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Smart Travel App

Assignment 1: Project idea

Deadline NOV 14, 2023

Assignment 2: Paper prototype

Deadline NOV 21, 2023

Assignment 3: Hi-fi prototype and evaluation

Deadline DEC 21, 2023

Assignment 1: Project idea

1.1 DESCRIPTION OF THE PROJECT IDEA   (4 points)

The "Smart Travel Application" is the cutting-edge solution designed to revolutionize the way users plan and experience their journey. This software, which caters to lone travelers, adventure seekers, and frequent travelers, uses artificial intelligence, community involvement, and special features to make travel planning effective and personalized. The application's aim is to revolutionize trip planning by giving consumers all across the world a smooth, entertaining, and socially connected experience. Here are the features of the project.

Signup/Sign in

- Upon opening the app, they will be prompted to create an account. The signup form should collect essential information, such as name, email, and a secure password. If the user already have an account then the user will prompt to login page.

Personalized Itinerary Builder

- Users can create their custom itineraries by specifying their preferences, interests, budget, time duration and constraints etc.

AI-Powered Recommendations

- Based on user choices, the app uses machine learning algorithms to recommend activities, restaurants, and attractions spots that user should visit within their budget. For example, if a user is examining a historical site, the AI can provide relevant historical information or recommend places of interest in the area.
- Through natural language exchanges, users can communicate with the AI Travel Companion. Users can improve the user experience by conversing with each other and asking questions, making suggestions, or requesting travel advice.

Group Journey

- Users can invite friends to make groups to make plans together for hangout. A group chat functionality within these groups, so users can interact and inspired each other.

Social Sharing

- By encouraging users to share their travelogues, advice, and recommendations on the app, it creates a feeling of community. A strong system of ratings and reviews enables users to participate and gain from group insights. Integrate social media sharing

functionality so users can easily share their journey, or favorite points to be visited with their existing social networks.

Gamification

- Use gamified aspects to draw people in. Let them earn badges or awards for visiting new places and sharing their travelogues.

1.2 RELATED WORK   (4 points)

- The smart travel app, in contrast to TripIt, provides a customized experience with real-time group planning, a learning virtual assistant, and an emphasis on ethical travel. Its dedication to fostering social engagement via community feed sets it apart as an all-encompassing and creative vacation planning service. https://play.google.com/store/apps/details?id=com.tripit
- The Smart Travel Companion App, which combines personalization, sustainability, and community involvement, offers a more thorough and inventive approach to travel planning than TripAdvisor, which mainly concentrates on user ratings. https://play.google.com/store/apps/details?id=com.tripadvisor.tripadvisor
- The article emphasizes the significance of utilizing big data to provide individualized services and dynamically linking stakeholders through a technological platform in order to provide intelligence to tourism destinations. The strategy used in the essay and the Smart Travel Companion App differs significantly, even though they both recognize the importance of personalized experiences in the tourist industry. Using an AI trip Companion to comprehend and adjust to users' preferences over time, the Smart Travel Companion App sets itself apart by offering personalized trip suggestions and dynamic itinerary planning. The emphasis is on creating a socially linked travel community and transforming the trip planning process, which provides a different angle from the article's discussion of smart tourism destinations [1].
- The article presents a prototype of an electronic guide application that uses an evolutionary optimizer to take competing goals into account while offering customized itineraries for multiple days to tourists. Although this is consistent with the idea of tailored travel advice, the Smart Travel Companion App stands apart since it includes an AI Travel Companion [2].

REFERENCES

[1] https://link.springer.com/chapter/10.1007/978-3-319-14343-9_28

[2] https://link.springer.com/article/10.1007/s40558-019-00150-5

UNIQUE IN OUR PROJECT   (3 points)

AI Travel Companion: This function goes above and beyond standard suggestion systems. Over time, the AI Travel Companion is a virtual assistant that picks up on user preferences and changes accordingly. Based on comments, real-time interactions with the app, and the user's travel history, it continuously improves its recommendations. Through constant user engagement, the AI Travel Companion picks up on patterns in the user's travel behavior and adjusts to changing preferences. The recommendations are guaranteed to stay worthwhile and current thanks to this adaptive learning.

USEFULNESS OF OUR PROJECT   (3 points)

Those who want a hassle-free and customized travel planning experience, including solo travelers, adventure seekers, and regular travelers, can find everything they need in the Smart Travel Companion App.

One notable feature of the Smart Travel App is how incredibly helpful it is in reinventing the trip planning process. The app ensures that every journey is uniquely tailored by incorporating an AI Travel Companion that offers personalized recommendations that change over time based on the user's interests. The dynamic platform is created via real-time adaptation, community participation, and social features that allow users to connect and exchange ideas. The app's dedication to security, offline usability, and money management makes it more useful, and its environmental impact tracker encourages travelers to make ethical travel decisions. All things considered, the Smart Travel App surpasses traditional travel planning, providing a thorough and user-focused resource that not only expedites the procedure but also enhances the trip experience with customized, dynamic, and socially engaged components.

1.3 GROUP EVALUATION SESSION   (4 points)

User 1 Feedback	
Positive Comment	Main positive aspect is to plan tours more easier and targeted in terms of time, budget, route, vehicle. In addition, with AI and ML, it can develop the interest of the user by giving historical info of the places where he want to visit/plan.
Negative Comment	Adventures are the main charm of Tourism. By using this app. User is overwhelmed with info. So, in my point of view there is the fair chance of less adventurous thoughts can be a raised in the mind of users.

User 2 Feedback	
Positive Comment	According to me, this app is revolutionized with all things on the same points rather than to visit multiple platforms to get one information. And one can go through the feedback of the previous tourists. It can help him to decide the venues and places
Negative Comment	No criticism please. I think this is a good idea and would want to see it carried out.

User 3 Feedback	
Positive Comment	Smart travel application is an innovative idea which uses AI to help end users plan the best trips. It will suggest the trips based on user search history and the information they provide while creating the profile. It has many options like planning group journeys and social sharing. The most attractive thing is that the users will get different kinds of badges for visiting new places which will unlock more features for them.
Negative Comment	Not negative feedback but there can be some security risks as tons of people will sign up so the data should be kept safe. Social sharing options need to be used and optimized properly so that it only shares the data which the user wants to share.

1.4 CONCLUSION   (2 points)

We can overcome the psychological factor that may involve in the usage of this app by addiction milestones to uncover the additional information about tour destinations and historical places. This may help in preserving the charm of adventure. The idea is to add milestones on the basis of distance remaining. As closer you get to destination the milestones are achieved resulting in disclosing information.

Assignment 2: Paper prototype

## 2.1 MOOD BOARD   (6 points)

This mood board design shows the functionalities of smart travel mobile application. I draw different photos in this design to convey various messages. The first picture of AI robot shows the importance of Artificial Intelligence which recommend the users different travelling paths according to their preferences.

Besides, I added pictures of different beautiful and dream destinations where everyone wants to travel. Therefore, this app will help the users to explore multiple places and also visit them.

Most importantly, people can create new friends and also plan a trip together. This is the most interesting feature of this mobile application. It will enable the users to invite their friends and also form new groups which will make their journeys more exciting.

Overall, my perspective to design this mood board is to give the overview of my smart travel mobile application for helping the users to properly plan their tours with different people.
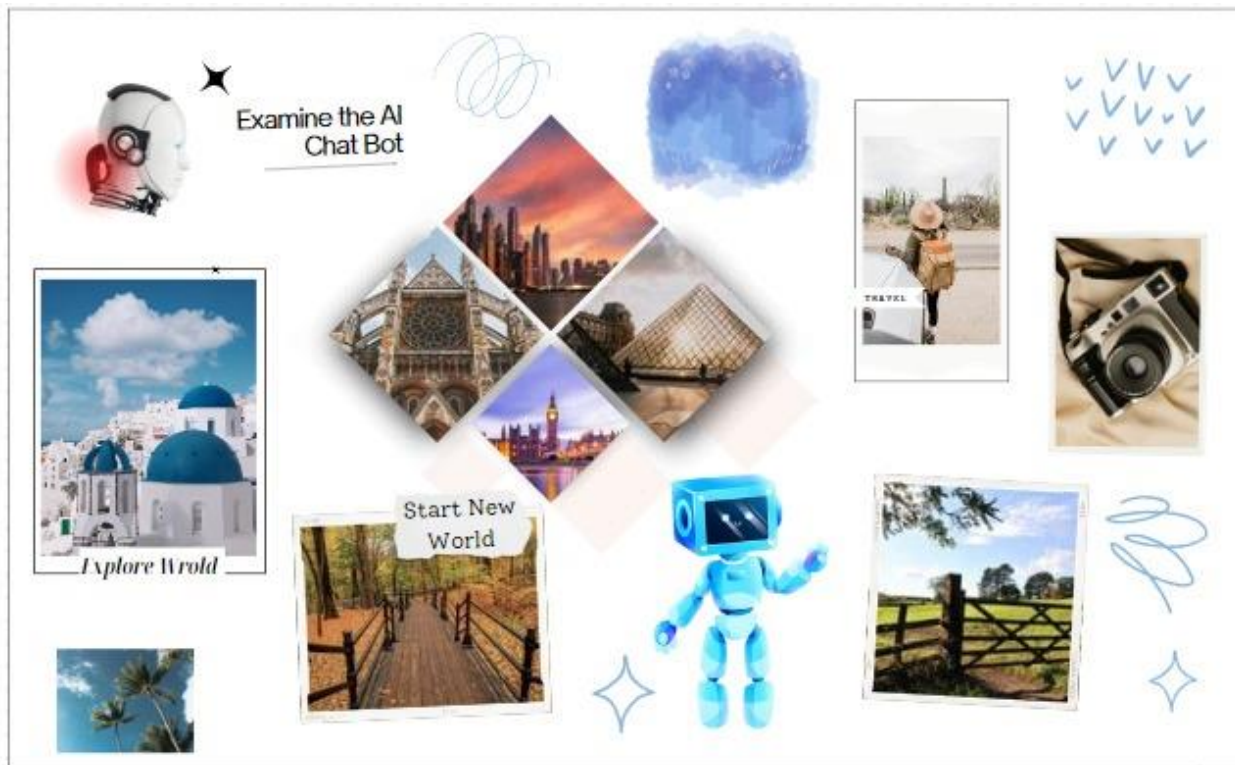
2.2 PAPER PROTOTYPE (4 points)

Introduce and describe your paper prototype. What is it about, what does it do? (4 points). Paste pictures of the prototype. For every picture, please add a caption that explains what is depicted in the picture.

Here is the prototype for the "Smart Travel Application," which encapsulates the essence of this mobile application. By enabling users to design unique itineraries according to their tastes, the Smart Travel Application provides a personalized travel experience. The platform is designed for individuals who have a passion for travel and enjoy sharing their experiences with their community. It uses gamification, giving users prizes and badges for travelling to new locations and posting travelogues. By encouraging users to offer ideas and advice, the app creates a sense of community. It also makes it possible to arrange trips together with friends, which improves the social side of travel. In general, the goal is to offer a smooth and captivating interface that integrates social media, travel planning, and gamified components to create a more immersive experience.

2.2.1 LOGIN/SIGNUP (1 point)

Here is the paper prototype for sign up, sign in, and forgot password.

- If the user is new to our application, he or she has to create an account with an email, password, and confirm password field and get registered with us.
- If the user already has an account, the application can be accessed by entering a valid email and password.
- If the user forgets his or her password, they can get a verification link by entering their registered email address.
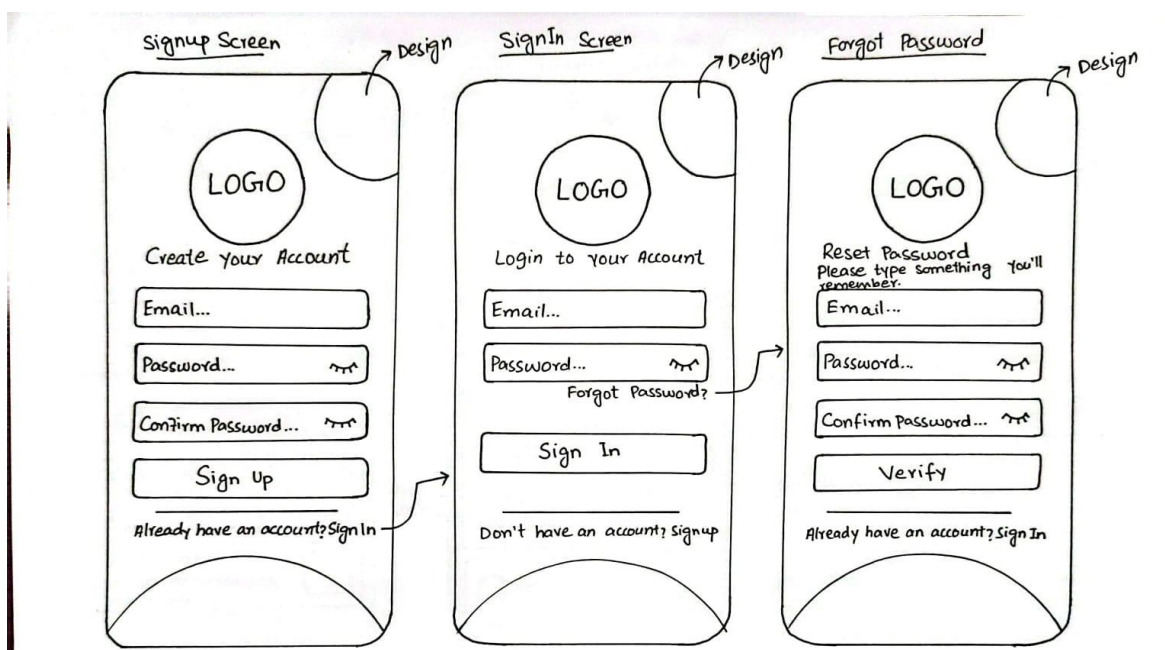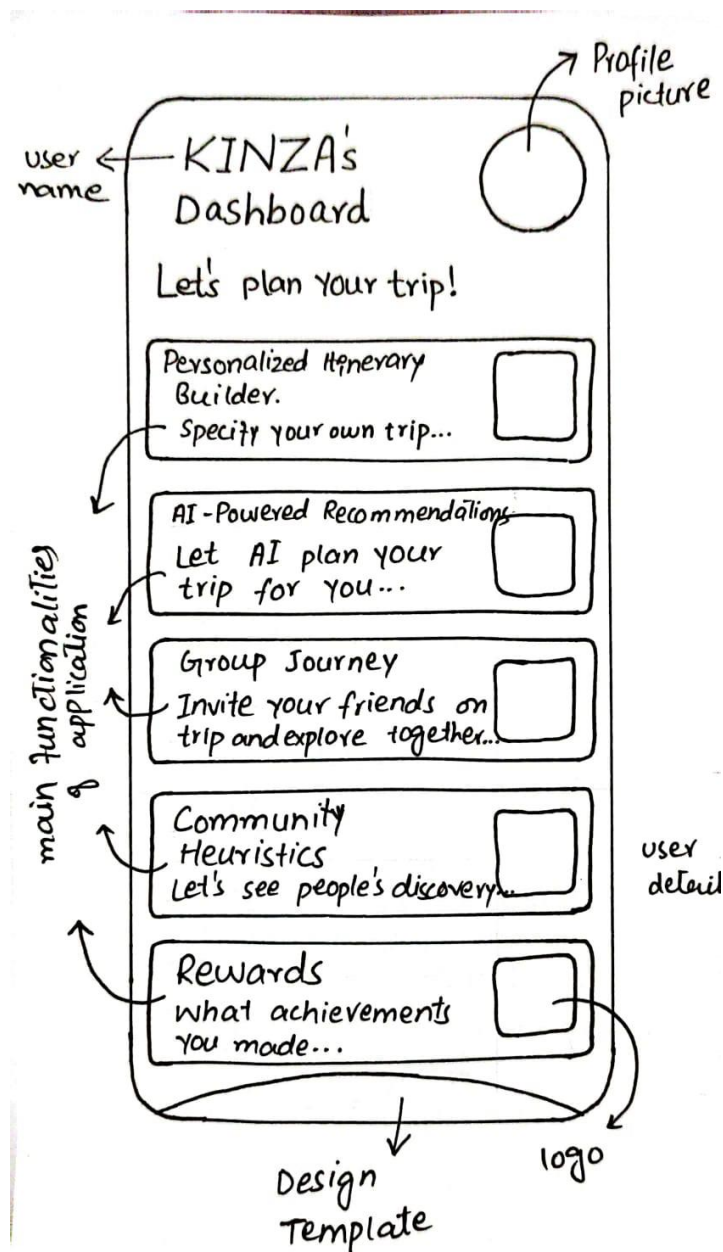
2.2.2 HOME SCREEN   (1 point)

This is the home/dashboard screen of the Smart Travel Application which shows the main features of the application. Here, the application showcases its primary features, allowing users to select the specific actions they would like to perform within the application.
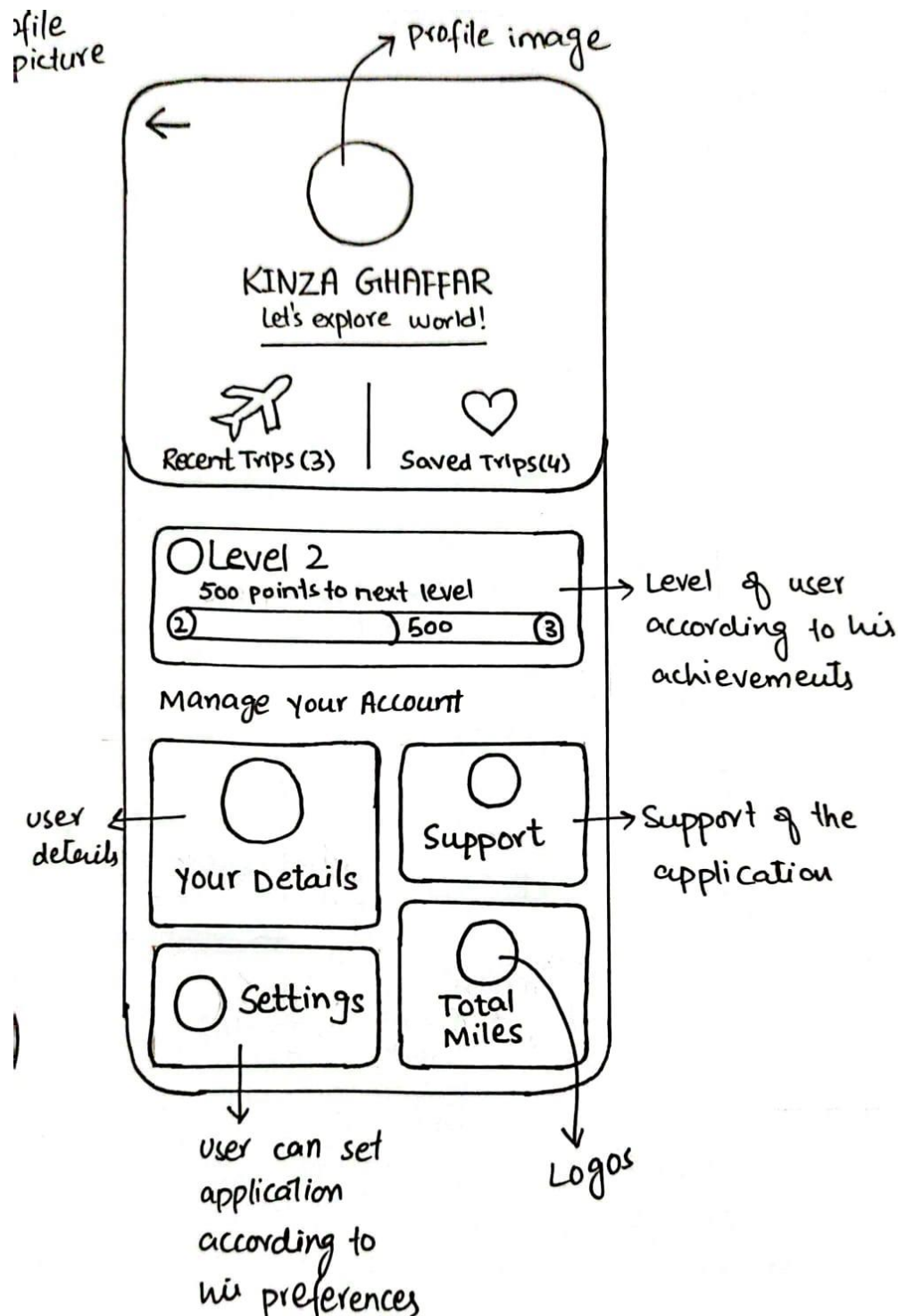
- Personalized Itinerary Builder
- AI-Powered Recommendations
- Group Journey
- Social Sharing
- Gamification

2.2.3 PROFILE SCREEN   (1 point)

- This is the user profile screen. Users have the option to modify their profile picture and view a comprehensive summary of their recent or saved trips. Additionally, they can track their level of achievements, determined by the points accumulated through their travel experiences.

2.2.4 SPECIFIC FUNCTIONALITIES   (10 points)

Personalized Itinerary Builder

- Through the interactive elements of the app, users may arrange their travels. All they have to do is divulge information about themselves, including their hobbies, budget, length of stay, and any special requirements. In this manner, the software tailors travel schedules to each user's interests and constraints, resulting in a more pleasurable and customized travel experience.
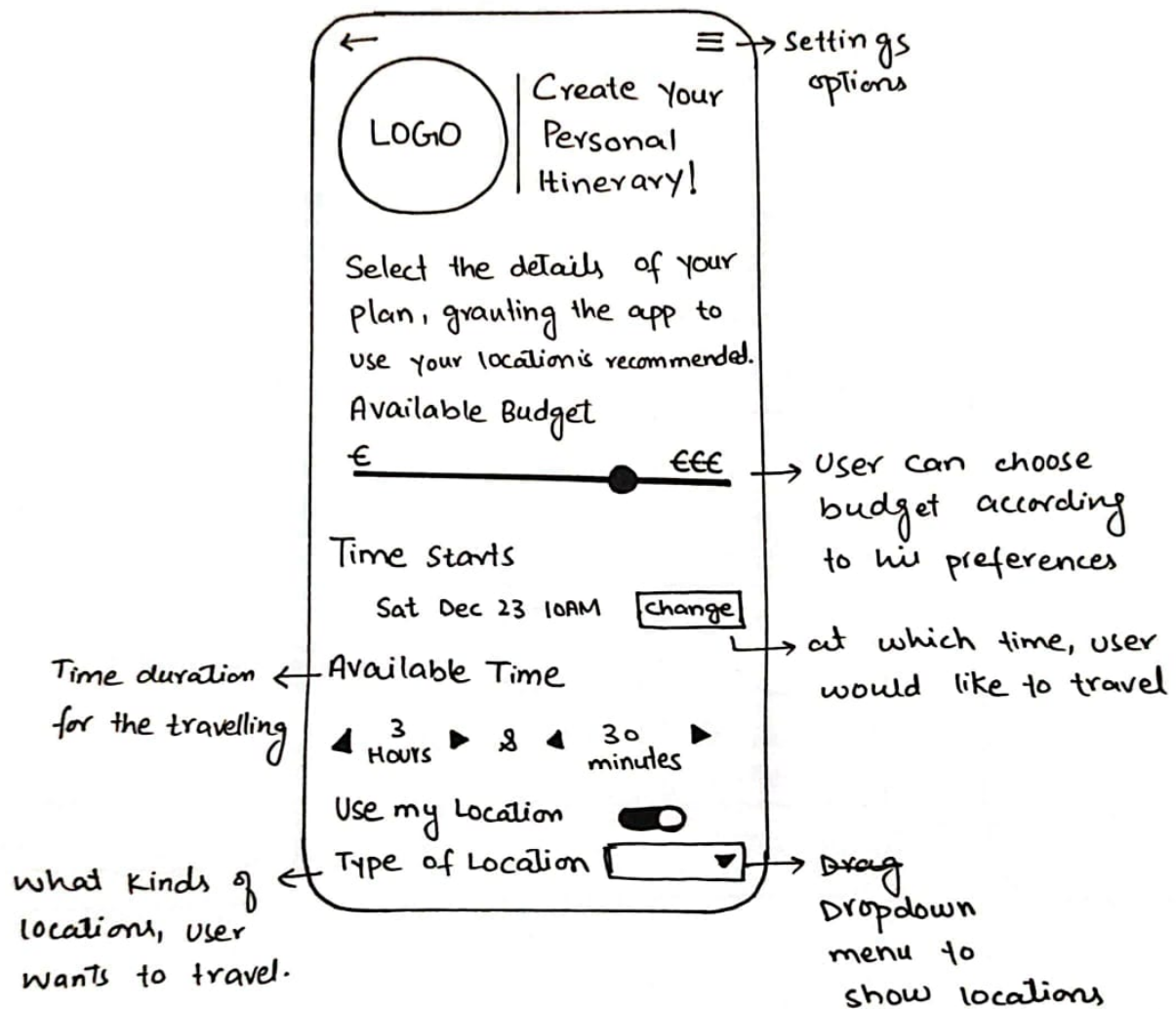
AI-Powered Recommendations

Screen-1:

- The app employs machine learning algorithms based on user selections to suggest budget-friendly activities, eateries, and tourist destinations.

Screen-2:

- The AI Travel Companion can converse with users using natural language interactions. By talking to one other and exchanging ideas, opinions, and travel information, users can enhance their overall experience.
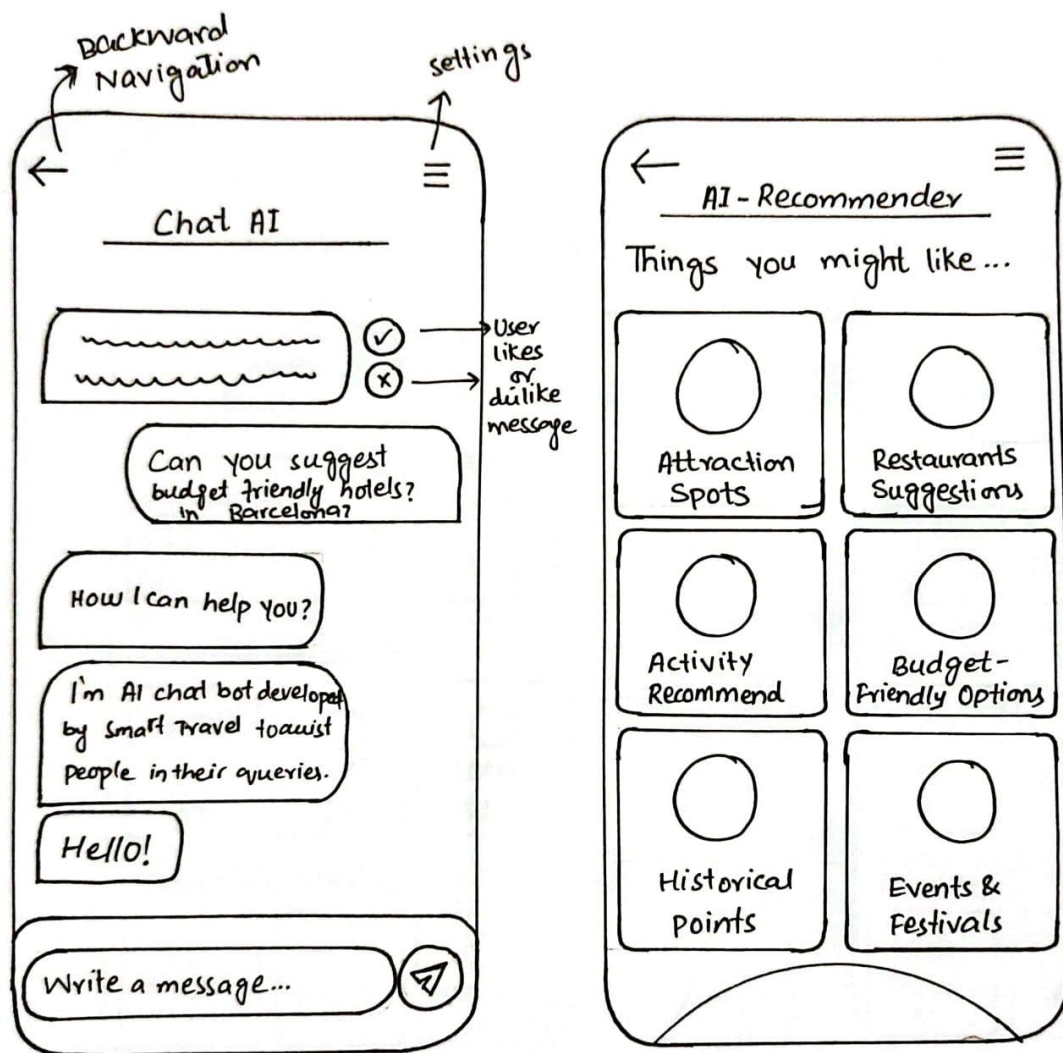
Group Journey

- <mark>Users can create groups and invite friends, which enables them to work together to plan social events. This tool makes planning and coordinating easy and promotes a shared experience during group hangouts.</mark>
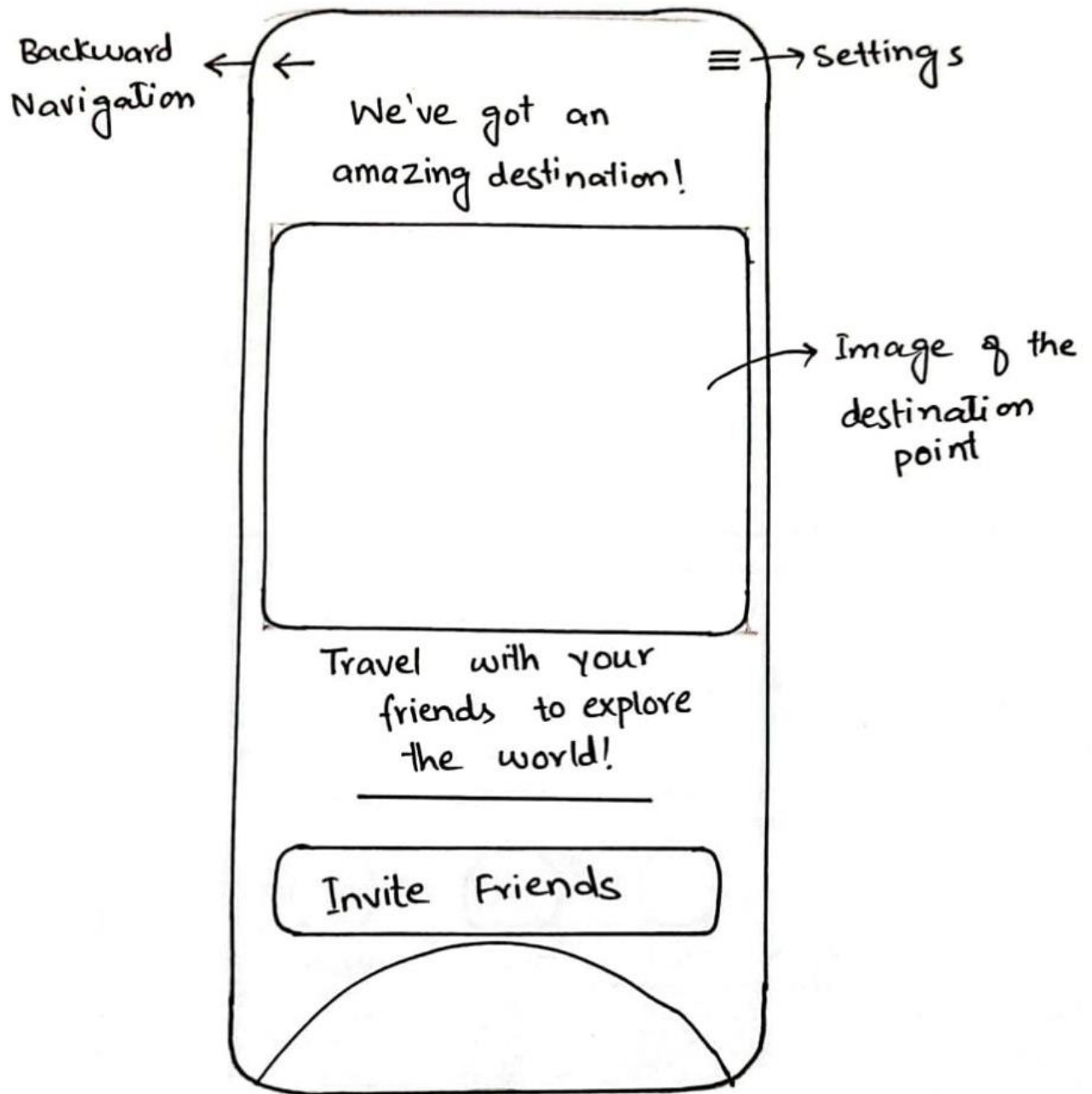
Backward Navigation ← ← ≡ → Settings

We've got an amazing destination!

→ Image of the destination point

Travel with your friends to explore the world!

Invite Friends

Social Sharing

- By encouraging users to share their travelogues, advice, and recommendations on the app, it creates a feeling of community.
- It fosters a sense of community by encouraging users to contribute their travelogues, observations, and advice within the application. Through the usage of this interactive platform, users can record their experiences and offer insightful recommendations and advice to other users. With the help of this cooperative method, users may actively contribute to a common knowledge base, fostering a community of like-minded travelers. Consequently, the application turns into a center for sharing travel narratives, encouraging relationships, and enhancing the user experience in general.
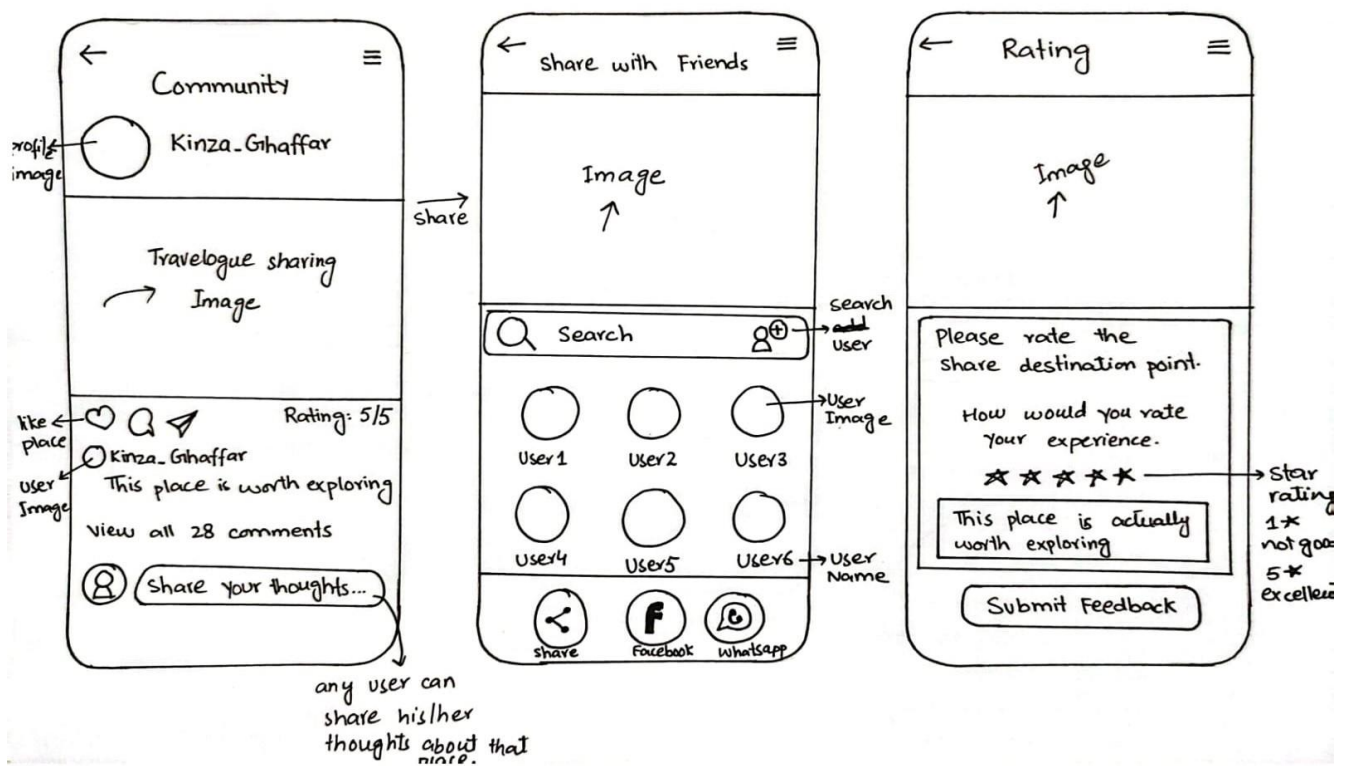
Gamification

- Use gamified aspects to draw people in. Let them earn badges or awards for visiting new places and sharing their travelogues.
- The application uses gamification techniques to draw users in and make them want to share and go on new travel experiences in order to win badges and rewards. This creative method turns discovery into a participatory, fulfilling experience that promotes accomplishment and community involvement. The application not only promotes active engagement but also offers a dynamic atmosphere where users are inspired to contribute, share, and celebrate their individual and collective travel achievements by gamifying the process of finding and capturing travelogues.

2.3 GROUP EVALUATION SESSION   (4 points)

User 1 Feedback	
Positive Comment	The AI travel companion feature is innovative and more likely to attract young users and probably solo travelling who often look for a companion. Adaptive learning through user behavior and real time interaction is also a very good aspect. The Smart Travel App also provides the user will option to explore the app offline which i think is a great feature as some places do not have internet.
Negative Comment	The community participation feature is not clearly described, there are words like "guaranteed to stay worthwhile and current" which kind of seems overpromising. As the app contains many features and unique ones so implementing it with real time scenario can lead to complexity.

User 2 Feedback	
Positive Comment	Innovative AI Travel Companion: The adaptive learning and personalized recommendations offered by the AI Travel Companion stand out as a revolutionary feature, ensuring tailored suggestions for users based on their preferences and interactions. Revolutionary Trip Planning Approach: The app's approach to trip planning sets it apart by combining personalized recommendations, community engagement, and social features, creating a dynamic platform that enhances the overall travel experience. Wide Applicability: The app's versatility caters to various traveler types, from solo adventurers to frequent travelers, offering a hassle-free and customized planning experience that meets diverse needs.
Negative Comment	Not really but one concern is that with extensive user engagement and learning capabilities, there could be concerns about data privacy and how user information is used, necessitating a transparent and robust privacy policy.

User 3 Feedback	
Positive Comment	The prototype of the Smart Travel application provides great insights of its features. As users logged in it shows recent trips and saved ones also whenever user is just scrolling and thinking about some trips they can always save it and see it later on. Then there is AI recommender which works like your brain and suggest you what you want to see.
Negative Comment	No criticism please. I think this is a good idea and would want to see it carried out.

2.4 CONCLUSION   (2 points)

Based on user feedback, the Smart Travel App's hi-fi prototype will be strategically improved. The cutting-edge AI Travel Companion feature will be improved for greater adaptability and customized suggestions. Users will be guided in utilizing real-time interactivity and adaptive learning through clear demonstrations. A large number of users will register, so it is important to properly protect their data. For security reasons, I believe that two factor authentication is necessary. These days, hacking systems is not difficult. I'll make an effort to enhance this feature in the high-fidelity prototype. The purpose of these improvements is to make the Smart Travel App more safe and easy to use.

Assignment 3: Hi-fi prototype

3.1 APPLICATION PROTOTYPE   (25 points)

Figma prototype (0 points, but mandatory)

<Paste the url to the Figma prototype here. Make sure that the right screen size and permissions for viewing are set in this url.>

Figma Link:
https://www.figma.com/proto/vOnlhHuM0HRQUkbCtadT8B/Untitled?type=design&node-id=3-161&t=wEDnClEZB4u6p7yG-0&scaling=scale-down&page-id=0%3A1

Description of the application and its functionalities

Here is the prototype for the "Smart Travel Application," which encapsulates the essence of this mobile application. By enabling users to design unique itineraries according to their tastes, the Smart Travel Application provides a personalized travel experience. The platform is designed for individuals who have a passion for travel and enjoy sharing their experiences with their community. It uses gamification, giving users prizes and badges for travelling to new locations and posting travelogues. By encouraging users to offer ideas and advice, the app creates a sense of community. It also makes it possible to arrange trips together with friends, which improves the social side of travel. In general, the goal is to offer a smooth and captivating interface that integrates social media, travel planning, and gamified components to create a more immersive experience.

(design: 12 points;   functionality: 13 points)

- Your application should have (at least):
- a login/signup screen (1 point)
- home screen (or dashboard) (1 point)
- profile screen (1 points)
- 5 other functionalities, enabled by as many screens as needed (2 points per functionality). Please explicitly list and describe these five functionalities. Again note: the functionalities should be different from each other, e.g. changing a setting on and off are **NOT** counted as two functionalities but one.

Include pictures of the prototype and describe its functionalities. Add as many screenshots as needed to demonstrate the functionalities, login/signup, profile, and home screen. For every screenshot, add a *caption* that explains what is depicted in the screenshot.
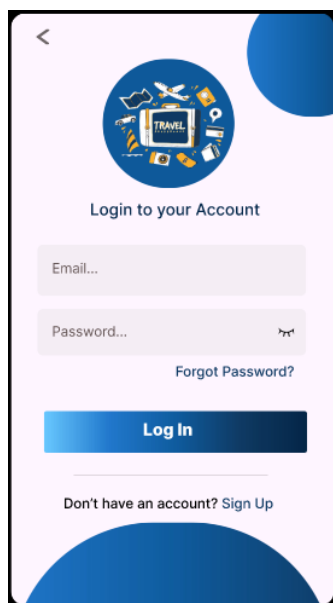
Login / Signup Screen

New users are required to create an account by providing their email address, a password, and confirming it to successfully register with our application. If user forgets his/her name, he or she can navigate to forgot password page by clicking on it.
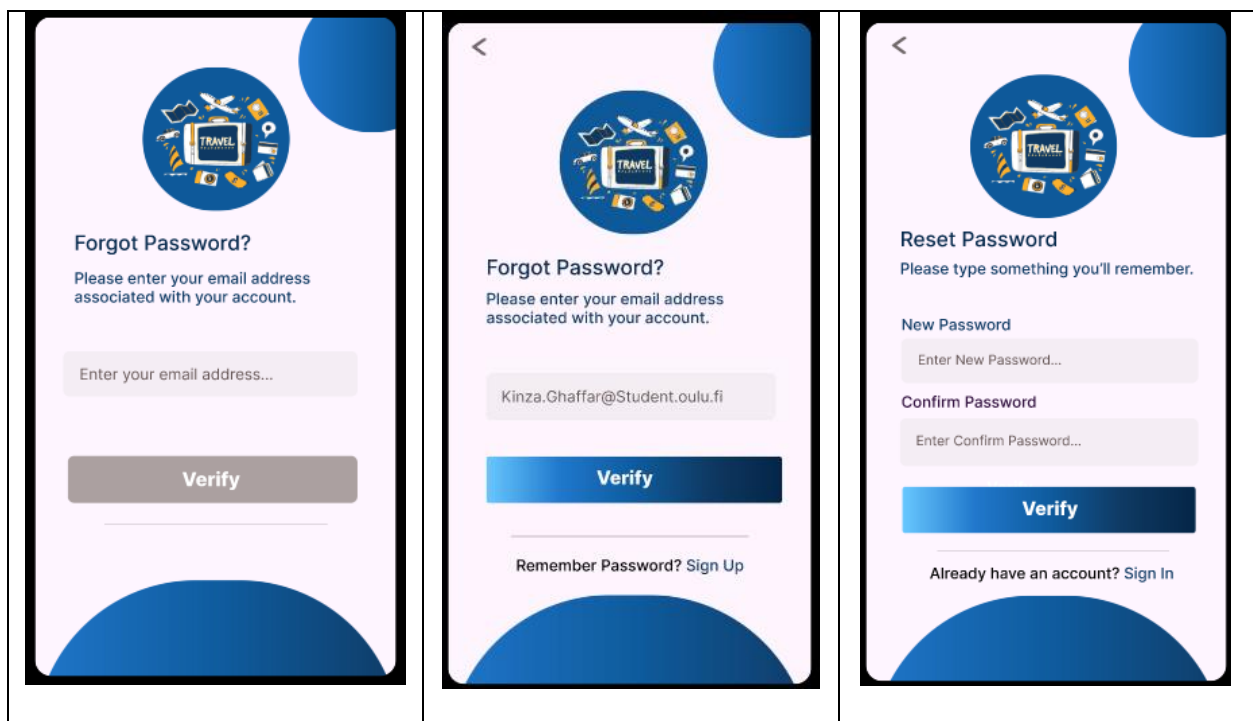

For existing users, accessing the application is as simple as entering a valid email and password combination. If user forgets his/her name, he or she can navigate to forgot password page by clicking on it.

In the event of a forgotten password occurs, users can request a verification link by entering their registered email address.

User Profile

This represents the user profile screen, offering users the flexibility to update their profile picture and access a detailed overview of recent or saved trips. Furthermore, users can monitor their achievement levels, which are determined by the points earned through their travel experiences.
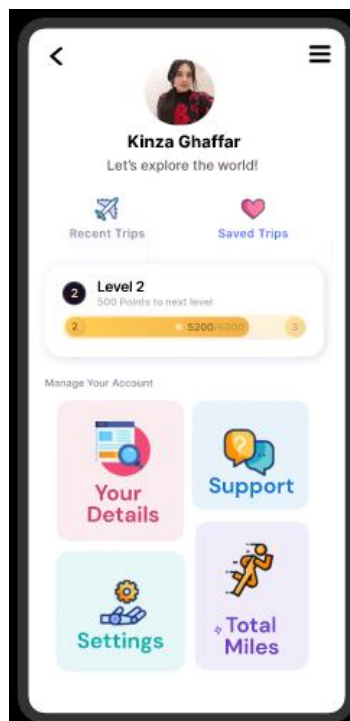
Home Screen / Dashboard

This serves as the home/dashboard screen of the Smart Travel Application, presenting its key features. Users are guided to select specific actions within the application, which include:

- Personalized Itinerary Builder
- AI-Powered Recommendations
- Group Journey
- Social Sharing
- Gamification
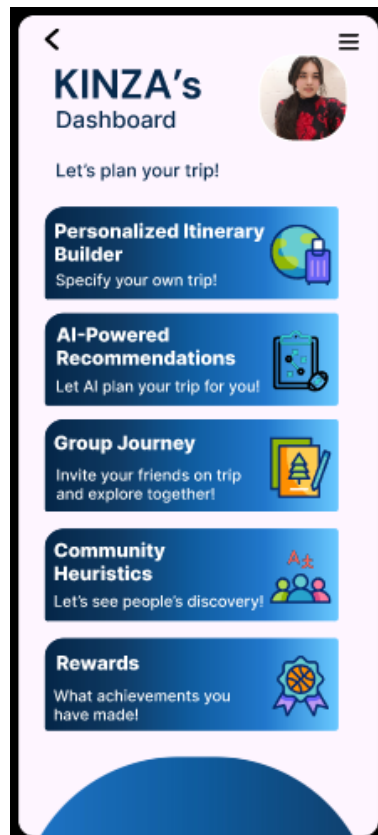
SPECIFIC FUNCTIONALITIES   (10 points)

Personalized Itinerary Builder

Using the interactive features of the app, users can effortlessly plan their travels by sharing details about their hobbies, budget, duration of stay, and any specific preferences. This enables the software to craft personalized travel itineraries that align with each user's unique interests and constraints, ensuring a more enjoyable and customized travel experience.

AI-Powered Recommendations

- Utilizing advanced machine learning algorithms, the application refines its recommendations based on users' preferences and choices. By analyzing these selections, the app suggests a curated list of budget-friendly activities, eateries, and tourist destinations. This dynamic approach ensures tailored suggestions that align precisely with each user's preferences, enhancing their overall travel experience.
- The AI Travel Companion engages in natural language interactions, allowing users to have conversations, exchange ideas, opinions, and travel information. This interactive communication enhances the overall user experience, fostering a dynamic and informative exchange between the user and the AI.

Group Journey

- Users have the option to form groups and extend invitations to friends, creating a collaborative space for planning social events. This feature streamlines the planning process and enhances coordination among group members. By promoting shared experiences during group hangouts, the tool aims to strengthen social connections and make the planning process more enjoyable and efficient for all involved.
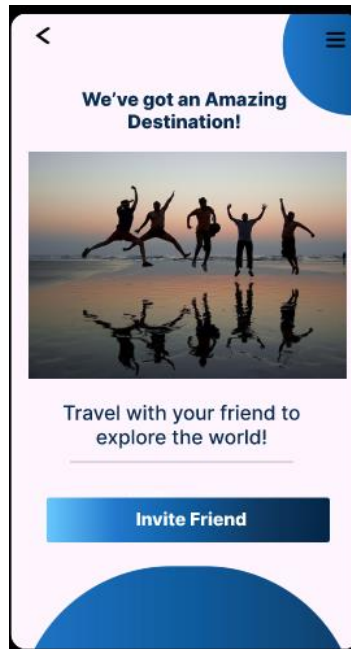
By clicking on "Invite Friends", user will get the option to see list of his or her friends to be invited for a trip as shown in the below screenshot.
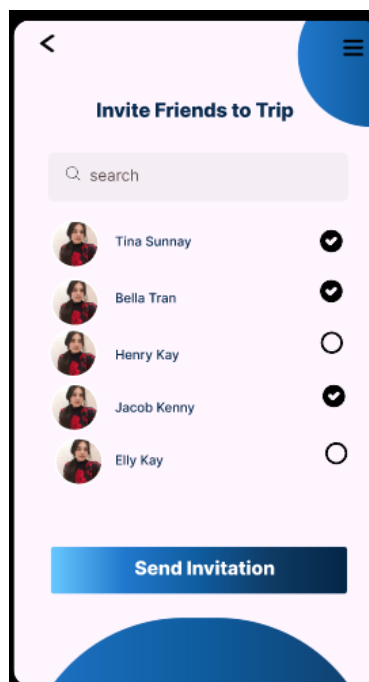
Social Sharing

- The "Social Sharing" feature nurtures a sense of community by urging users to share their travelogues, advice, and recommendations within the app. This interactive platform allows users to document their experiences and provide insightful guidance to others. Through this collaborative approach, a shared knowledge base is created, fostering a community of like-minded travelers. Ultimately, the application transforms into a hub for sharing travel narratives, cultivating connections, and enriching the overall user experience.

In this feature, users can share their achievements and travelogues with the community. It facilitates interaction through likes, shares, and comments, allowing users to discover more noteworthy places to visit based on each other's experiences.
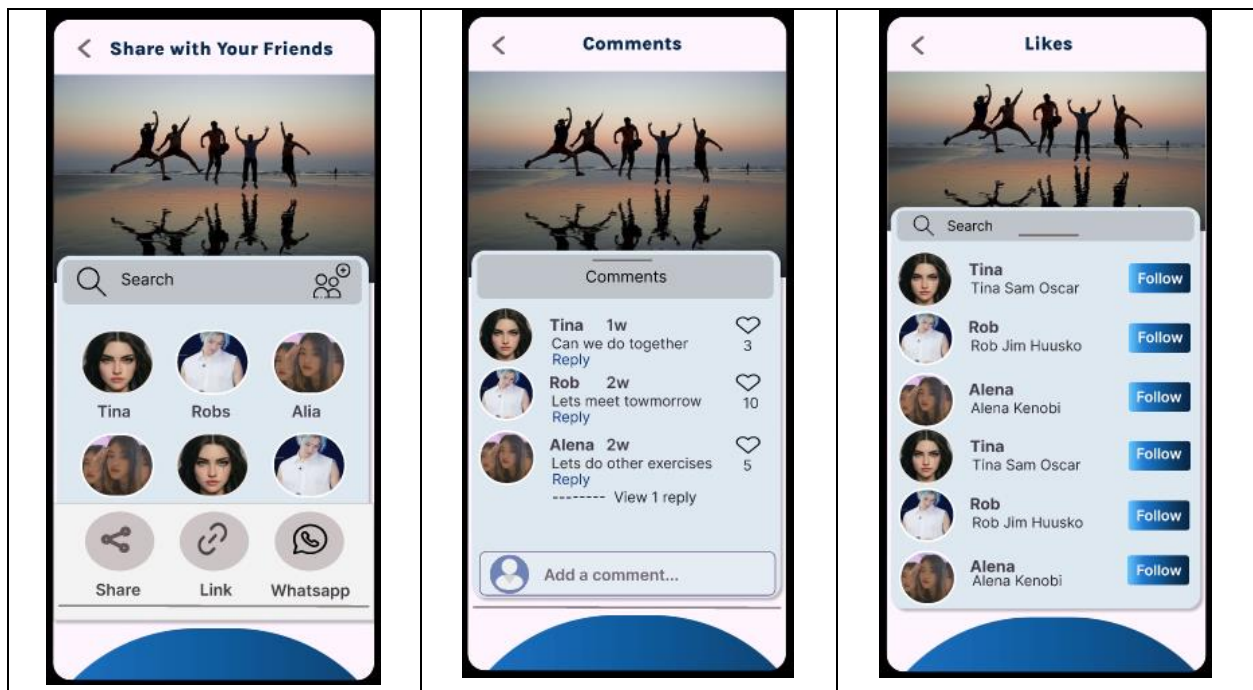
Gamification

The application employs gamification techniques to engage users, enticing them to share and explore new travel experiences in pursuit of badges and rewards. This innovative approach transforms the act of discovery into a participatory and fulfilling experience, fostering a sense of accomplishment and community involvement. By gamification, the application creates a dynamic atmosphere where users are motivated to contribute, share, and celebrate their individual and collective travel achievements.
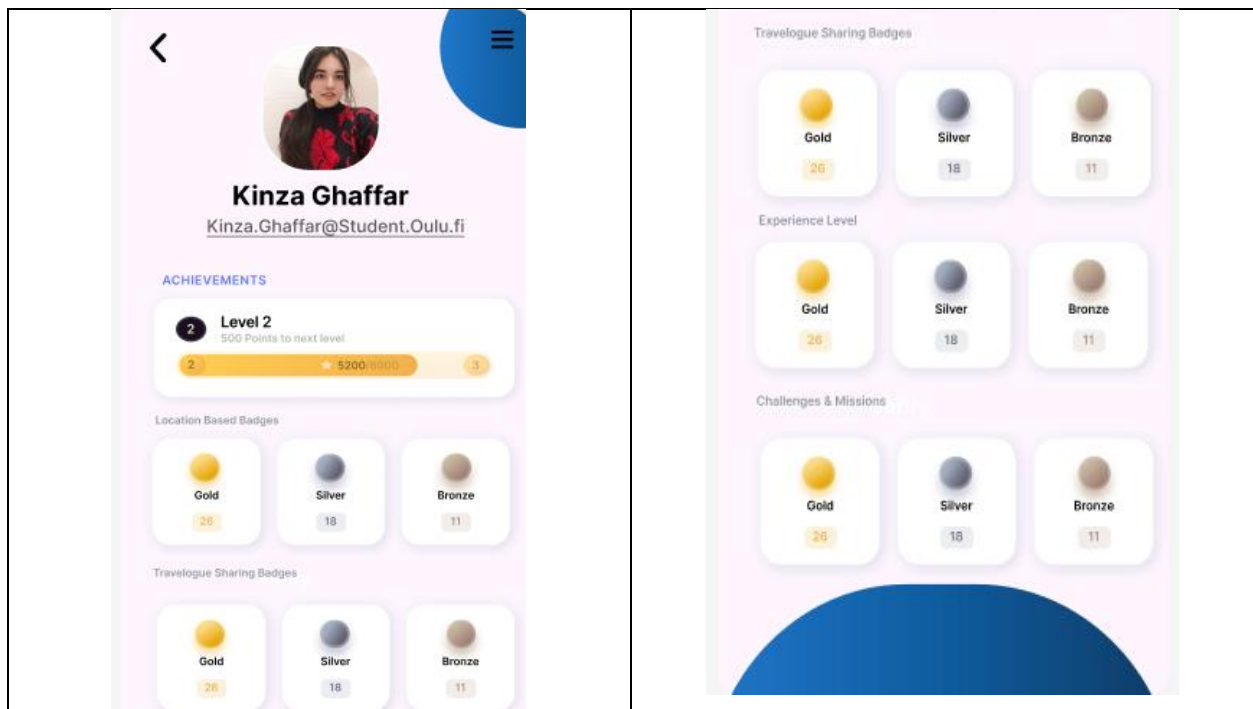
3.2 GROUP EVALUATION SESSIONS   (10 points)

Describe the results of the evaluation sessions separately: think-aloud (5 points) and co-operative evaluation (5 points). A strong report of the co-operative evaluation can make up for points in the other section, and vice versa. Include: What did you observe? What did you learn about your prototype?

Think-Aloud Sessions:

Observations:

- During the think-aloud sessions, participants vocalized their thoughts, actions, and emotions while engaging with the prototype.
- Noted instances where users hesitated, showed confusion, or navigated through the app smoothly.
- Documented specific areas where users faced challenges or encountered difficulties understanding certain features or functions.

Learnings about the Prototype:

- Identified issues related to usability or areas necessitating improvement based on user input. Learned about users' anticipations, inclinations, and pain points while utilizing the app.
- Evaluated whether the design aligned with users' requirements and if they could easily fulfill tasks or objectives within the app.
- Insights into users' responses regarding the app's arrangement, navigation, terminology, and overall user experience.

Cooperative Evaluation:

Observations:

- During the cooperative evaluation, participants collaborated and conversed about their encounters with the prototype.
- Noted any agreements among participants concerning specific features, functions, or design components.
- Documented suggestions, notions, or criticisms that emerged from group discussions.

Learnings about the Prototype:

- Identified shared issues or positive aspects acknowledged by multiple participants.
- Gained insight into varied viewpoints and user behaviors that might not have surfaced during individual assessments.

- Detected trends in user feedback critical for enhancing the app's overall usability and appeal.
- Insights into how users engaged and shared viewpoints about the app within a group context.

Key Insights from Both Evaluation Methods:

Usability Challenges:

- Identified recurring usability challenges like confusion in navigation, unclear labeling, or difficulties in accessing particular features.

User Preferences:

- Understood particular features or functions that received positive feedback from users and those that fell short of their expectations.

Opportunities for Improvement:

- Recognized areas where the prototype could be refined or adjusted to better align with users' requisites and preferences.

Overall User Experience:

- Attained a comprehensive comprehension of the prototype's strengths and weaknesses from both individual and group perspectives.

Synthesizing insights from think-aloud sessions and cooperative evaluations offered a comprehensive outlook on the prototype's performance, user engagements, and potential areas for enhancement. This amalgamation of feedback lays a solid groundwork for refining the app's design and functionality.

3.3 LIMITATIONS   (10 points)

Reflect on the limitations of the chosen usability evaluation methods in this HCI course. What was missing from the evaluation with this method? What other measures would you take to evaluate the app if you would continue developing it?

Limitations of Think-Aloud Sessions and Cooperative Evaluations:

- **Contextual Constraints**: Both approaches might lack real-world context, potentially leading to variations in user behavior between controlled evaluations and actual usage scenarios while traveling.

- **Individual Prejudices:** User feedback in these sessions could be influenced by personal biases or perspectives, possibly diverging widely and not representing the broader user community.
- **Limited Participant Pool:** These methods usually involve a restricted number of participants, making it difficult to encompass diverse viewpoints or uncover less common issues comprehensively.

Additional Evaluation Methods:

- **Observation in Real-Life Scenarios:** Witness users engaging with the app in their natural settings (while traveling) to comprehend their real-life usage patterns and difficulties.
- **Comparative Testing (A/B Testing):** Experiment by presenting various app versions to different user groups to compare their preferences and behaviors.
- **Quantitative Surveys and Analytics:** Gather numerical data through surveys to acquire feedback from a larger user base. Analyze user behavior using in-app analytics tools to grasp usage trends, popular features, and points of disengagement.
- **Accessibility Verification:** Assess the app's accessibility features to ensure inclusivity for users with diverse needs, including those with disabilities.
- **Expert Reviews or Heuristic Evaluations:** Engage usability professionals to assess the app based on established usability principles, aiming to identify potential design deficiencies.
- **Extended Duration Studies:** Conduct studies spanning longer periods to track user interactions and evolving preferences with the app over time.
- **Remote User Testing:** Enable users to evaluate the app remotely and provide feedback asynchronously, widening the user demographic for insights.

Integrating these additional evaluation methods facilitates a more thorough comprehension of the app's usability, user experiences, and areas necessitating enhancement. Each method contributes distinct insights that collectively aid in refining the app's design and functionality comprehensively.

3.4 CONCLUSION   (5 points)

What is your conclusion about your hi-fi prototype?

Also use this section to self-reflect on your project. What was easy, what was difficult, what do you think worked well or did not work so well?

As the hi-fi prototype comes to an end, it becomes clear that the **Smart Travel Application** effectively incorporates a number of user-centric features to improve the trip experience as a whole. Together, all the features make for an extensive and entertaining platform. Looking back on the project, it was comparatively easy to develop the user interface and add

interactive elements. Coming up with and putting into practice the gamification features, such badges, and prizes, was a fun and difficult task. The user experience was made more exciting by this creative component.

Ease of Execution:

- Creating initial design ideas and structuring the app's features was straightforward.
- Implementing fundamental functions like user profiles and navigation was manageable due to available resources and existing knowledge.
- The effective incorporation of social sharing, which promoted a sense of community among users, was what made it work. Encouraging travelers to use the application to share their accomplishments, guidance, and experiences improves the community vibe in general.

Striking a balance between usability and complexity proved challenging in order to keep the software intuitive for a wide range of users. It took careful study of user flows and interface design to strike this equilibrium. I tried to implement and improve all the feedback I received from previous user evaluation and I really enjoyed it while working on designing this application. Ongoing user feedback and iterative design will be key to refining and enhancing the application further.