

COURSEWORK 1: DESIGN PORTFOLIO

INTRODUCTION

In a world where digital platforms increasingly connect communities, Exchange Bridge defines the model of skill and service exchanges with a combination of traditional exchanges and a flexible, user-centered approach to engagement. Unlike most other existing platforms, which lean toward a sole reliance on direct barter or very limited credit-based models, Exchange Bridge is designed to fill in the gaps of these platforms with their apparent inability to fulfill the potential due to their rigid transaction models. It provides the user with a flexible, inclusive approach in order to support continuous engagement and allows for a much wider range of users, from those needing immediate services to those contributing over time.

Exchange Bridge has a unique offering in that users can share skills or services without intermediaries, with the possibility of earning and spending EBCoins - the virtual currency of the application. This flexibility supports both immediate exchanges and the possibility of saving coins for future needs, creating a dynamic and inclusive environment (Preece, Rogers, & Sharp, 2002). Based on social capital theories, defining "Connections among individuals' social networks and the norms of reciprocity and trustworthiness that arise from them" (Putnam, 2000), Exchange Bridge allows for continued engagement through both individual choice and community-led interactions.


EBCoins play the central role in enhancing users' motivation. Based on gamification research showing that point-based systems increase engagement and satisfaction (Hamari & Koivisto, 2015; Deterding et al., 2011), this app leverages virtual currency to offer users the flexibility to request services even when immediate reciprocity isn't possible. This method accommodates a broad spectrum of users, ensuring that everyone can actively participate regardless of available resources at any given time. Additionally, the platform encourages social interaction and community trust through visible profiles, user ratings, and transparent feedback, which align with HCI principles of promoting clarity and ease of use (Norman, 1987).

While many platforms pose user inflexibility with rigid frameworks, Exchange Bridge offers personalization and accessibility. Customizable settings allow users to modify the language, visual display, and notifications in a system aligned with universal UX design principles and promoting inclusivity (Pereyra, 2023). It thus becomes very easy for diversified users to navigate the site and fostering a sense of belonging and empowerment (Buzan, 2006).

What further differentiates this app is its focus on collaborative projects, bringing users together around common goals, such as community workshops or group-led initiatives. Facilitating individual exchanges alongside such collective efforts, the app encourages users to form meaningful bonds with one another, therefore tightening community bonds in the virtual space (Rheingold, 2000; Resnick & Zeckhauser, 2002). Lastly, Exchange Bridge offers a space of freedom and cooperation and, in so doing, sets a new standard for community-centered digital architecture.

PERSONAS

Two diverse personas have been identified and the details are as follows

<div data-bbox="408 360 799 448">Persona 1</div> <div data-bbox="164 445 518 801"></div> <p>Name: Gabriel Bernard</p> <p>Type of Persona/User: Single Father and Chef from France</p> <p>Age: 34</p> <p>Occupation: Chef at a Restaurant</p> <p>Other relevant demographics: Recently moved to the UK with two children: a 4-year-old son and a 6-year-old daughter.</p>	<p>Likes:</p> <ul style="list-style-type: none">• Enjoys cooking and sharing his French culture through lessons.• Prefers simple, practical solutions that save time and effort.• Values safety and reliability when it comes to his children.• Help people with physical work like lifting heavy things, home repair assistance etc., <p>Dislikes:</p> <ul style="list-style-type: none">• Complicated technology or apps with too many steps.• Unreliable service providers or babysitters.• Language barriers that make communication difficult.• Formal, expensive English classes that don't fit his schedule. <p>Goals & Tasks:</p> <ul style="list-style-type: none">• Improve his English to integrate better into the community and advance his career.• Find reliable and affordable babysitting services so he can attend English classes and work.• Use his French cooking skills to offer lessons and earn EBcoins for babysitting or other services.
<p>Stressors & Motivations:</p> <ul style="list-style-type: none">• Stressed by juggling work, learning English, and raising his children alone.• Motivated to learn English to improve his career prospects and help his children succeed in their new environment. <p>Pain Points:</p> <ul style="list-style-type: none">• Difficulty in finding trustworthy, affordable babysitters.• Language barriers making it hard to navigate life in the UK.	

- Limited time to balance learning, work, and family.

Needs & Expectations:

- Needs a user-friendly app interface, ideally in French, to navigate easily.
- Expects reliable babysitting services and a system that ensures his children's safety.
- Hopes for a simple, efficient process to book services.

Persona 2



Name: Kamala Kumar

Type of Persona/User: Retired English Professor, Mentorship Enthusiast

Age: 68

Occupation: Retired English Professor

Other relevant demographics: Indian origin, moved to the UK as a child, uses a wheelchair due to physical limitations.

Likes:

- Passionate about teaching English and mentoring young people.
- Enjoys discussing and teaching Indian culture.
- Loves helping others with their career paths and providing life advice.

Dislikes:

- Complicated or inaccessible apps and technology.
- Unreliable or inconsistent help for physical tasks.
- Insufficient opportunities for continued teaching and mentoring.

Goals & Tasks:

- Stay active and engaged through teaching English and mentoring young professionals.
- Receive reliable assistance with lifting heavy items at home.
- Donate EBcoins to community projects or students in need.

Stressors & Motivations:

- Stressed by her physical limitations and difficulty managing some daily activities.
- Motivated to stay connected and active in the community by sharing her knowledge and helping young people.

<p>Pain Points:</p> <ul style="list-style-type: none"> • Difficulty managing technology for daily tasks and relying on others for assistance. • Limited access to consistent and reliable help for heavy-lifting tasks. • Lack of opportunities to pass on her knowledge to younger generations. <p>Needs & Expectations:</p> <ul style="list-style-type: none"> • Needs an accessible, easy-to-use app interface with large text for readability and high-contrast options to accommodate visual impairments. • Expects trustworthy help and a consistent way to book assistance for tasks like lifting or moving items. • Hopes to gain fulfillment by teaching English and sharing her cultural knowledge while earning EBcoins to support community causes. 	
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SCENARIO


Gabriel is eager to improve his English language skills so using Exchange Bridge, he finds Kamala, a retired English professor who offers English tutoring sessions. Gabriel explores Kamala's profile, noting her positive reviews and availability, which seems compatible with his own. He sends a request for her tutoring service.

Kamala receives Gabriel's request and sees his genuine need to learn English to better support his children and advance his career. She's interested in helping him but has sudden commitments. She reviews her current schedule and considers how she might work around her appointments to accommodate Gabriel. In exchange for her future tutoring, Gabriel has accepted the offer to assist Kamala with heavy snow clearing in the winter, a task challenging for her due to mobility limitations.

Meanwhile, both Gabriel and Kamala attend a community event organized through the app, where he leads a French cooking session. Along with other community members, Kamala, who has a passion for cooking, participates to learn new recipes. This exchange reinforces the community support and learning ethos fostered by Exchange Bridge.

The personas of Gabriel and Kamala were chosen to represent diverse backgrounds, needs, and capabilities, reflecting real-world community dynamics. Gabriel, a single father new to the UK, highlights the challenges of adapting to a new language and culture. Kamala, a retired professor with


mobility limitations, showcases the value of lifelong learning and mentoring within communities. Setting the scenario in one-on-one and in community event fosters inclusivity and mutual support, where individuals share skills, strengthening social bonds and enhancing user engagement.


Exchange Bridge

LOGIN

Email

Password





[Forgot Password?](#)

Log in

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

OR

 Continue with Google

 Continue with Facebook


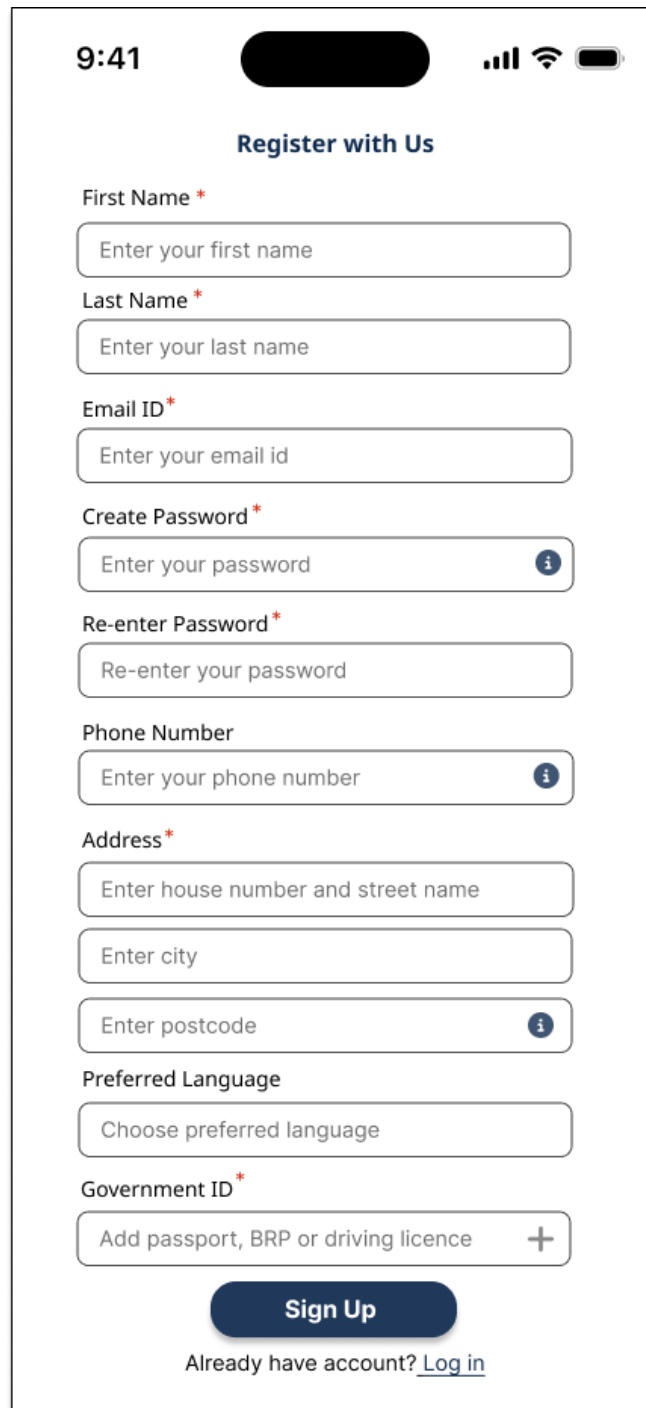
 Continue with Apple

Figure 1.1: Login Page

The Exchange Bridge login screen, as illustrated in (*see Figure 3.1*), is designed with usability and accessibility at its core, following Nielsen's Usability Heuristics for user-friendly design. It includes essential/mandatory fields: email and password, with clear labels, supporting **recognition rather than recall** by reminding users of the required input. The “eye” icon next to the password field adheres to the **visibility of system status** principle, allowing users to confirm their entry for accuracy (Nielsen, 1995).

The “Forgot Password?” link enhances **error recovery** by enabling users to retrieve access easily if credentials are forgotten, supporting user control and freedom. For new users, a “Sign up” link below directs them to account creation, accommodating **flexibility** for both new and returning users.

The inclusion of multiple login options, such as Google, Facebook, and Apple, caters to diverse user preferences and minimizes effort by offering familiar sign-in choices (Norman’s principles of **affordance** and **user control**). Following aesthetic and minimalist design, the interface is uncluttered, focusing solely on login essentials to enhance user experience and adherence to PACT’s user-centered design principles.

A mobile application registration screen with a white background and rounded corners. At the top, a status bar shows the time 9:41, a black pill-shaped notch, and icons for cellular signal, Wi-Fi, and battery. The title 'Register with Us' is centered in a dark blue font. Below it, several form fields are arranged vertically. Fields for 'First Name', 'Last Name', 'Email ID', 'Create Password', 'Re-enter Password', 'Phone Number', and 'Address' are each preceded by a label with a red asterisk. The 'Address' field is split into three sub-fields: 'Enter house number and street name', 'Enter city', and 'Enter postcode'. The 'Preferred Language' field has a label without an asterisk and a dropdown menu. The 'Government ID' field has a label with an asterisk and a button with a plus sign. A dark blue 'Sign Up' button is centered at the bottom, with a link 'Already have account? Log in' below it.

9:41

Register with Us

First Name *

Enter your first name

Last Name *

Enter your last name

Email ID *

Enter your email id

Create Password *

Enter your password

Re-enter Password *

Re-enter your password

Phone Number

Enter your phone number

Address *

Enter house number and street name

Enter city

Enter postcode

Preferred Language

Choose preferred language

Government ID *

Add passport, BRP or driving licence

Sign Up

Already have account? [Log in](#)

Figure 3.2: Registration Page

The registration screen (*see Figure 3.2*), is crafted to prioritize clarity and ease of use. Key fields such as First Name, Email ID, and Password are highlighted with asterisks, making it clear that they are mandatory, following Fitts' Law for optimized user interaction. The password confirmation field enhances user confidence by reducing errors. Contextual information icons next to fields provide supportive guidance, enabling users to input data correctly without cluttering the interface, following **Progressive Disclosure** principles. The Preferred Language dropdown improves personalization,

ensuring inclusivity and user comfort, particularly beneficial for non-native speakers. Additionally, the Government ID section allows flexibility, offering users options to select from familiar documents, which is used for background verification which adds a layer of security. The Sign Up button is designed with affordance in mind, prominent and intuitively located for final action. This button at the bottom **reduces decision fatigue**, following Hick's Law, while a Login link below maintains navigation consistency, as outlined in Interaction Design Standards by the Department for Education.

Both the Login and Registration screens streamlined design supports efficiency by enabling quick login or registration, enhancing user satisfaction through a secure, intuitive process. UX goals like accessibility are met with options for two-factor authentication, addressing security needs effectively.

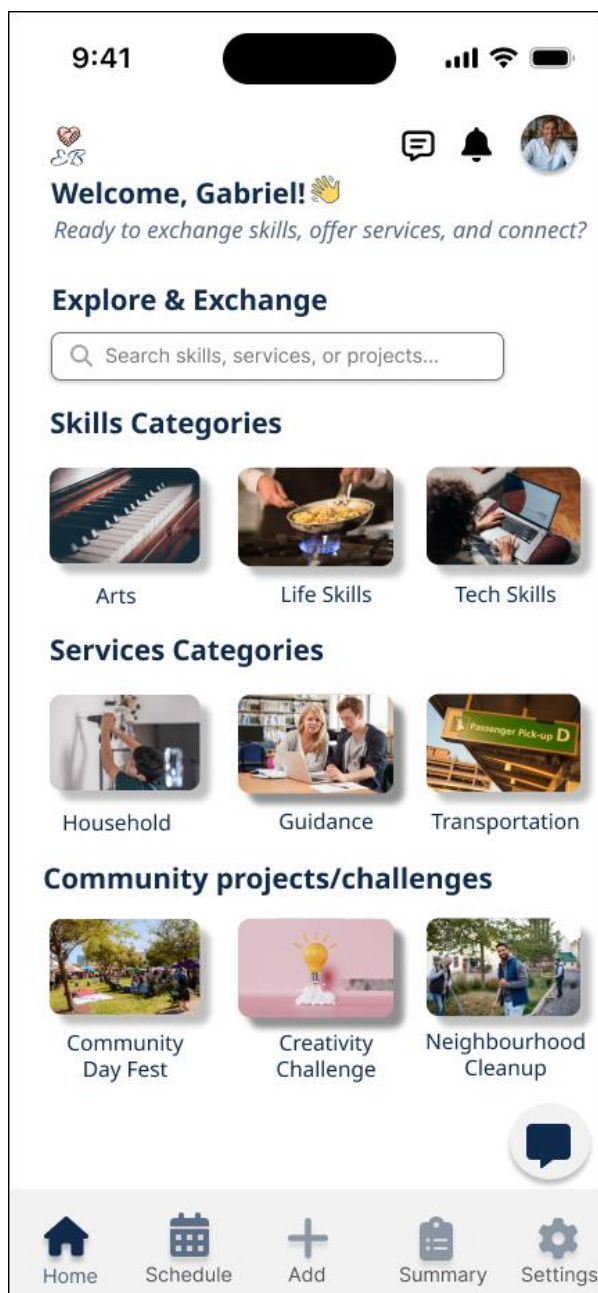


Figure 3.3: Home Page

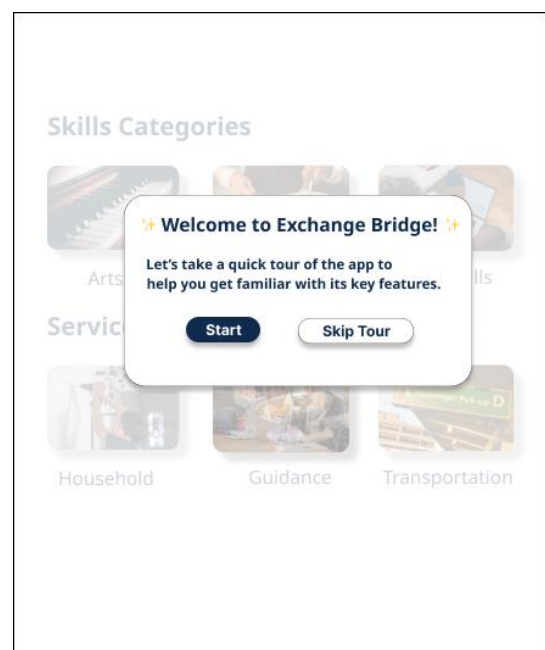


Figure 3.3(a): Welcome Tour pop-up



Figure 3.3(b): Life Skills Category

The app's onboarding flow begins with a welcome tour popup (*see Figure 3.3(a)*) on the home screen, which introduces users to core app features. This feature aids **user familiarity** without overwhelming. Users can choose "Start" to explore or "Skip Tour," supporting **user control** and **freedom** (Nielsen's Heuristics).

The home screen, titled "Explore & Exchange" (*see Figure 3.3*), presents Skills Categories, Services Categories, and Community Projects/Challenges. Visual icons for each category, like Arts for skills and Household for services, enhance recognition over recall by offering clear, relatable visuals. This structure aligns with Millers Law by limiting information into **manageable chunks**, improving ease of navigation.

Clicking on a category leads to a dedicated page as represented in (*see Figure 3.3(b)*), for that category, for example, clicking on Life Skills leads to a page showcasing sub-skills such as Cooking and Finance in a visually appealing layout. The design prioritizes **clarity** and **accessibility**, ensuring users can locate relevant skills intuitively. By categorizing information this way, the app helps enhance engagement and usability through a seamless experience tailored to diverse user needs.

The floating action message button at the bottom-right enhances user experience by providing immediate access to support with one tap, thanks to its distinct positioning based on the Law of Proximity. This design prioritizes user needs and maintains a minimalist interface, reducing screen clutter and ensuring seamless navigation for users.

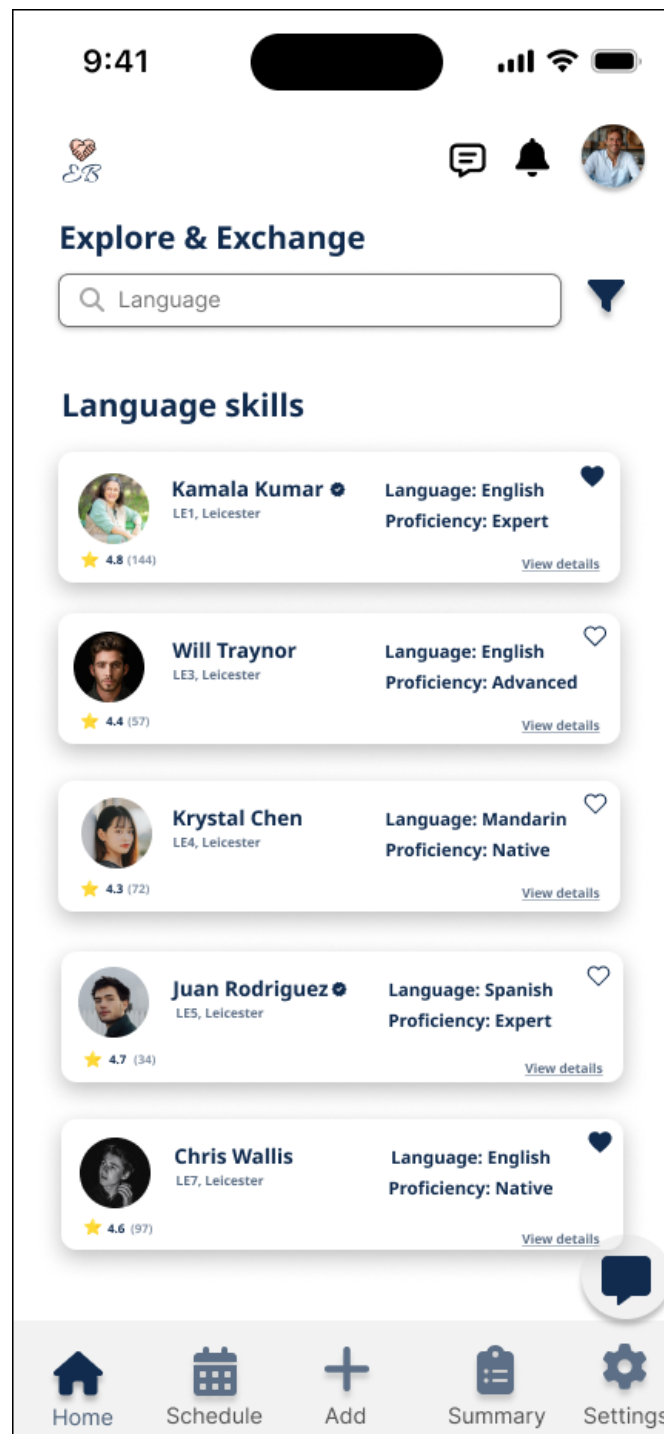






Figure 3.4: Search Results Page


The Search Results page as illustrated in (see Figure 3.4) is designed to enable users to search for tutors easily by typing in the search bar or using the filter option to refine their choices. Each tutor card presents essential information: name with background verified symbol (if the background verification process is completed) (see Figure 3.9(b)), location, proficiency level, rating, and favourite icon, in a structured format, aligning with Miller's Law by grouping information to prevent overwhelming the user. The use of clear labels and icons reduces the need for users to remember details, minimizing **cognitive load** by allowing them to **quickly recognize** and **process** information



without overthinking. This approach supports Don Norman's **principle of affordance**, making the selection process intuitive and efficient.

9:41



About Tutor



Kamala Kumar 
Ret'd English Professor
Empowering learners, one session at a time.
Expert English Tutor
LE1, Leicester [View on map](#) 

★★★★★

Session Information

Title
English Tutoring for Beginners

Objective
By the end of this series of sessions, gain fluency and confidence in everyday conversations while mastering essential grammar and vocabulary.

Available Days and Times

☐ Wednesday : 5.00 PM - 6.00 PM
☒ Saturday : 2.00 PM - 4.00 PM
☒ Sunday : 3.00 PM - 5.00 PM


Session Mode

☒ In-person
☐ Online

Exchange Format
Service - Help in heavy snow removal activities in the yard.

Note from Tutor
Sessions are interactive and tailored to your needs. Bring a notebook. For flexible scheduling, drop a message.

Student Testimonial





"Kamala's sessions transformed my confidence and fluency in English, making a real difference."


Leave a message


Add to favourites

Request

 Home

 Schedule

 Add

 Summary


 Settings

Figure 3.5: About Tutor/User Page

Confirm Request?

Requested Date/Time
Saturday : 2.00 PM - 4.00 PM
Sunday : 3.00 PM - 5.00 PM

Requested Mode of Session
In-person

Add a Note

Looking forward to improving my English skills! Can we focus on daily scenarios

☒ Make this a recurring event

☒ Send session remainder if request accepted

Cancel

Confirm

Figure 3.5(a): Confirm Request pop-up

The session detail page (*see Figure 3.5*), on the app is designed for clarity and efficiency. Using Don Norman's Principles of Design, the screen achieves **visibility** by clearly displaying essential information such as session title, objectives, available days, session mode, and an exchange format. Users can quickly identify their options and navigate without confusion, as each section is well-labeled, fulfilling the **mapping** principle. The student testimonial at the bottom adds social proof, enhancing **trust** and **emotional satisfaction**, aligning with UX goals for positive user experience.

The "Confirm Request" overlay, as depicted in (*see Figure 3.5(a)*), aligns with Nielsen's Usability Heuristics of **error recognition** and **recovery** by enabling users to double-check their selections such as date, time, and session mode before finalizing. This overlay minimizes the risk of mistakes by allowing users to review and correct information, thereby reducing potential errors. Additionally, it supports **reasonable user control** and **freedom**, as users have the option to cancel and return to the session details screen if adjustments are necessary. By incorporating these design principles, the app fosters a sense of control and confidence, reducing frustration and enhancing the overall user experience.

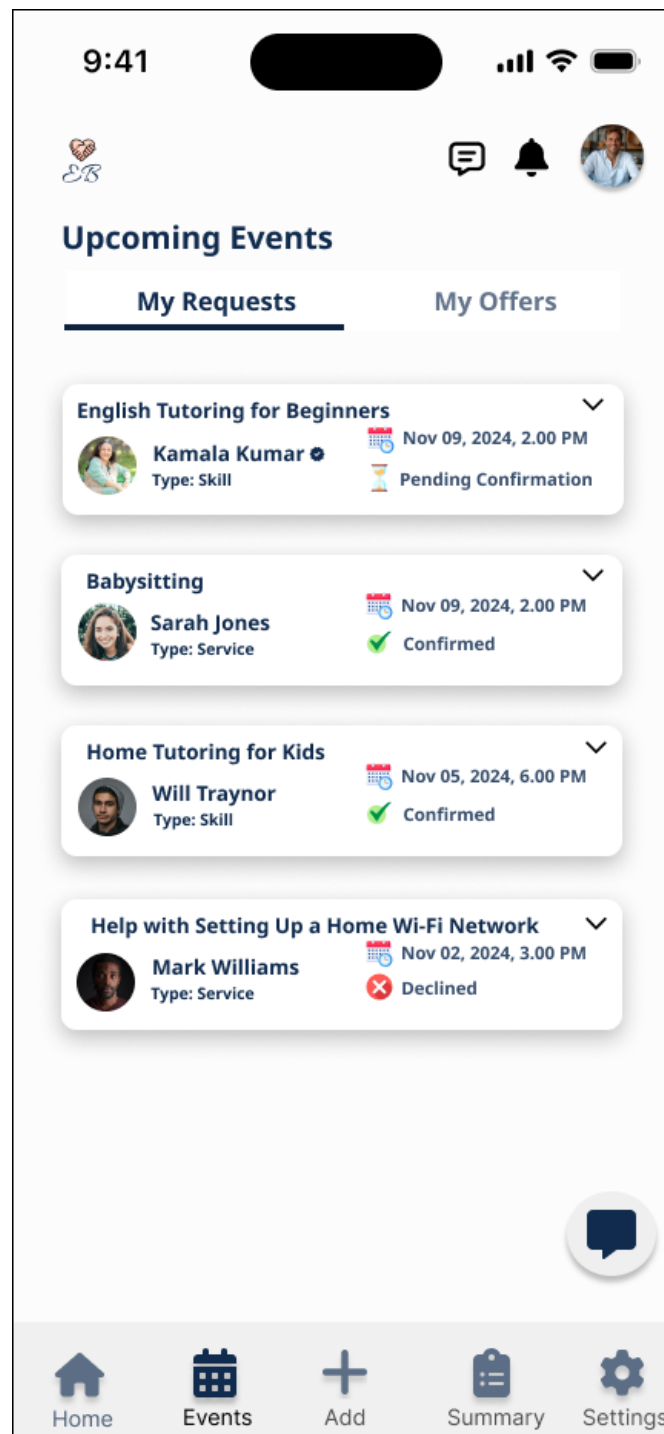


Figure 3.6: Upcoming Events Page

The Upcoming Events Page (see Figure 3.6), on the app displays upcoming sessions and services, organized under "My Requests" and "My Offers" to give users a clear, categorized view of their engagements. Status indicators (e.g., "Pending Confirmation," "Confirmed," "Declined") use icons and colour coding, aligning with Nielsen's **visibility of system status** heuristic to allow users to track the progress of their events at a glance. The use of progressive disclosure ensures a clean interface by only revealing additional details, such as location and session mode, when the user expands an event, minimizing on-screen clutter and focusing attention where necessary.

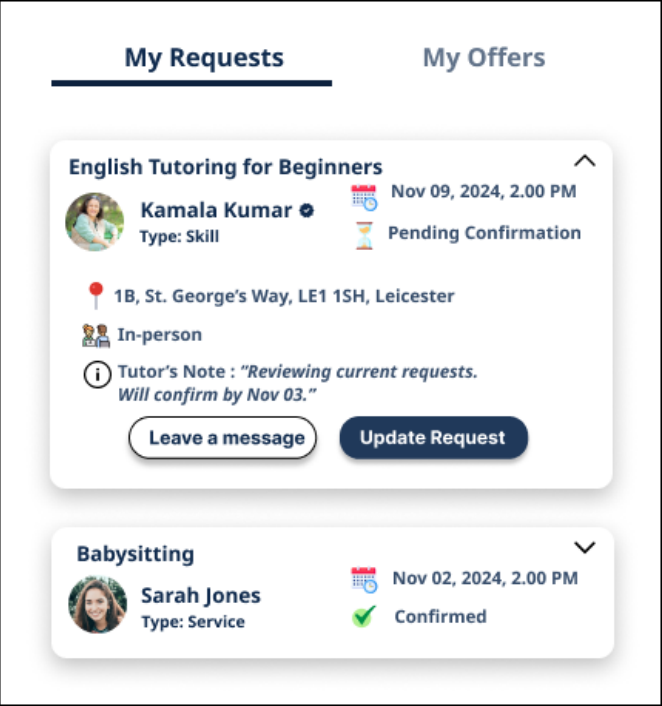


Figure 3.6(a): My Requests Tab with Expanded view

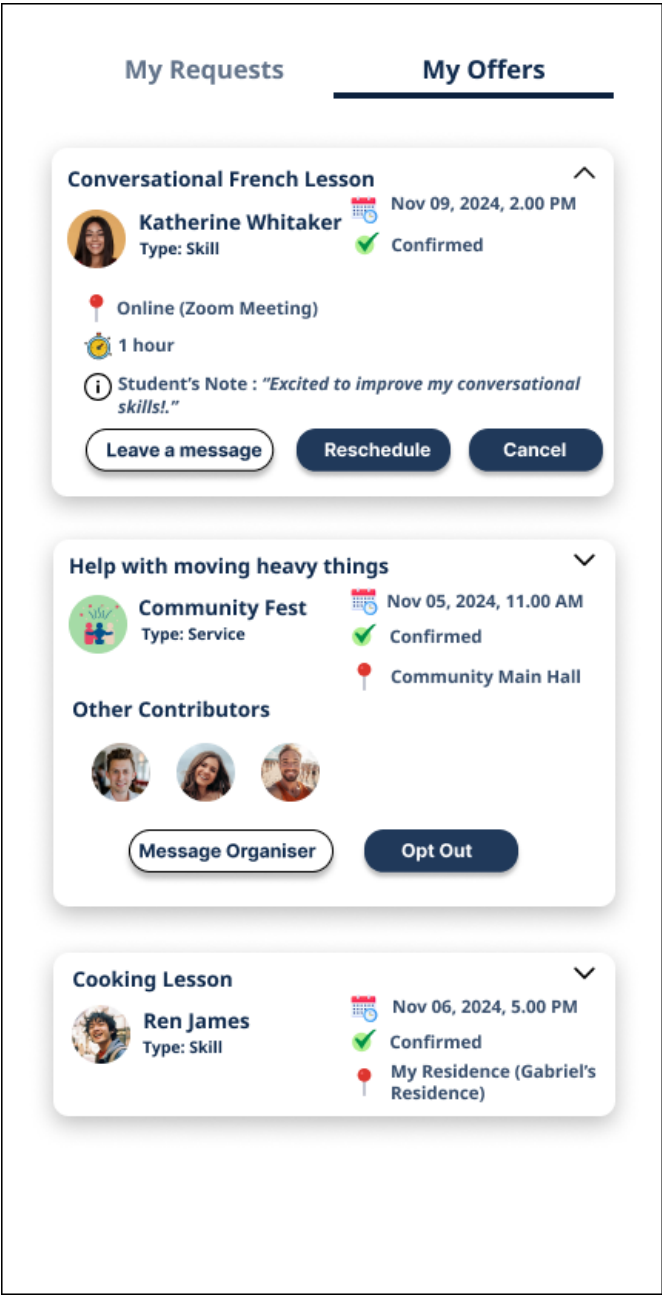


Figure 3.6(b): My Offers Tab

In the expanded "My Requests" view, (see Figure 3.6(a)), users see essential details like the location, mode of session, and tutor's notes, along with interactive buttons such as "Leave a Message" and "Update Request." These features align with Don Norman's principles of **feedback** and **affordance**, clearly signaling available actions and ensuring users understand how to interact with each element.

Clear status indicators support **effectiveness** and **visibility**, helping users quickly understand the status of each event. The ability to update or manage offers directly enhances control and flexibility

The "My Offers" section, shown in (see Figure 3.6(b)), empowers users to manage their services through action buttons like "Reschedule" and "Opt Out." These options support **reasonable user control** by enabling users to modify or withdraw from commitments easily, reflecting Preece, Rogers & Sharp's user-centered design principles. The "Opt Out" feature also emphasizes error recognition and recovery, allowing users to adjust commitments without navigating complex menus.

The screenshot displays the 'Post Availability' page in a mobile application. At the top, the status bar shows the time 9:41, a black privacy bar, and icons for cellular signal, Wi-Fi, and battery. Below the status bar, there is a heart icon, a profile picture, and icons for messages, notifications, and a profile picture. The main heading is 'Post Availability'. Below this, there are two tabs: 'Skill' (selected) and 'Service'. The form consists of several fields, each with a red asterisk indicating it is required:

- Title ***: A text input field containing 'English Tutoring for Beginners'.
- Profile Summary ***: A text input field containing 'Retired English Professor' and 'Empowering learners, one session at a time'.
- Describe Skill ***: A text input field containing 'English Tutoring' with an information icon.
- Skill Proficiency ***: A dropdown menu with 'Expert' selected.
- Availability ***: A date range selector showing 'Wed - Nov 6, Sat - Nov 9, Sun - Nov 10' with a calendar icon.
- Mode of Session ***: A dropdown menu with 'In-person' selected.
- Objective**: A text input field containing 'Gain fluency and confidence in everyday conversations while mastering essential grammar and vocabulary.'
- Exchange Format ***: A text input field containing 'Help in heavy snow removal activities in the yard.'

At the bottom of the form is a large blue 'Post' button. To the right of the 'Post' button is a circular icon with a speech bubble. The bottom navigation bar contains five icons: Home, Events, Add (selected), Summary, and Settings.

Figure 3.7: Post Availability Page

The Post Availability screen, (*see Figure 3.7*), is designed for clarity and efficiency, streamlining the process of listing a skill or service. Key fields, starting with Title and Profile Summary, set the context, while pre-populating the summary with user details reduces cognitive load and builds credibility (Buzan, 2006). Describe Skill and Skill Proficiency (with **context** - information icon) fields allow users to provide relevant details, adhering to Don Norman's principle of **consistency** by using structured dropdowns that ensure **ease of use** and **familiarity** across the app.

The Availability (with date picker) and Mode of Session fields enable users to specify schedules and preferences, aligning with Preece, Rogers, & Sharp's approach to user-centered design by reducing ambiguity. The Objective section allows for clear communication of session goals, while the Exchange Format field allows users to specify what they seek in exchange for the skill or service, such as service/skill or EBCoins. This feature adds transparency and helps to set expectations, aligning with Norman's principles of making requirements visible and upfront.



Figure 3.8: Summary Page

The Summary of Activities screen provides users with a clear, chronological overview of past exchanges, segmented by month for easy tracking. Each activity card includes the session type, recipient, date, EBCoins earned, and a short testimonial or feedback, supporting Nielsen's visibility of status heuristic by clearly showing users their completed contributions. This design also follows Millers' Law by chunking information into visually distinct cards, reducing cognitive load and aiding **quick comprehension**. Additionally, icons and labels provide intuitive cues, enhancing **recognition**

and speeding up the user's ability to differentiate between types of sessions. Overall, this screen emphasizes transparency and organization, supporting user goals of tracking engagement and contributions seamlessly.



Figure 3.9: User Profile Page

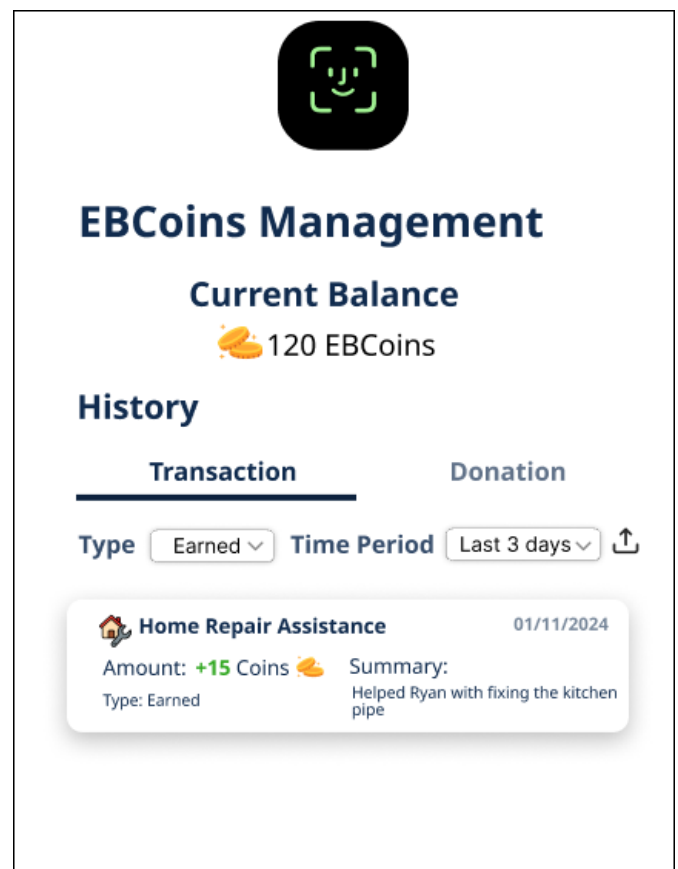


Figure 3.9(a): User Profile – EBCoins Management Page

The User Profile page, (see Figure 3.9), on the app provides a comprehensive view of the user's contributions, EBCoin balance, and achievements, reflecting Preece, Rogers, & Sharp's emphasis on transparency in user-centered design. The profile includes a visual rating and status, which reinforces social validation and user motivation. The Monthly Analysis graph offers users a clear breakdown of their engagement types, such as skills offered, received, or community contributions, aligning with **Garrett's** "structure" layer in UX by presenting organized data that is easy to interpret.

The EBCoins Management section, highlights the user's balance, recent transactions, and total donations, encouraging a clear financial overview and aligning with usability goals of **efficiency** and **clarity**. Users can access detailed EBCoin history in the secondary EBCoins Management screen, (see Figure 3.9(a)), which uses a type and time-filtered, tabbed structure for Transaction and Donation histories thus enhancing **learnability** and ease of use. The transaction history can also be exported. To ensure security while managing EBCoins, the page implements a Face ID or password verification feature. This security measure aligns with Don Norman's Principle of Constraints, as it restricts access to only authorized users, serving as a natural barrier that prevents unauthorized access to sensitive financial information.

Achievements and badges, like "Skill Master," serve as motivational triggers, rewarding active contributors and fostering emotional engagement, which aligns with the usability goals of **fun** and **satisfaction**. Overall, the interface efficiently combines informative and motivational elements, enhancing user experience by making achievements, contributions, and financial insights both accessible and visually appealing.

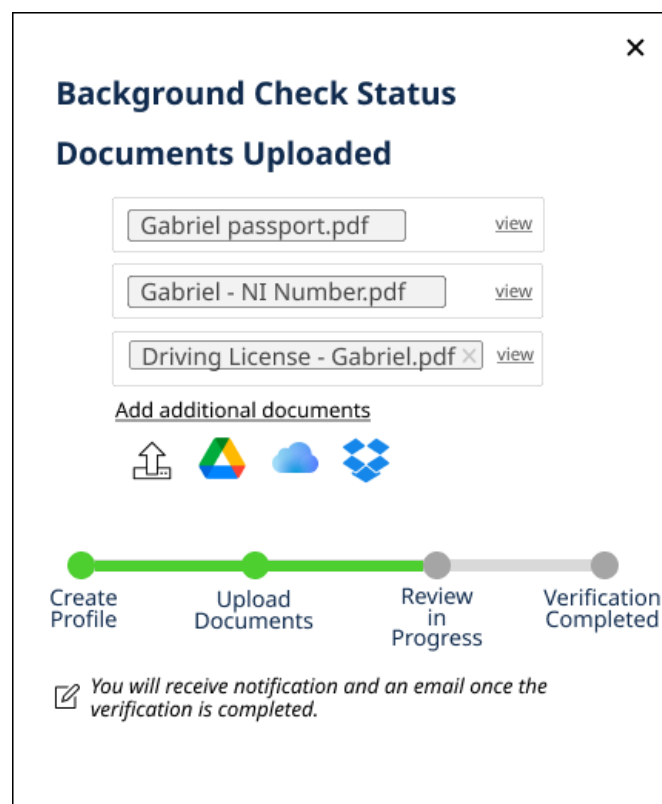


Figure 3.9(b): Background Check Status Details Page

The Background Check Status page, (see Figure 3.9(b)), offers **transparency** through document previews and a progress tracker, outlining each verification stage from profile creation to completion. Different options to upload documents support easy document upload, while the notification promise aligns with **visibility** and **feedback** principles, reassuring users of timely status updates throughout the process.

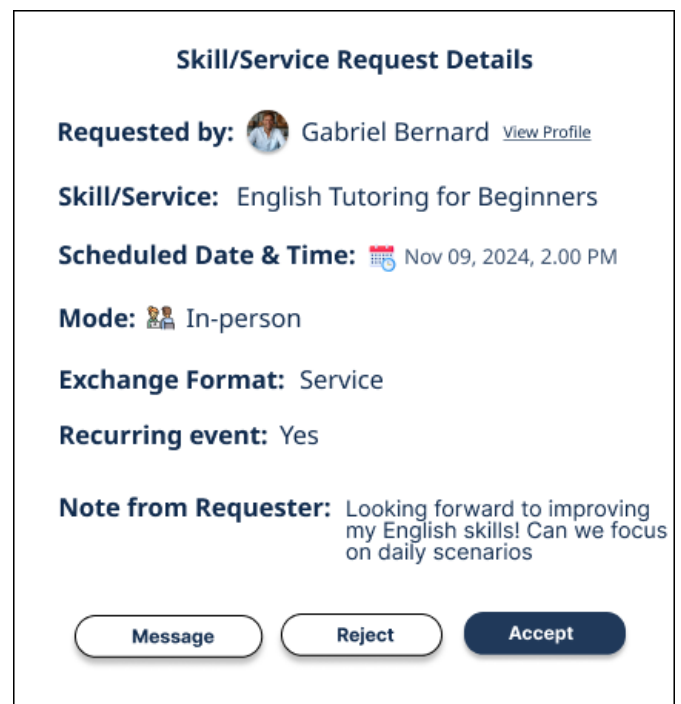
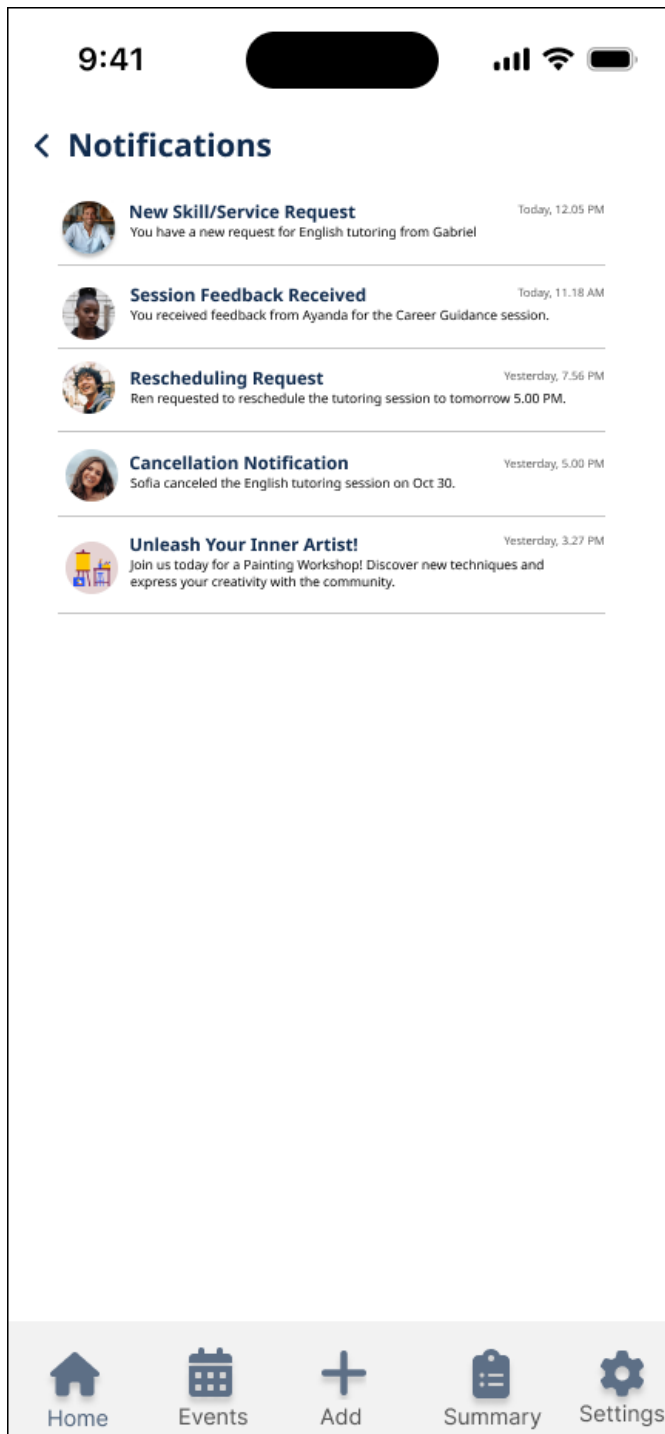


Figure 3.10(a): Details of Notification Screen

Figure 3.10: Notifications Page

The Notifications screen, (*see Figure 3.10*), on the app organizes alerts like skill requests, session feedback, rescheduling, and cancellations in a streamlined, chronological format, enhancing ease of navigation. Each notification type has a clear, concise label and timestamp, aligning with Nielsen's visibility of system status, enabling users to stay updated effortlessly. The details screen is displayed when clicking on a notification. For example, here when clicking on the first notification, we see Skill/Service Request Details screen, (*see Figure 3.10(a)*). This provides essential information about the requested session, including the requester's profile, date, mode, and exchange format, which reinforces user-centered design by providing all necessary details at a glance. With options to message, accept, or reject the request, the design supports reasonable user control, allowing flexibility in responding to requests (Preece, Rogers & Sharp, 2002). This layout enhances efficiency and provides a seamless experience by reducing the need for additional navigation.

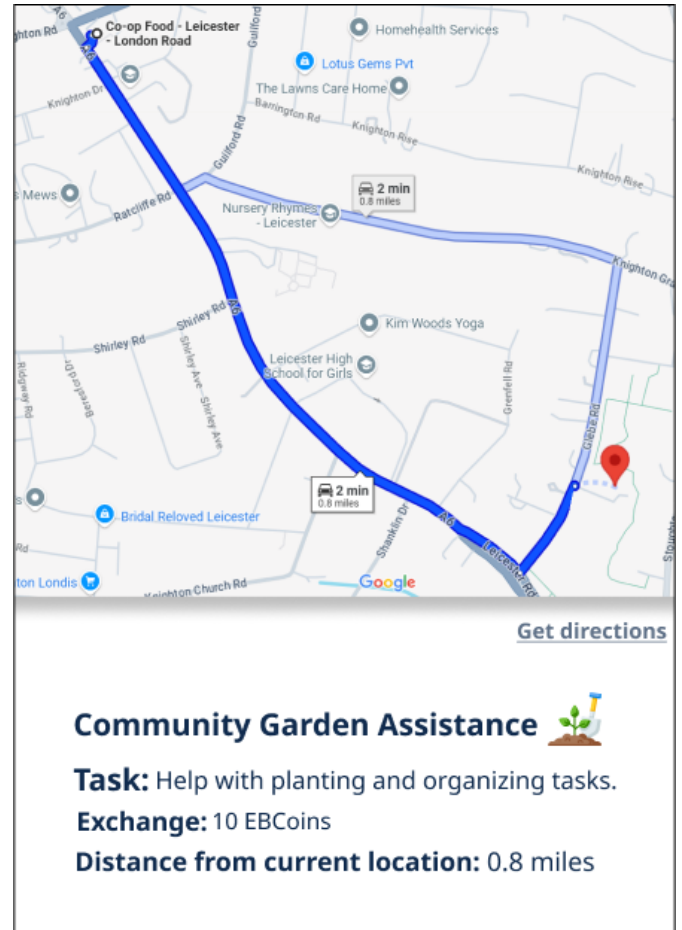
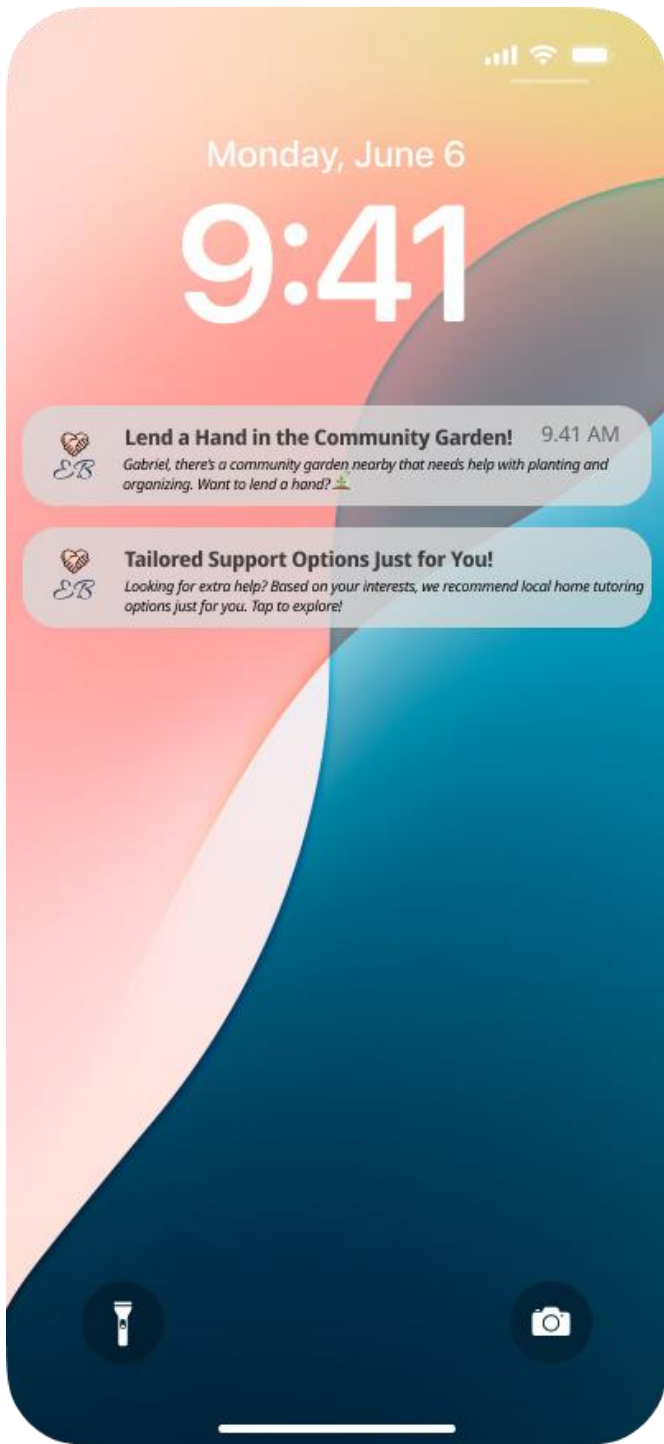


Figure 3.11(a): Geo-fencing notification – community garden help details screen

Figure 3.11: Geo-fencing notification and Personalised AI Recommendation Push Notification Page

The geo-fencing and AI based recommendation push notification feature, (see Figure 3.11), on the Exchange Bridge app alerts users to nearby community tasks in real time, enhancing “contextual relevance” within the PACT framework. For example, a notification suggests “Community Garden Assistance” within close proximity, specifying the task, exchange value (10 EBCoins), and exact distance. Upon tapping the notification, users can view a map with directions, (see Figure 3.11(a)), making navigation simple and immediate. This feature aligns with user-centered design by providing relevant, location-based information that integrates seamlessly into users’ routines, facilitating spontaneous engagement with the community and enhancing overall usability and satisfaction. The second notification represents recommendation on home tutoring based on previous search and activities on the app.

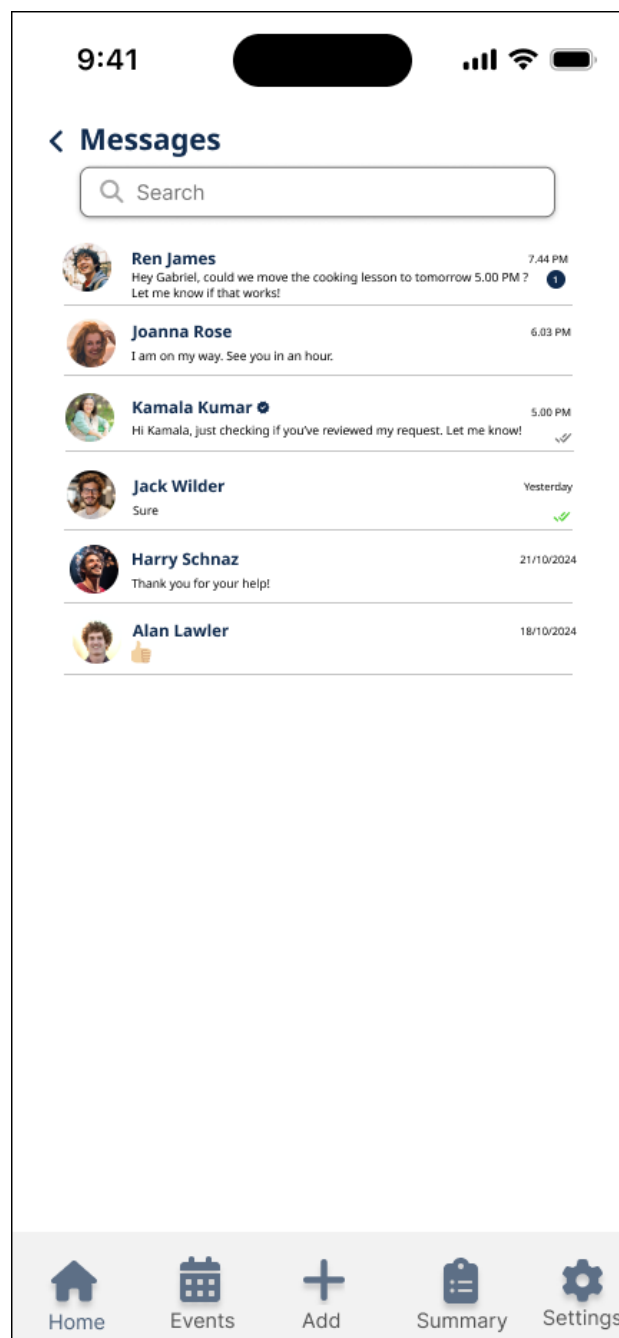


Figure 3.12: Messages Page

The Messages screen, (see Figure 3.12), in the app organizes conversations in a clean, user-friendly interface. Each message shows the sender's profile picture, message preview, timestamp, delivered(grey)/read(green) status, ensuring users can quickly scan for important updates. The search bar aids in locating specific conversations efficiently, enhancing usability and reducing navigation time.

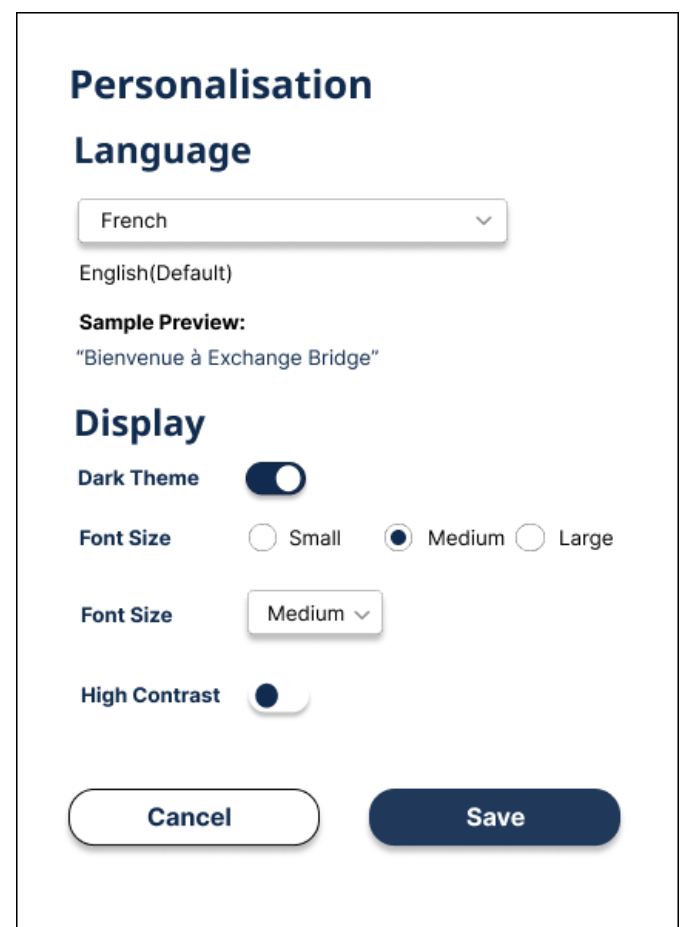
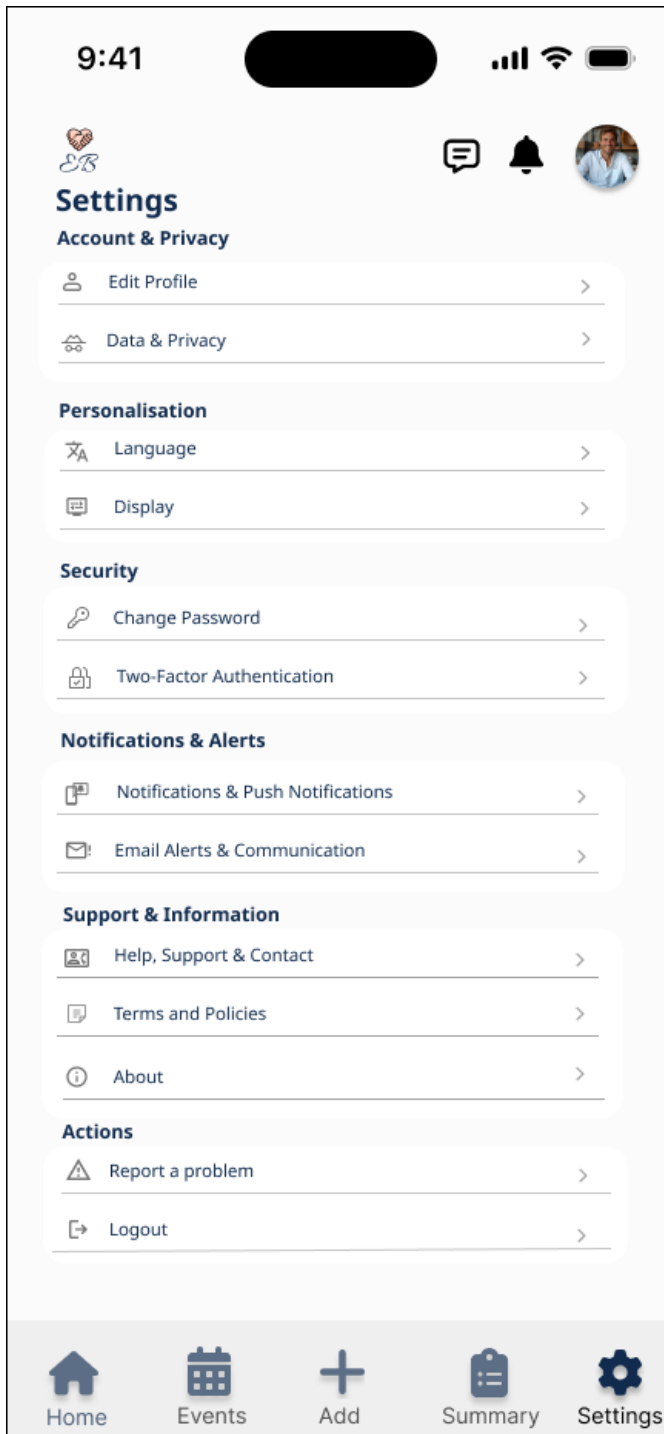


Figure 3.13(a): Settings – Personalisation Screen

Figure 3.13: Settings Page

The Settings page, (*see Figure 3.13*), of the app is structured to prioritize user control, allowing users to manage various aspects of their profile, notifications, privacy, and app personalization. This setup aligns with Preece, Rogers, & Sharp's user-centered design principles, enabling users to customize their experience according to their preferences and needs, enhancing both **clarity** and **ease of use**.

In the Personalization screen, (*see Figure 3.13(a)*), a Language dropdown allows users to select their preferred language with a sample preview, supporting **user assurance** by letting them confirm their choice visually before saving. This feature enhances confidence in their selection, ensuring they feel in control of the language experience.

For Display settings, options like Dark Mode, font size adjustments, and high contrast demonstrate the **Considering Users** principle of the Universal UX Design Process (Pereyra, 2023). By offering these customization options, the app respects diverse visual preferences and needs, promoting **accessibility** for all users. This aligns with the user-centered design goal, creating a personalized and comfortable interaction environment.

CONCLUSION

In designing Exchange Bridge, this portfolio sought to create a platform that meets the needs of users through enhanced flexibility, personalization, and ease of access to community-driven skill and service exchanges. The app's advanced features, to list a few, geo-fencing notifications, recurring events, and personalized recommendations, enhance the user experience by providing relevant, real-time information that aligns with the user's context and preferences. Geo-fencing, fostering spontaneous engagement and supporting (Rheingold's (2000)) theories on situational awareness and community participation. Similarly, recurring event option simplifies the coordination of frequent tasks, a feature rooted in (Preece, Rogers, and Sharp's (2002)) interaction design principles, which emphasize efficiency and smooth, repeated interactions.

A user-centered approach underpins the app's design, advancing existing literature by embedding choice and personalization across various elements. Users can personalize their profiles, adjust display settings, and filter notifications, features that align with universal UX principles (Pereyra, 2023) to support inclusivity and accommodate users' individual preferences. Personalized recommendations, driven by AI, further enhance user experience by connecting users to relevant services and skills based on their history and interests. These features advance the interaction design literature by showcasing how user autonomy and context-aware interaction can coalesce to build a satisfying and engaging user experience (Putnam, 2000).

The app's flexible exchange options, skill-for-skill, service-for-service, skill-for-service, service-for-skill or EBCoin-based exchanges are another standout aspect, fostering a dynamic community where participants can engage in ways that suit their immediate needs. EBCoins support the theories on gamification and engagement posited by (Hamari & Koivisto (2015)), demonstrating that incorporating rewards within community platforms can increase retention and satisfaction.

Features like collaborative projects add depth by enabling users to work toward shared goals, thus building community bonds within a digital space. This feature aligns with social capital theory by emphasizing shared trust and reciprocity (Putnam, 2000).

Ultimately, Exchange Bridge's innovative design, with its unique blend of personalization, flexibility, and community-centered features, provides a compelling advancement over existing models. By addressing user autonomy, enhancing situational awareness, and supporting a flexible exchange economy, this design moves beyond traditional community applications, setting new standards for engaging, inclusive, and contextually aware digital experiences.

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