SPRINT 2 - Group Name: Packet Sniffers

University of Roehampton London

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Group Members:

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Introduction

This report provides a comprehensive overview of the SkillSwap platform, a peer-to-peer skill exchange system that enables users to share and learn skills without monetary transactions. The platform allows users to post skills they can offer, search for matching skill exchanges, and communicate through an integrated messaging system. To ensure a smooth user experience, various design elements such as wireframes, use case diagrams, and activity diagrams have been developed. These visual representations help define the system's structure, user interactions, and overall workflow, assisting in both the design and development phases. This report details each of these components, ensuring clarity in understanding SkillSwap's core functionalities and user engagement processes for our intended readers to understand.
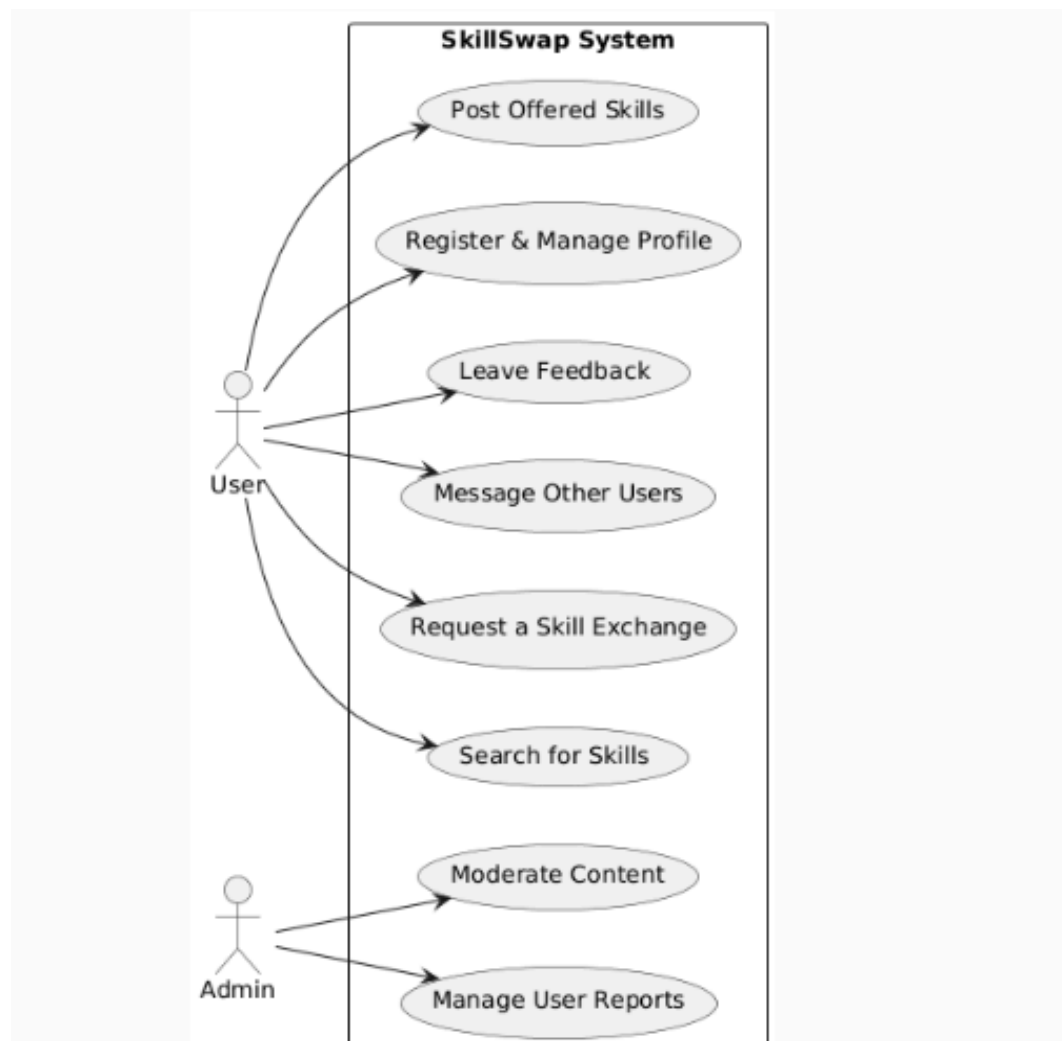
USE CASE DIAGRAM

Figure 1

Figure 1 or the Use Case Diagram for SkillSwap provides a high-level visualization of how different users interact with the platform's core functionalities. It outlines the main actors—Registered Users and Guests—and their interactions with key system components, such as User Registration, Skill Posting, Skill Matching, Messaging, and Profile Management. Registered users can post skills, search for matches, send messages, and manage their profiles, while guests have limited access, primarily to browsing available skill listings. The diagram also highlights future expansions, such as a reputation system for user feedback and verification. By mapping out these interactions, the Use Case Diagram ensures that all essential user workflows are accounted for, helping developers structure the platform's functionality and identify key system requirements early in the development process.

FEATURES AS USER STORIES

In order to demonstrate the qualities that Skillswap possess it is important to see how certain scenarios play out from a technical and non technical perspective in order to allow us to maximise efficiency of our system as well as customer satisfaction.

Skill Matching System

User Story 1 – *Search for Skills*

- As a user, I want to search for available skills, so that I can find relevant people to swap skills with.
- **Acceptance Criteria:**
  - Users can enter a skill name in the search bar.
  - The system displays relevant results based on the query.
  - Users can filter results by category, location, or rating.

User Story 2 – *Receive Skill Recommendations*

- As a user, I want to see suggested skill swap matches, so that I can easily find relevant people to exchange skills with.

- Acceptance Criteria:
  - The system recommends matches based on my listed skills.
  - Each match includes the user's profile, offered skill, and requested skill.
  - I can click "Connect" to message the user.

Messaging System

User Story 3 – *Send and Receive Messages*

- As a user, I want to message another user, so that I can discuss skill exchange details.

- Acceptance Criteria:
  - Users can open a chat with a matched user.
  - Messages are displayed in a conversation format.
  - Users can send text messages and receive real-time responses.

User Story 4 – *Check Online Status*

- As a user, I want to see if a user is online, so that I know if I can expect a quick response.

- Acceptance Criteria:
  - Each user's status (Online/Offline) is displayed in the chat.
  - The status updates dynamically when a user logs in or out.

Skill Posting & Profile Management

User Story 5 – *Post a Skill Swap Listing*

- As a user, I want to post a skill that I can offer and a skill I want to learn, so that I can find people for skill exchange.

- Acceptance Criteria:
  - Users can enter an offered skill and a requested skill.
  - Users can provide a description of what they can teach.
  - Users can set availability and submit the post.

User Story 6 – *Edit or Delete a Skill Post*

- As a user, I want to edit or delete my skill post, so that I can update my availability or remove old posts.

- Acceptance Criteria:
  - Users can view all their posted skills.
  - Users can update skill details and availability.
  - Users can delete a post if they no longer want to offer that skill.

SPRINT 3 SPECIFICATIONS

User Management Stories

User Registration

As a new user, I want to create an account so that I can access the platform.

Acceptance Criteria:

- ○ A registration form is available.
- ○ User details are stored in the database.
- ○ Confirmation message is displayed upon successful registration.

User Login

As a registered user, I want to log in securely so that I can access my profile and listings.

Acceptance Criteria:

- ○ Login page with email/password fields.
- ○ Authentication using session-based login.
- ○ Error message for incorrect credentials.

View Users List

As an admin/user, I want to see a list of all registered users so that I can find people to interact with.

Acceptance Criteria:

- ○ Users are displayed in a list format.
- ○ Data is fetched from MySQL database.
- ○ Pagination for better performance.

View User Profile

As a user, I want to view my profile and edit my details so that my information is accurate.

Acceptance Criteria:

- ● Profile page displays user information.
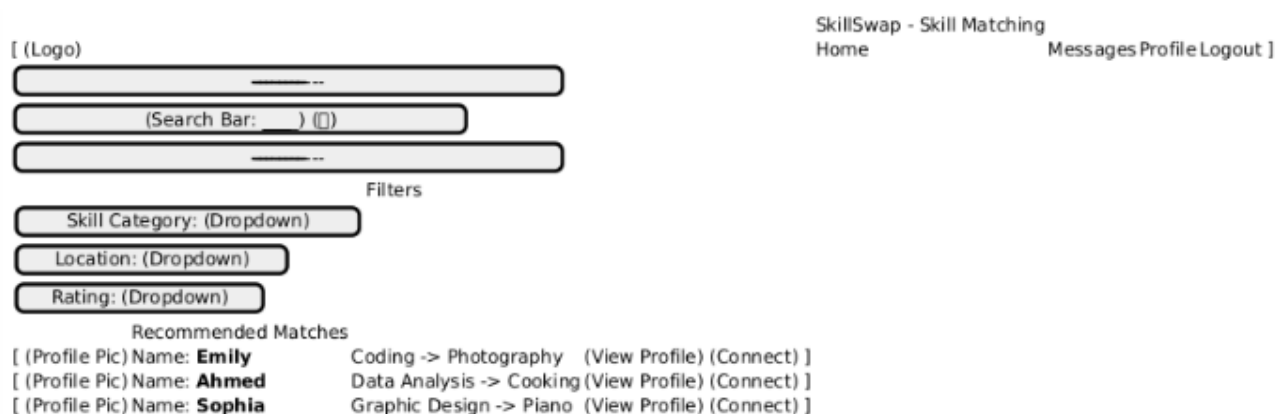- ● Edit button allows changes to user details.

WIREFRAMES

The wireframes for SkillSwap serve as a visual representation of the platform's core functionalities, ensuring a user-friendly experience. Three key wireframes were designed: the Skill Matching Page, the Messaging Interface, and the Skill Posting Form. The Skill

Matching Page allows users to search for skill exchange opportunities, view recommended matches, and filter results based on categories, location, or user ratings. The Messaging Interface facilitates seamless communication between users, featuring a conversation list, real-time chat, and status indicators. Lastly, the Skill Posting Form enables users to list the skills they offer and request, with structured input fields, category selection, and availability options. These wireframes provide a foundation for the platform's user experience (UX) design, helping developers and stakeholders visualize the system's structure before full implementation.

Skill Matching Page

*The Skill Matching Page is designed to help users discover skill exchange opportunities efficiently. It features a search bar that allows users to look for specific skills and a filter panel where they can narrow down results based on skill category, location, and user ratings. The main section of the page displays recommended matches, listing users who have relevant skills to exchange. Each match includes the user's profile picture, name, skill offered, skill requested, and action buttons for viewing the profile or initiating a connection. This layout ensures that users can quickly find suitable partners for skill swapping, improving the overall matchmaking exp*erience.

```
[ (Logo)                                          SkillSwap - Skill Matching
                                                  Home                Messages Profile Logout ]
 _____
(_____—__-_____)
(_____(Search Bar: ___) ([])__)
(_____—__-_____)
                    Filters
( Skill Category: (Dropdown) )
( Location: (Dropdown) )
( Rating: (Dropdown) )
              Recommended Matches
[ (Profile Pic) Name: Emily      Coding -> Photography   (View Profile) (Connect) ]
[ (Profile Pic) Name: Ahmed      Data Analysis -> Cooking (View Profile) (Connect) ]
[ (Profile Pic) Name: Sophia     Graphic Design -> Piano  (View Profile) (Connect) ]
```

2. Messaging Interface

The Messaging Interface enables seamless communication between users who have matched for a skill exchange. On the left side, a conversation list displays all ongoing chats, including the profile picture, user name, last message preview, and online/offline status indicators. The main chat window shows the selected conversation in a structured chat bubble format, making it easy to follow discussions. At the bottom, there is a message input field with options to attach files and send messages. This interface ensures that users can effectively coordinate skill exchange sessions, ask questions, and share relevant learning materials in real-time.

Post a Skill Exchange

```
[            ———-            ]
[  Skill Offered: (Dropdown)  ]
[  Skill Requested: (Dropdown)  ]
[  Description: (Multi-line Textbox)  ]
[            ———-            ]
[  Category: (Dropdown: Tech, Art, Fitness)  ]
[  Availability: (Checkboxes: Mon, Tue, Wed...)  ]
[            ———-            ]
[  (⬚ Upload Image) (⬚ Preview)  ]
[  (Submit ⬚)  ]
```

3. Skill Posting Form

The Skill Posting Form allows users to create a listing for the skills they offer and the skills they wish to learn. It includes input fields for "Skill Offered" and "Skill Requested", along with a description box for users to provide more details. Users can also select a category (such as Tech, Arts, Fitness, or Languages) and set their availability using checkboxes for different days of the week. Additional features include an image upload option for profile or skill-related visuals and a preview button to review the listing before submission. This structured approach ensures that listings contain all necessary details, making it easier for users to find relevant matches.

Messages - Chat
Messages   (New Chat)]

```
[ (Back)
[            ———            ]
          Conversation List
[ (⬚) Emily   Last message preview... (⬚ Online) ]
[ (⬚) Ahmed Last message preview... (⬚ Offline) ]
[ (⬚) Sophia Last message preview... (⬚ Online) ]
[            ———            ]
```

Chat Window

```
[  Emily (Online)  ]
[            ———-            ]
[  (Emily: Hello! Interested in coding?)  ]
[  (You: Yes! When can we start?)  ]
[            ———            ]
[  (Attach ⬚)  (Type a message...) (Send ⬚)  ]
```
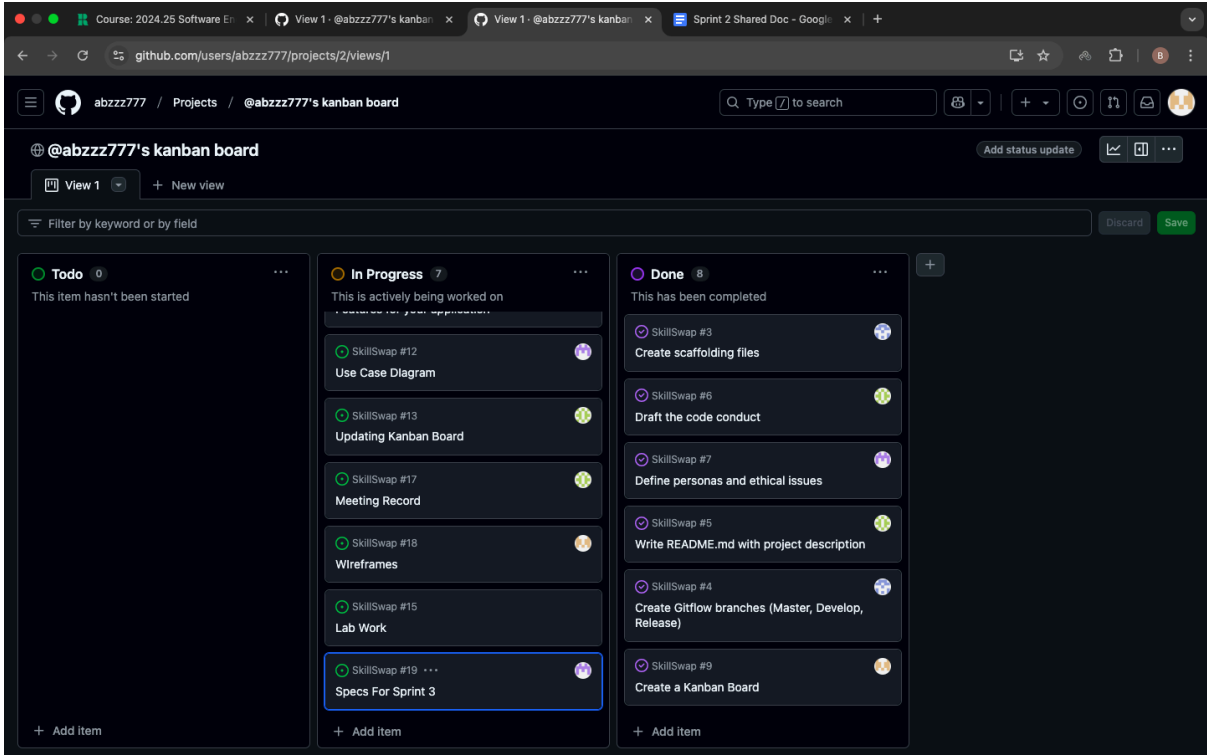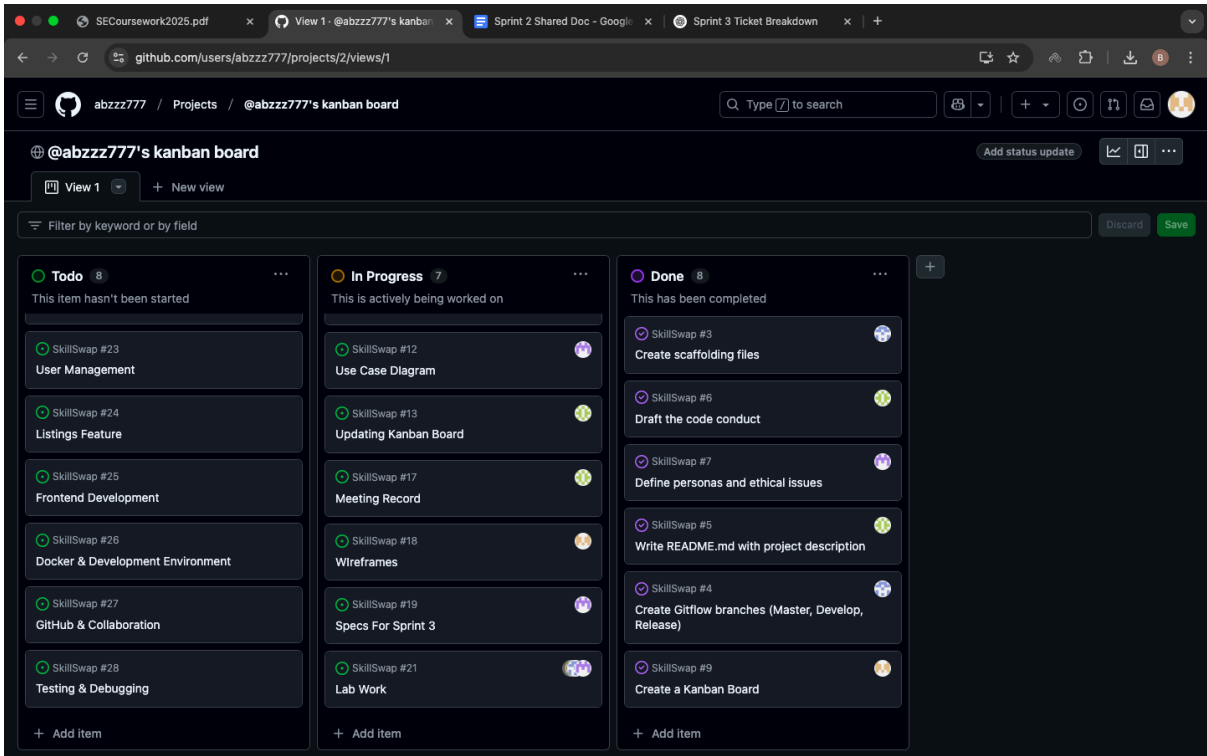
These wireframes establish the foundation for SkillSwap's user interface (UI) and user experience (UX), ensuring smooth navigation and effective interactions between users. They will guide the development process and help in refining the platform's design based on user feedback.

ACTIVITY DIAGRAM
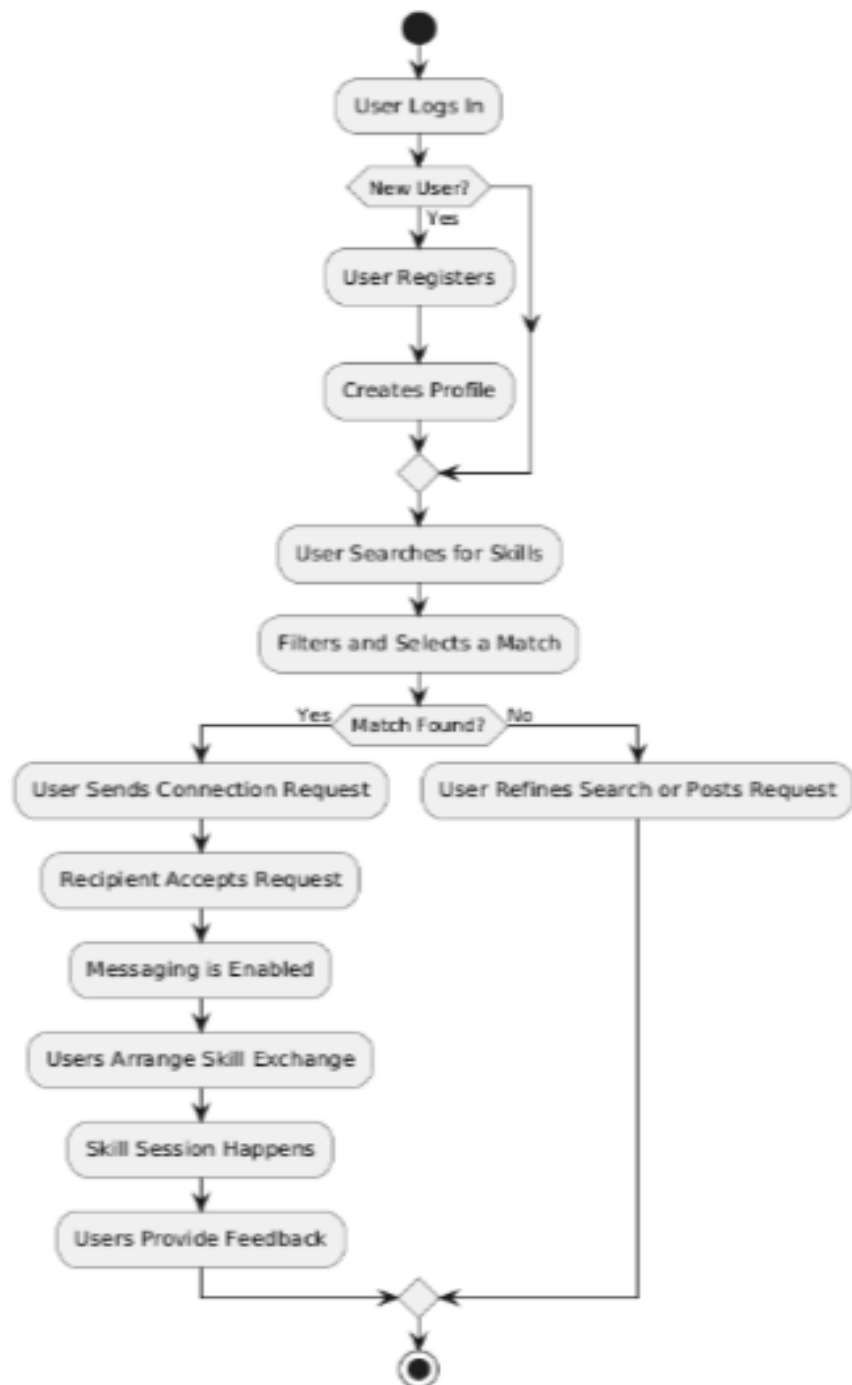
KANBAN BOARD & MEETING RECORD SCREENSHOTS

Meeting Minutes

| Date and Time	21/02/2025 14:00 To 18:00
Project Name	Skill Swap
Meeting Goal	• Complete Sprint 2 • Get up to date with Lab work • Plan the start of development
Facilitator	Abdalla Ali
Note taker	Omar Akram
Attendees	**Omar Akram, Abdalla Ali, Samatar Warsama and Luqmaan Ahmed**
Roundtable Updates (each group member to contribute)	• All Lab work up to date • Meeting Record Completed • Kanban board Updated • Preparations to start development
Discussion points	**Devleopment of Application and Sprint 3**

Actions (list tasks and assign a group member)	Kanban Board – Abdalla Ali Meeting Records – Omar Akram User Stories – Samatar Warsama Soint 3 preparations- Luqmaan Ahmed

SPRINT 2 SUBMISSION CHECKLIST
- Features for your application defined as user stories
- Use case diagram
- Sprint 3 specification prepared with at least: user stories wireframes, activity diagrams.
- Other artefacts may be included such as sequence diagrams, ERD diagram, class diagram, designs, colour schemes
- Sprint 3 tickets prepared on your Kanban board
- A screenshot of your Kanban board
- All students up to date with lab work and ready to start development
- Meeting records completed

Summary

Following the checklist we explored the key structural components of the SkillSwap platform, including wireframes, use case diagrams, and activity diagrams, which serve as blueprints for system development. The wireframes outlined the user interface for skill matching, messaging, and skill posting, ensuring an intuitive design. The use case diagram illustrated user interactions, detailing how different types of users engage with the system. The activity diagram mapped out the step-by-step workflow of a typical skill exchange process, from searching for a skill to completing a session and providing feedback. Together, these components provide a clear roadmap for development, enhancing the user experience and functionality of SkillSwap.
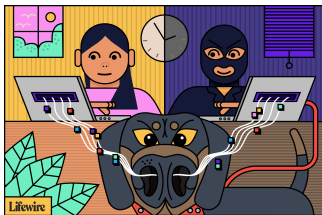
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