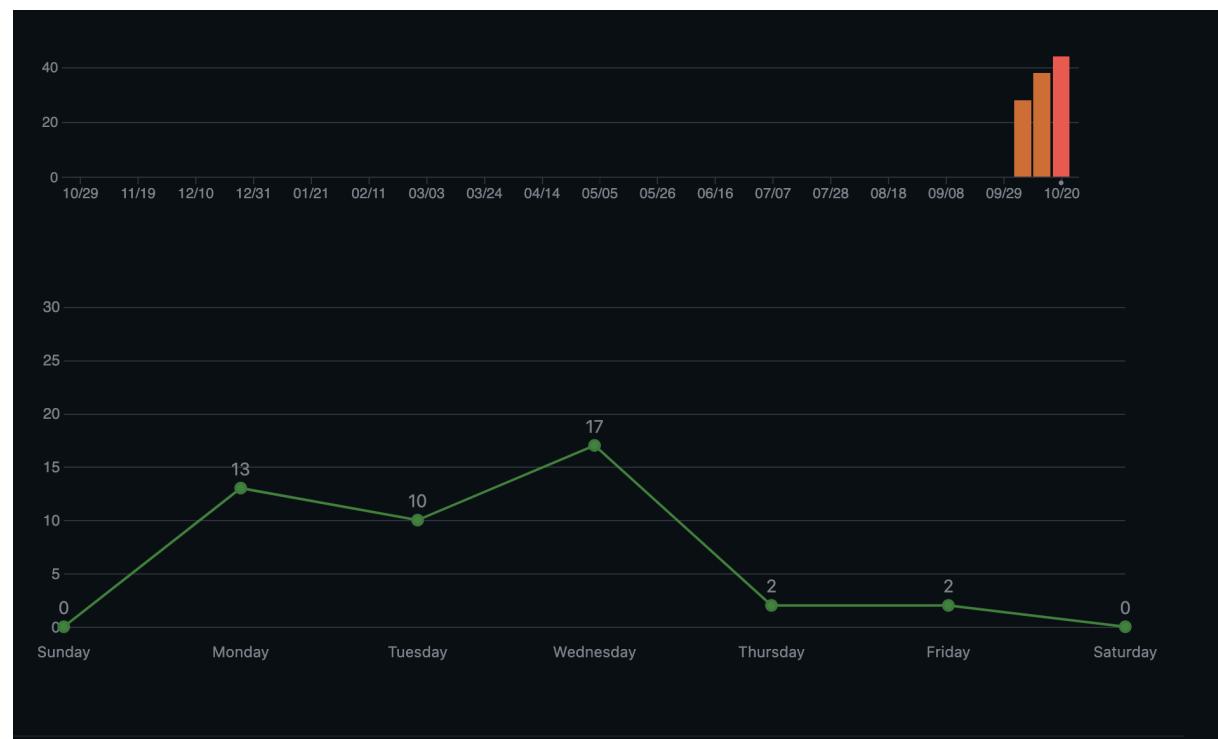
Tags	
v3.1.0	...
(⌚ 2 hours ago → 1f9c901	[zip] tar.gz
v3.0.0	...
(⌚ yesterday → 582fe3c	[zip] tar.gz
v2.1.0	...
(⌚ last week → 8c088da	[zip] tar.gz
v2.0.0	...
(⌚ last week → 6dddf0a7	[zip] tar.gz
v1.0	...
(⌚ last week → b828b92	[zip] tar.gz

GitHub :

This is a history of the entire GitHub repo throughout sprint 3:



History of Commits



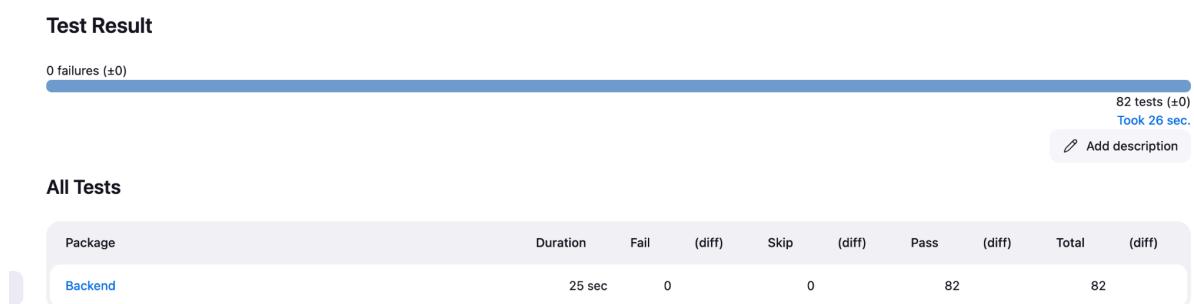
Jenkins

Overview of Jenkins in Our Project

In the Virtual Scroll Access System (VSAS), Jenkins played a vital role in automating our development workflow. It ensured that every code update was automatically built, tested, and analysed for code coverage. Jenkins integration streamlined our Continuous Integration (CI) pipeline by linking GitHub, running Gradle-based builds, and generating detailed test and code coverage reports. This report outlines how Jenkins was configured and the steps we took to automate our CI process.

Key Stages in the Jenkins Pipeline

- **Checkout:** Jenkins pulled the latest code from GitHub to ensure the pipeline operated on the most recent version of the project.
- **Build:** The project was compiled and packaged using Gradle, producing a **.jar** file.
- **Test:** Jenkins executed unit tests using JUnit to validate the codebase.
- **Code Coverage:** JaCoCo generated code coverage reports, saved as HTML for easy review.



Build and Test Coverage on Jenkins

Jenkins automated the testing and code coverage processes:

- **JUnit Tests:** After each build, Jenkins automatically ran all unit tests, publishing the results on the dashboard for easy tracking.

Package: Backend



Coverage Summary

name	instruction	branch	complexity	line	method	class
Backend	M: 242 C: 2406 91%	M: 41 C: 115 74%	M: 61 C: 200 77%	M: 90 C: 667 88%	M: 25 C: 158 86%	M: 1 C: 14 93%

Coverage Breakdown by Source File

name	instruction	branch	complexity	line	method	class
FileHandler	M: 9 C: 53 85%	M: 0 C: 4 100%	M: 1 C: 4 80%	M: 5 C: 15 75%	M: 1 C: 2 67%	M: 0 C: 1 100%
FileHandlerTest	M: 0 C: 198 100%	M: 2 C: 2 50%	M: 2 C: 12 86%	M: 0 C: 60 100%	M: 0 C: 12 100%	M: 0 C: 1 100%
Login	M: 32 C: 0 0%	M: 4 C: 0 0%	M: 7 C: 0 0%	M: 9 C: 0 0%	M: 5 C: 0 0%	M: 1 C: 0 0%
LoginBackend	M: 18 C: 53 75%	M: 3 C: 21 88%	M: 3 C: 13 81%	M: 4 C: 10 71%	M: 1 C: 3 75%	M: 0 C: 1 100%
LoginBackendTest	M: 20 C: 127 86%	M: 0 C: 0 100%	M: 4 C: 15 79%	M: 4 C: 42 91%	M: 4 C: 15 79%	M: 0 C: 1 100%
Scroll	M: 10 C: 94 90%	M: 0 C: 2 100%	M: 2 C: 11 85%	M: 3 C: 22 88%	M: 2 C: 10 83%	M: 0 C: 1 100%

name	instruction	branch	complexity	line	method	class
FileHandler	M: 9 C: 53 85%	M: 0 C: 4 100%	M: 1 C: 4 80%	M: 5 C: 15 75%	M: 1 C: 2 67%	M: 0 C: 1 100%
FileHandlerTest	M: 0 C: 198 100%	M: 2 C: 2 50%	M: 2 C: 12 86%	M: 0 C: 60 100%	M: 0 C: 12 100%	M: 0 C: 1 100%
Login	M: 32 C: 0 0%	M: 4 C: 0 0%	M: 7 C: 0 0%	M: 9 C: 0 0%	M: 5 C: 0 0%	M: 1 C: 0 0%
LoginBackend	M: 18 C: 53 75%	M: 3 C: 21 88%	M: 3 C: 13 81%	M: 4 C: 10 71%	M: 1 C: 3 75%	M: 0 C: 1 100%
LoginBackendTest	M: 20 C: 127 86%	M: 0 C: 0 100%	M: 4 C: 15 79%	M: 4 C: 42 91%	M: 4 C: 15 79%	M: 0 C: 1 100%
Scroll	M: 10 C: 94 90%	M: 0 C: 2 100%	M: 2 C: 11 85%	M: 3 C: 22 88%	M: 2 C: 10 83%	M: 0 C: 1 100%
ScrollManager	M: 39 C: 353 90%	M: 7 C: 29 81%	M: 8 C: 23 74%	M: 17 C: 97 85%	M: 1 C: 12 92%	M: 0 C: 1 100%
ScrollManagerTest	M: 3 C: 412 99%	M: 1 C: 1 50%	M: 1 C: 25 96%	M: 1 C: 117 99%	M: 0 C: 25 100%	M: 0 C: 1 100%
ScrollTest	M: 0 C: 116 100%	M: 0 C: 0 100%	M: 0 C: 12 100%	M: 0 C: 32 100%	M: 0 C: 12 100%	M: 0 C: 1 100%
User	M: 36 C: 127 78%	M: 2 C: 2 50%	M: 10 C: 13 57%	M: 18 C: 36 67%	M: 8 C: 13 62%	M: 0 C: 1 100%
UserManager	M: 66 C: 267 80%	M: 8 C: 28 78%	M: 9 C: 18 67%	M: 26 C: 65 71%	M: 2 C: 7 78%	M: 0 C: 1 100%
UserManagerTest	M: 0 C: 128 100%	M: 0 C: 0 100%	M: 0 C: 15 100%	M: 0 C: 47 100%	M: 0 C: 15 100%	M: 0 C: 1 100%
UserRegistration	M: 9 C: 177 95%	M: 14 C: 26 65%	M: 14 C: 20 59%	M: 3 C: 41 93%	M: 1 C: 13 93%	M: 0 C: 1 100%
UserRegistrationTest	M: 0 C: 212 100%	M: 0 C: 0 100%	M: 0 C: 15 100%	M: 0 C: 62 100%	M: 0 C: 15 100%	M: 0 C: 1 100%
UserTest	M: 0 C: 89 100%	M: 0 C: 0 100%	M: 0 C: 4 100%	M: 0 C: 21 100%	M: 0 C: 4 100%	M: 0 C: 1 100%

- **JaCoCo Coverage Report:** Jenkins integrated with JaCoCo to generate HTML reports that detailed the percentage of code covered by tests. This provided insights into areas that needed better test coverage.

Jenkins Setup and Automation

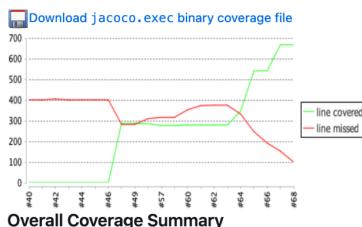
5.1 Build and Test Automation

Every time code was pushed to the GitHub repository, Jenkins automatically:

- Pulled the latest commit and started the CI pipeline.
- Built the project using Gradle, which also ran the unit tests.
- Generated a JaCoCo test coverage report. On average, the project achieved an average of **81.5%** coverage across instruction and branch tests, surpassing the target of 75%.

Jenkins also recorded the test logs, providing insights into the history of passed and failed tests.

JaCoCo Coverage Report



Overall Coverage Summary

name	instruction	branch	complexity	line	method	class
all classes	89% M: 305 C: 2406	74% M: 41 C: 115	76% M: 64 C: 200	87% M: 100 C: 667	85% M: 28 C: 158	88% M: 2 C: 14

Coverage Breakdown by Package

name	instruction	branch	complexity	line	method	class
Backend	M: 242 C: 2406 91%	M: 41 C: 115 74%	M: 61 C: 200 77%	M: 90 C: 667 88%	M: 25 C: 158 86%	M: 1 C: 14 93%
UI.Login	M: 63 C: 0 0%	M: 0 C: 0 100%	M: 3 C: 0 0%	M: 10 C: 0 0%	M: 3 C: 0 0%	M: 1 C: 0 0%

5.2 JaCoCo Test Report on Jenkins

The JaCoCo code coverage report was generated after running tests and archived as an HTML file. This provided a visual overview of which parts of the code were well-covered and which needed more attention.



Test Result (no failures)

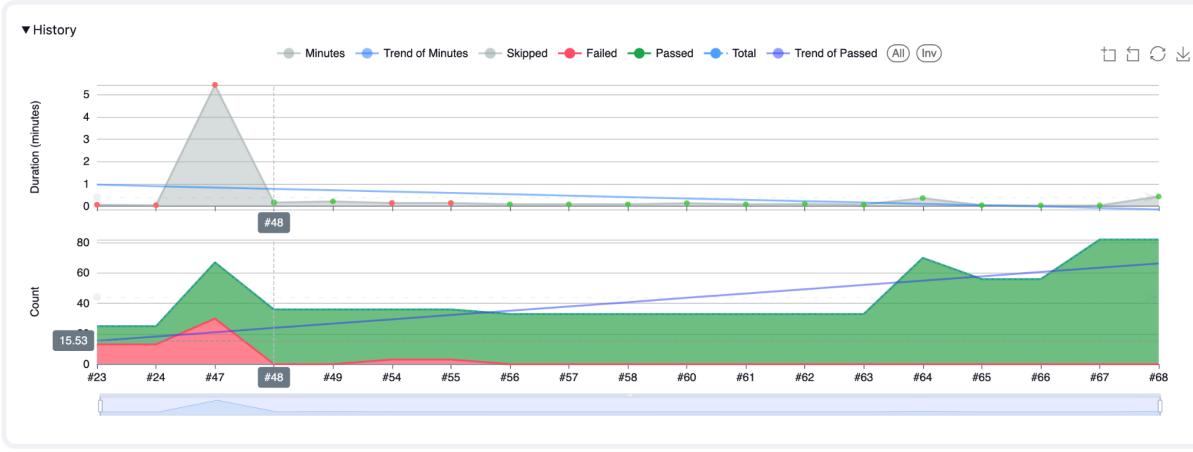


Jacoco - Overall Coverage Summary

INSTRUCTION	89%	<div style="width: 89%; background-color: #ff9999; height: 10px;"></div>	<div style="background-color: #99ff99; height: 10px;"></div>
BRANCH	74%	<div style="width: 74%; background-color: #ff9999; height: 10px;"></div>	<div style="background-color: #99ff99; height: 10px;"></div>
COMPLEXITY	76%	<div style="width: 76%; background-color: #ff9999; height: 10px;"></div>	<div style="background-color: #99ff99; height: 10px;"></div>
LINE	87%	<div style="width: 87%; background-color: #ff9999; height: 10px;"></div>	<div style="background-color: #99ff99; height: 10px;"></div>
METHOD	85%	<div style="width: 85%; background-color: #ff9999; height: 10px;"></div>	<div style="background-color: #99ff99; height: 10px;"></div>
CLASS	88%	<div style="width: 88%; background-color: #ff9999; height: 10px;"></div>	<div style="background-color: #99ff99; height: 10px;"></div>

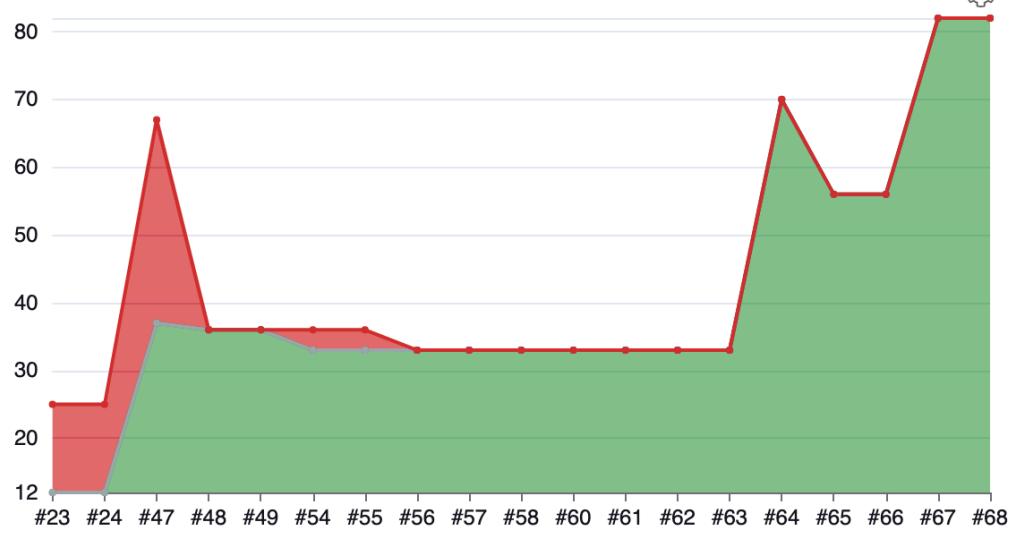
</> No changes.

Jenkins Outputs



Test Result Trend

● Passed ● Skipped ● Failed



Code Coverage Trend

700

Jenkins provided detailed output data after each build:

- **Build Output:** Included steps such as compiling and testing the project.
- **Test Results:** Displayed the status of each test case with links to detailed JUnit reports.
- **Code Coverage Report:** HTML reports showing coverage statistics by class and method.

Example: After a successful build, Jenkins displayed the build steps, test results, and coverage reports.

```

Started by user Jainil Chauhan
Running as SYSTEM
Building in workspace /Users/apple/.jenkins/workspace/A2
The recommended git tool is: NONE
using credential cc6abd23-ca03-4443-bb3e-0f933e444b51
> git rev-parse --resolve-git-dir /Users/apple/.jenkins/workspace/A2/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.sydney.edu.au/SOFT2412-COMP9412-2024Sem2/Vinit_Lab15_Group02_Assingment2.git # timeout=10
Fetching upstream changes from https://github.sydney.edu.au/SOFT2412-COMP9412-2024Sem2/Vinit_Lab15_Group02_Assingment2.git
> git --version # timeout=10
> git --version # 'git version 2.39.3 (Apple Git-145)'
using GIT_ASKPASS to set credentials
> git fetch --tags --force --progress -- https://github.sydney.edu.au/SOFT2412-COMP9412-2024Sem2/Vinit_Lab15_Group02_Assingment2.git
+refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse refs/remotes/origin/main^{commit} # timeout=10
Checking out Revision 7330b49a7ca35ac095bf0d6b146e8b39be929632 (refs/remotes/origin/main)
> git config core.sparsecheckout # timeout=10
> git checkout -f 7330b49a7ca35ac095bf0d6b146e8b39be929632 # timeout=10
Commit message: "Ultimate Final Push"
> git rev-list --no-walk 7330b49a7ca35ac095bf0d6b146e8b39be929632 # timeout=10
[Gradle] - Launching build.
[A2] $ /Users/apple/.jenkins/tools/hudson.plugins.gradle.GradleInstallation/gradle_build/bin/gradle clean build test
Starting a Gradle Daemon (subsequent builds will be faster)
> Task :clean
> Task :compileJava
> Task :processResources
> Task :classes
> Task :jar
> Task :startScripts
> Task :distTar
> Task :distZip
> Task :assemble
> Task :compileTestJava
> Task :processTestResources
> Task :testClasses
> Task :test
> Task :check
> Task :build

```

```

Deprecated Gradle features were used in this build, making it incompatible with Gradle 9.0.

You can use '--warning-mode all' to show the individual deprecation warnings and determine if they come from your own scripts or plugins.

For more on this, please refer to https://docs.gradle.org/8.10/userguide/command\_line\_interface.html#sec:command\_line\_warnings in the Gradle documentation.

BUILD SUCCESSFUL in 4m 19s
11 actionable tasks: 11 executed
Build step 'Invoke Gradle script' changed build result to SUCCESS
Recording test results
[Checks API] No suitable checks publisher found.
[JaCoCo plugin] Collecting JaCoCo coverage data...
[JaCoCo plugin] Version: 3.3.6
[JaCoCo plugin] **/**.exec;**/classes;**/src/main/java; locations are configured
[JaCoCo plugin] Number of found exec files for pattern **/**.exec: 1
[JaCoCo plugin] Saving matched execfiles: /Users/apple/.jenkins/workspace/A2/build/jacoco/test.exec
[JaCoCo plugin] Saving matched class directories for class-pattern: **/classes:
[JaCoCo plugin] - /Users/apple/.jenkins/workspace/A2/A2/build/classes 13 files
[JaCoCo plugin] - /Users/apple/.jenkins/workspace/A2/build/classes 44 files
[JaCoCo plugin] - /Users/apple/.jenkins/workspace/A2/build/reports/tests/test/classes 0 files
[JaCoCo plugin] Saving matched source directories for source-pattern: **/src/main/java:
[JaCoCo plugin] Source Inclusions: **/*.java,**/*.groovy,**/*.kt,**/*.kts
[JaCoCo plugin] Source Exclusions:
[JaCoCo plugin] - /Users/apple/.jenkins/workspace/A2/src/main/java 20 files
[JaCoCo plugin] Loading inclusions files..
[JaCoCo plugin] inclusions: []
[JaCoCo plugin] exclusions: [**/*Window*.class, **/*Pane*.class, **/*Main*.class, **/*ScrollDBBackend*.class, **/* RoundedCornerBorder*.class, **/*Signup*.class]
[JaCoCo plugin] Thresholds: JacocoHealthReportThresholds [minClass=0, maxClass=0, minMethod=0, maxMethod=0, minLine=0, maxLine=0, minBranch=0, maxBranch=0, minInstruction=0, maxInstruction=0, minComplexity=0, maxComplexity=0]
[JaCoCo plugin] Publishing the results..
[JaCoCo plugin] Loading packages..
[JaCoCo plugin] Done.
[JaCoCo plugin] Overall coverage: class: 87.5, method: 84.946236, line: 86.9622, branch: 73.71795, instruction: 88.74954, complexity: 75.757576
[Set GitHub commit status (universal)] PENDING on repos [] (sha:7330b49) with context:A2
Finished: SUCCESS

```

Adopted CI Practices

Throughout the project, we adhered to several best practices for Continuous Integration (CI):

- **Automated Builds:** Every commit triggered an automatic build, ensuring code readiness for deployment.
- **Automated Testing:** All unit tests were run as part of the pipeline to prevent the merging of broken code.
- **Code Coverage Monitoring:** Integrated JaCoCo allowed us to track test coverage and maintain a minimum of 75%.
- **Artifact Archiving:** Jenkins stored all relevant build outputs, enabling easy access to compiled .jar files and test results.
- **Post-Build Feedback:** After an unstable or unsuccessful build, the team received an email notification.

Conclusion

Jenkins played a crucial role in enhancing the development process for the Virtual Scroll Access System (VSAS). By automating build, test, and reporting tasks, we ensured that the project remained stable and well-tested throughout its development. Jenkins' integration with GitHub, JaCoCo, and JUnit provided a reliable pipeline, ensuring that each code change was thoroughly tested and deployed smoothly.

JUnit:

- We tested all the functionalities on our backend and got a coverage of **80.5%**

Backend

Element	Missed Instructions	Cov.	Missed Branches	Cov.	Missed	Cxty	Missed	Lines	Missed	Methods	Missed	Classes
userManager	<div style="width: 80%;">80%</div>	77%	<div style="width: 77%;">77%</div>	9	27	26	91	2	9	0	1	
scrollManager	<div style="width: 90%;">90%</div>	80%	<div style="width: 80%;">80%</div>	8	31	17	114	1	13	0	1	
user	<div style="width: 77%;">77%</div>	50%	<div style="width: 50%;">50%</div>	10	23	18	54	8	21	0	1	
loginBackend	<div style="width: 74%;">74%</div>	87%	<div style="width: 87%;">87%</div>	3	16	4	14	1	4	0	1	
scroll	<div style="width: 90%;">90%</div>	100%	<div style="width: 100%;">100%</div>	2	13	3	25	2	12	0	1	
userRegistration	<div style="width: 95%;">95%</div>	65%	<div style="width: 65%;">65%</div>	14	34	3	44	1	14	0	1	
fileHandler	<div style="width: 85%;">85%</div>	100%	<div style="width: 100%;">100%</div>	1	5	5	20	1	3	0	1	
Total	187 of 1,311	85%	34 of 146	76%	47	149	76	362	16	76	0	7

Test Summary



Packages

Classes

Package	Tests	Failures	Ignored	Duration	Success rate
Backend	82	0	0	2.624s	100%

Gradle:

The following commands were employed for gradle:

1. Build

```
▽ TERMINAL
● (base) anandagarwal@Anands-MacBook-Air Vinit_Lab15_Group02_Assingment2-main % gradle build
Deprecated Gradle features were used in this build, making it incompatible with Gradle 9.0.
You can use '--warning-mode all' to show the individual deprecation warnings and determine if they come from your own scripts or plugins.
For more on this, please refer to https://docs.gradle.org/8.3/userguide/command_line_interface.html#sec:command_line_warnings in the Gradle documentation.
BUILD SUCCESSFUL in 663ms
9 actionable tasks: 4 executed, 5 up-to-date
○ (base) anandagarwal@Anands-MacBook-Air Vinit_Lab15_Group02_Assingment2-main % █
```

2. Run

```
○ (base) anandagarwal@Anands-MacBook-Air Vinit_Lab15_Group02_Assingment2-main % gradle run
> Task :run
2024-10-18 20:34:31.724 java[70881:2775134] +[IMKClient subclass]: chose IMKClient_Modern
2024-10-18 20:34:31.724 java[70881:2775134] +[IMKInputSession subclass]: chose IMKInputSession_Modern
<=====--> 75% EXECUTING [18s]
> :run
█
```

3. Test

```
● (base) anandagarwal@Anands-MacBook-Air Vinit_Lab15_Group02_Assingment2-main % gradle test
Deprecated Gradle features were used in this build, making it incompatible with Gradle 9.0.
You can use '--warning-mode all' to show the individual deprecation warnings and determine if they come from your own scripts or plugins.
For more on this, please refer to https://docs.gradle.org/8.3/userguide/command_line_interface.html#sec:command_line_warnings in the Gradle documentation.
BUILD SUCCESSFUL in 398ms
5 actionable tasks: 5 up-to-date
○ (base) anandagarwal@Anands-MacBook-Air Vinit_Lab15_Group02_Assingment2-main % █
```

Project Board:

For this print we used the board effectively for our final sprint (Sprint 3). Our first meeting in the sprint allowed us to delegate tasks effectively and meant we knew exactly what had to be done and by who.

The project board is organized into three columns: TO DO 3, IN PROGRESS 4, and DONE 9. Each column contains several cards representing user stories or tasks. The cards include details such as the story text, a checkmark icon, the issue ID (e.g., SCRUM-51, SCRUM-45, SCRUM-19, SCRUM-42, SCRUM-47, SCRUM-29, SCRUM-27, SCRUM-31, SCRUM-62, SCRUM-53), the number of points (e.g., 2, 3, 4), and the assignee initials (e.g., NG, JC, AA, AD).

TO DO 3	IN PROGRESS 4	DONE 9
As a user, I should not be able to edit my ID key after I have made an account. SCRUM-51 2 NG	As a user, I want to preview scrolls before downloading them, So that I can check if the file is useful before downloading. SCROLL SEEKER (BROWSING & SEAR... SCRUM-29 3 JC	As a user, I want to be able to add scrolls with the same content with different names so that they aren't flagged as the same SCRUM-44 ✓ 3 AD
As a user, I want to be able to search by Uploader ID SCRUM-45 2 JC	As a user, I want to download scrolls from the platform, So that I can access the files locally on my device. SCROLL SEEKER (BROWSING & SEAR... SCRUM-27 4 NG	As an admin, I want to view upload/download statistics for each scroll, So that I can monitor the activity and usage of files in the system. ADMIN FEATURES SCRUM-31 ✓ 3 NG
As an admin, I want to view a list of users,So that I can manage user access to the system. USER MANAGEMENT SCRUM-19 3 AA	As a user, I want to be able to navigate back to the login/registration page from the scroll view page or user profile page. USER MANAGEMENT SCRUM-42 4 AA	As an admin, I want to add, So that I can manage user access to the system. ADMIN FEATURES SCRUM-62 ✓ 3 AA
+ Create issue	As a user, I want to be able to search by name SCRUM-47 2 JC	As an admin, I want to delete users, So that I can manage user access to the system. ADMIN FEATURES SCRUM-53 ✓ 3 AA
		As a user/admin, I want to be able to edit the files with any

Individual Contributions:

Nick

- Fixed binary fill editing to allow other characters such as letters and symbols.
- Implemented functionality so each scroll can have upload and download stats associated with that particular scroll
- Implemented functionality of the profile photo, users can now upload a profile photo that is stored in the account database.
- Implemented functionality so users could not change ID key after creating account
- Also did general bug fixing for various other features and improved functionality for other features implemented such as log file, admin responsibilities (adding and deleting files) and search features.
- Facilitated the role as the scrum master by delegating tasks, running stand ups, removing obstacles, tracking progress and Promoting collaboration.

Jainil

- Implemented the save feature for the scrolls, meaning any user except guest can save the scrolls to their system.

- Implemented the Search feature so that the user can search a user by Scroll ID, Scroll Name, Uploader Username, and Upload date.
- Did bug fixing for classes like Scroll Manger and Scroll so that the save feature runs smoothly.
- Made a final checkup on jenkins and accumulated the report.

Adhiraj

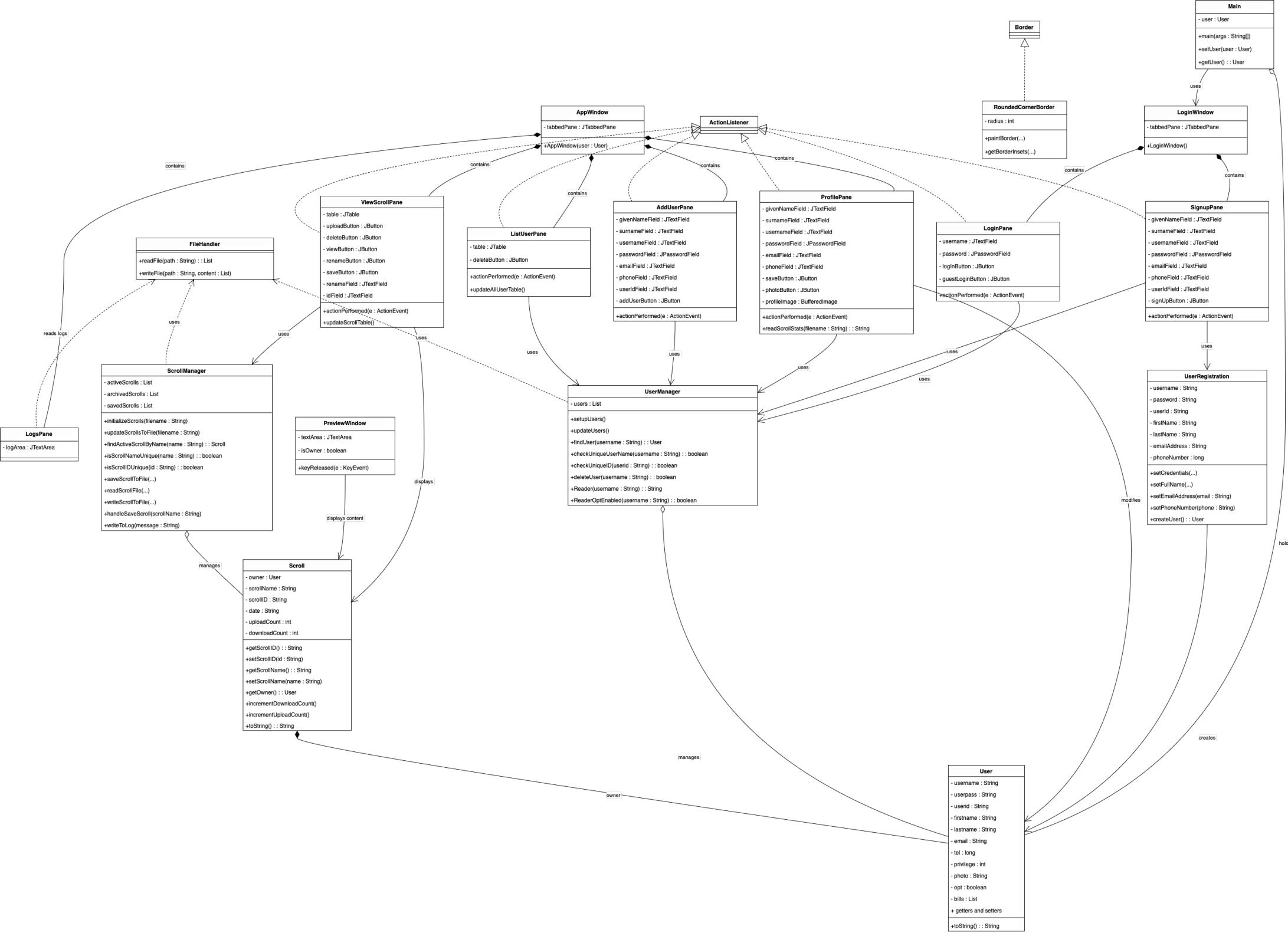
- Wrote test cases for all of the functionalities.
- Implemented stats feature for each Scroll with Nick
- Implemented profile photo feature with Nick
- Implemented Log file with Anand
- Collaborated with Jainil and Anand to do bug fixes and corrected failed tests during the testing part of the project.
- Helped document everything through the report

Anand:

- **User Management:** Adding admin and enabling features for the admin to view, add, and delete users.
- **Scroll Control:** Developed functionalities for the admin to monitor scroll uploads and manage scroll data
- **Task Logging:** Created a log file system that records every action users take, such as uploads, downloads, and edits.
- **Error Handling and System Events:** Included logging for system errors and events, ensuring a thorough record of application activity for debugging and audit purposes.
- **User-Friendly Navigation:** Designed a back button that allows users to toggle between pages, improving the application's navigation and user experience.
- **Context Preservation:** Ensured that data entered in forms and previous states are preserved when returning to earlier screens, minimising user disruption.
- **Backlog Prioritisation:** Actively managed the product backlog, setting priorities based on client requirements and aligning tasks with the team's development capacity.
- **Client management:** Engaged with the client to clarify requirements, address concerns, and provide updates, ensuring the development aligned with the client's evolving needs.
- **Report:** Giving the sprint goal and specifying the roles and responsibilities of every team member.
- **Edge Cases:** Made sure to add all edge cases and see if there were any incorrect user input without the correct error output to make sure the user understands what he is doing wrong.

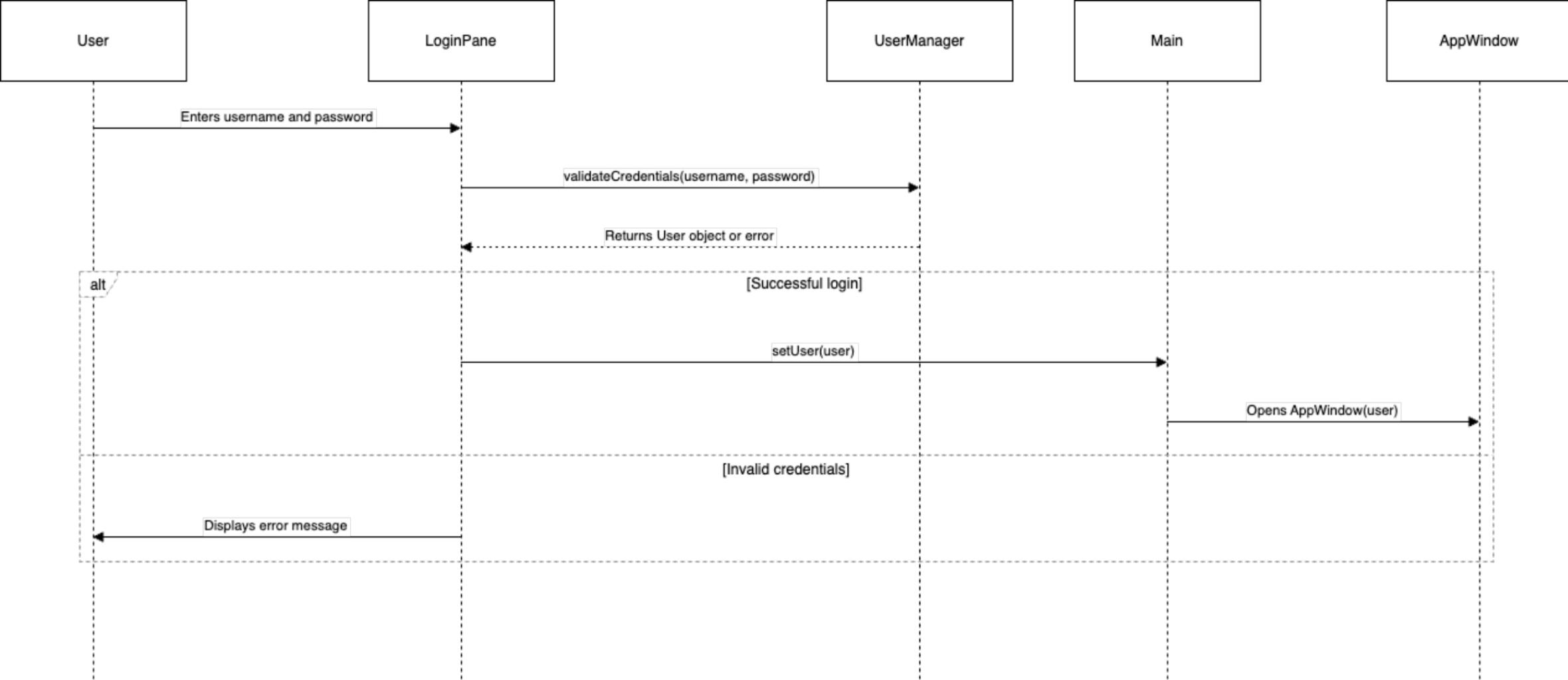
IMPORTANT DIAGRAMS:

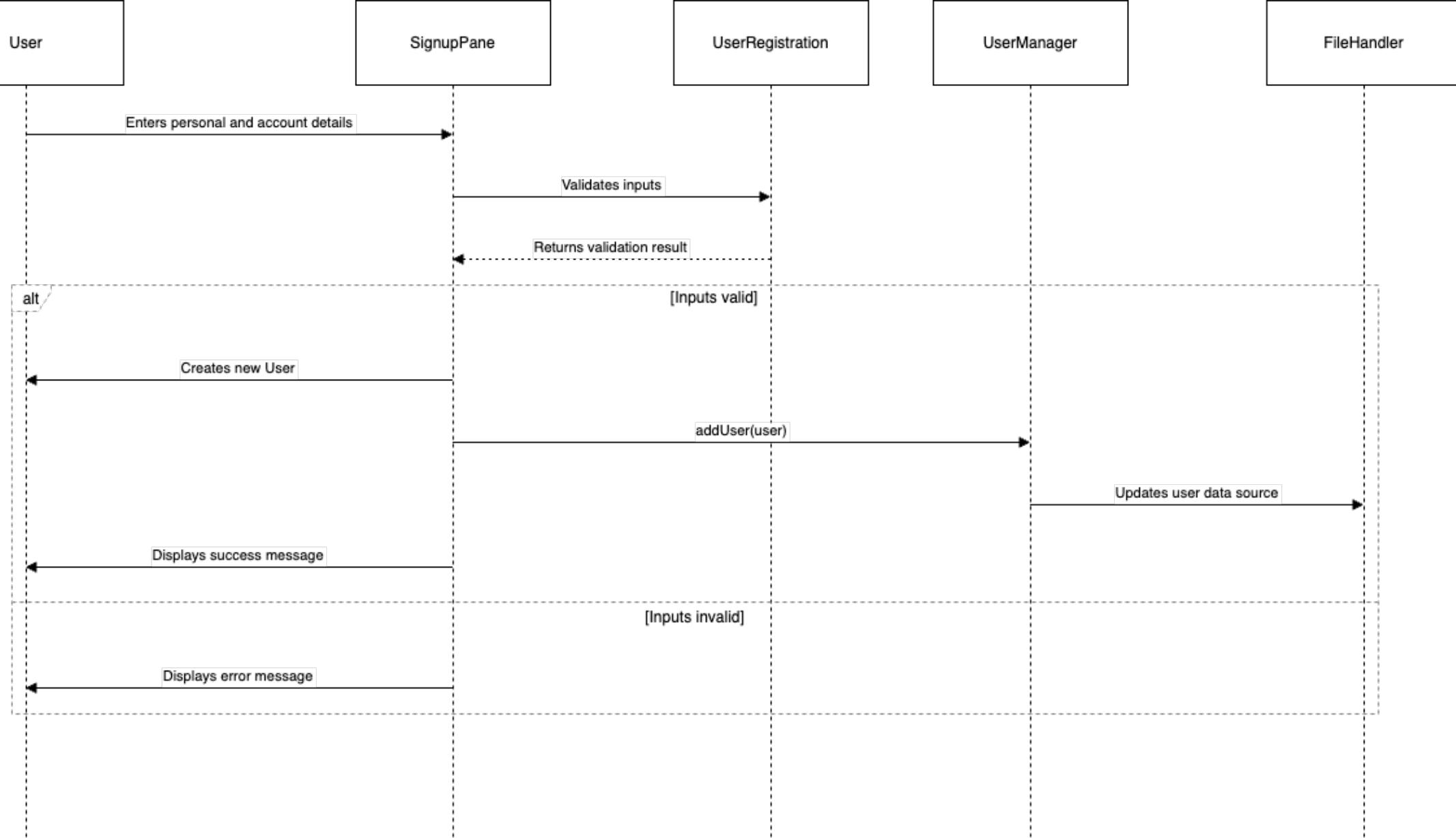
- 1. UML**
- 2. Sequence diagrams**
- 3. Data flow diagrams**

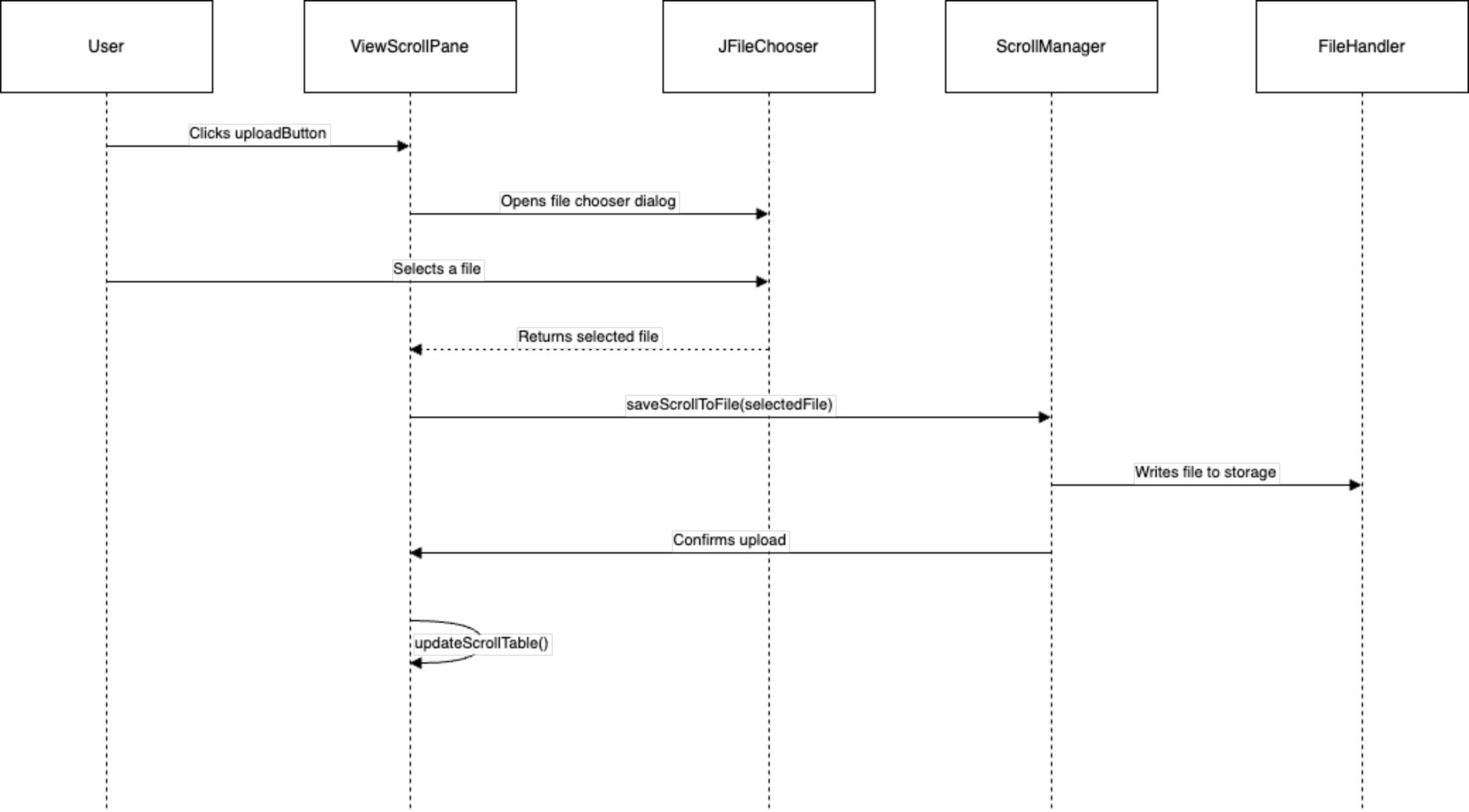


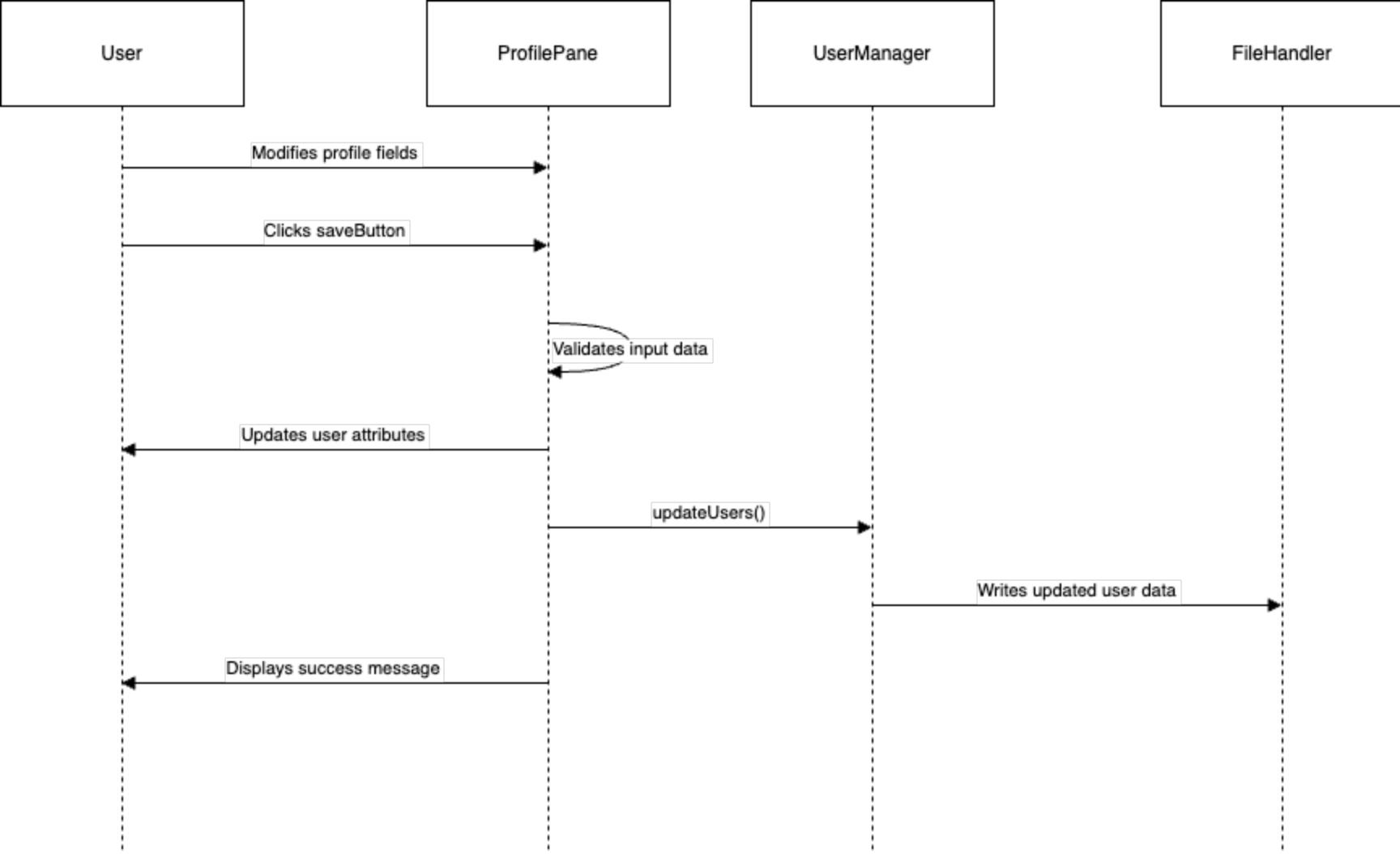
2. SEQUENCE DIAGRAMS:

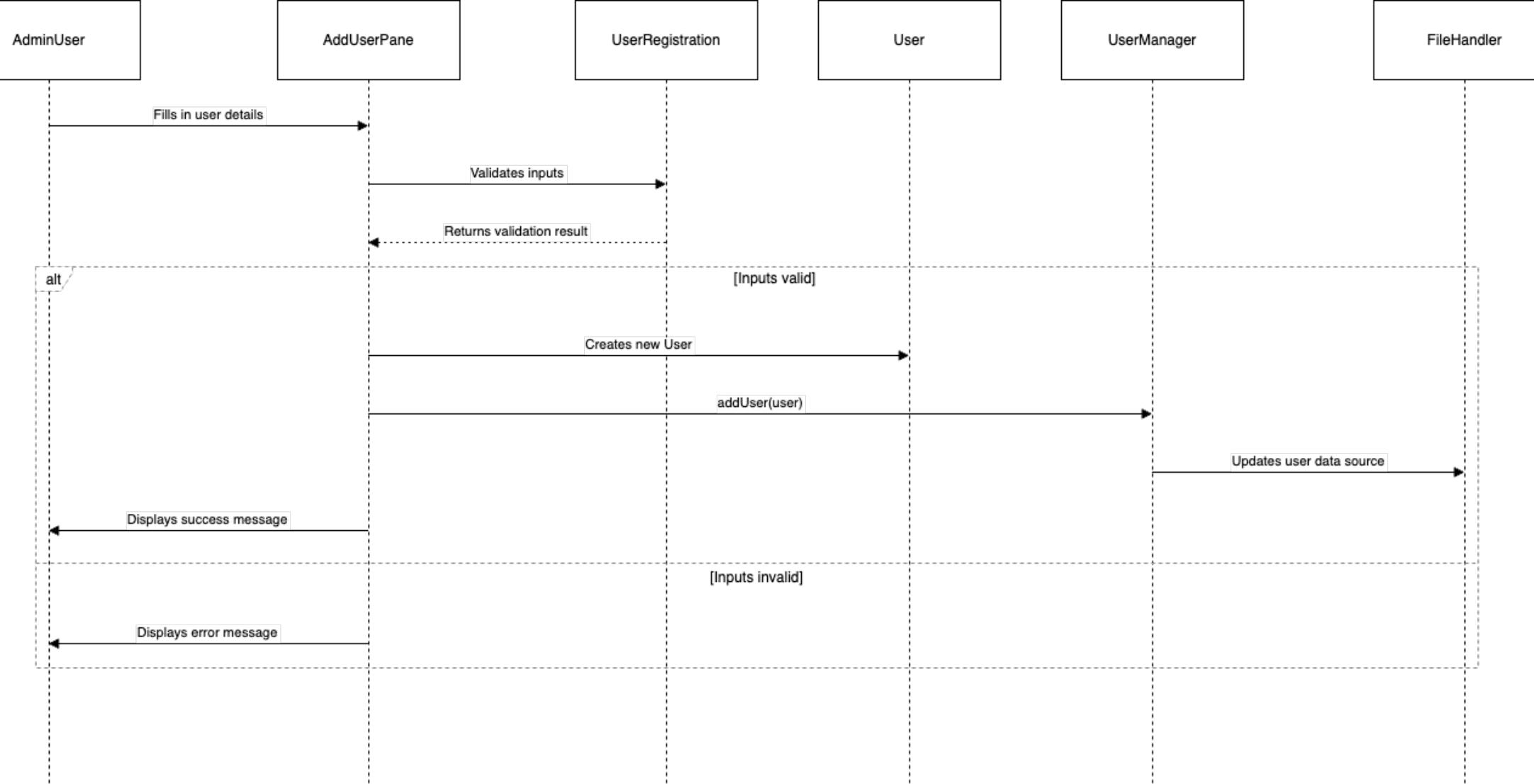
- 1. Login Process**
- 2. Signup Process**
- 3. Scroll Upload Process**
- 4. Profile Update**
- 5. Adding a new user as Admin**











3. Data Flow Diagram:

- 1. Login**
- 2. Sign Up**
- 3. Scroll Upload**
- 4. Profile Update**

Login Process

