High-fidelity prototype and planning of second usability evaluation

Human-Computer Interaction Project

Team 1

- Ortega Barrios, Carolina
- Tornier, Milan
- Barbanti, Francesco
- Del Prato, Matteo

Table of contents

1 Prototype design

1.1 List of screens

Screen	Description

Homepage / map	1. Main purpose: to show the presence and location of cafes in the geographical area where users are located, allowing them to launch specific research.
	
	2. Functionality: users can either
	   a. move around the map, looking for places already pinned down
	   b. click on pinned down cafes
	   c. click on the search bar
	   d. click on filters
	
	Please note: map is a scrollable element

Homepage / cafè list	1. Main purpose: to show a list of all available cafes in the area, as well as allow users to launch keywords based researches
	
	2. Functionality: users can either
	   a. scroll down the list
	   b. click on cafes
	   c. type into the search bar and launch a keyword based research
	
	Please note: the list is a scrollable element

Homepage / filters	1. Main purpose: to empower users with a list of filters to perform specific, filtered researches
	
	2. Functionality: users can
	   a. select mandatory and optional filters among the ones presented
	   b. show the results

Homepage / filtered map	1. Main purpose: to showcase results after a keyword - based or filters - based research has been launched
	
	2. Functionality: users can
	   a. move around the map and see where results are located
	   b. click on results

Homepage / offer pop-up	1. Main purpose: to show an overview of the cafè users have clicked on in the map in the homepage and request a booking 2. Functionality: user can

	a. click on the name of the cafè to access the detail page b. inspect the details overview of the place c. select a date when to book a seat d. select the time they want to book the seat from e. choose, if needed, the number of people they want to book for f. confirm the booking g. close the pop-up and go back to the map

Cafè profile page	1. Main purpose: to show extensive information regarding the cafè selected to help users make informed decisions, allow them to rate the place and request a booking
	
	2. Functionality: users can either
	    a. scroll down to inspect details
	    b. add the cafè to their wishlist
	    c. inspect the location (meaning they can click on the address and be redirect to an external map app)
	    d. click on the "book now" button
	    e. click on the "leave a review" button
	
	Please note: the page is a scrollable

Review page	1. Main purpose: to allow users to leave a review and rate a place they have been to
	
	2. Functionality: the screen allows users to
	    a. assign a star rating
	    b. leave a comment
	    c. submit the review or cancel and go back to the cafè detail page

Activity / upcoming activities	1. Main purpose: to showcase users' activity in the app - as in upcoming bookings - and remind them key cafes information along with bookings details
	
	2. Functionality: users can either
	    a. see an overview of their upcoming activities
	    b. inspect few key information related to the place they have booked a seat in, along with booking details

Friends' page / friends list	1. Main purpose: to showcase friends in the network
	
	2. Functionality: users can
	    a. see friends they have in their network
	    b. click on friends' profiles and inspect their activities
	    c. look for new friends to add

Friends' page / friends' details and suggestions	1. Main purpose: to showcase friends' details along places they have reviewed

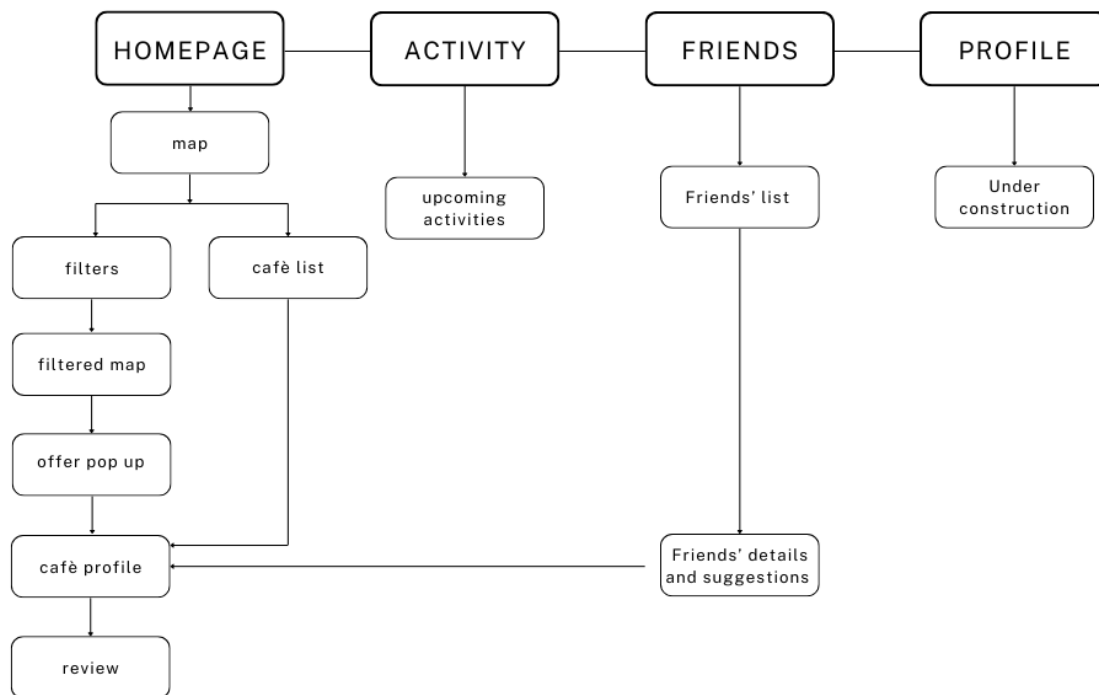|	2. Functionality: users can
	    a. inspect friends' details
	    b. see which places friends suggest (name of the place and picture), along with their reviews and rating

1.2 Navigation map

The app navigation map outlines the flow between different screens and features in the SitDown app, divided across four main screens: Homepage, Activity, Friends, and Profile.

1) HOMEPAGE

The **Homepage** is the primary screen from where users can access the **map page**. From here, users can either:

1) go to the **filters page** and launch a filtered research, being redirected to the filtered map screen
2) click on the search bar and access the **cafè list** page. From here, they can either:
   - i) launch a keyword - based research, and get redirected to the **cafè profile page**
   - ii) click on the cafes listed and get redirected to the **cafè profile page**
3) stay on the **map page** and inspect cafes details already pinned down, without applying any research

Once they click on a cafè icon from the map, they go through the **offer pop up**. From here, they can:

1) click on the cafè name to inspect the place, and therefore navigate to the **cafè profile page**
2) select a day and a time to book for, and get redirected to the **activity page**, where they'll see the **upcoming activities**

From the **cafè detail screen**, users can either:

1) scroll down the page to inspect details
2) access the **review page** to rate the place and review the place they have selected and are currently inspecting

2) ACTIVITY

In the Activities page, users directly land on the screen showing **upcoming activities.** Here, they can see their booking confirmation cards**.**

3) FRIENDS

The **Friends page** shows the **list of friends** users have in their own network. Clicking on a profile will lead to the **friends' details and suggestions page**, which shows the places the selected user has been to. By clicking on any cafè, users will get redirected to the specific **cafè profile page**.

4) PROFILE

The Profile page has not been prototyped and is currently under construction.

2 Planning of the usability testing

2.1 Evaluation goals

Perform a usability testing of the high-fidelity prototype, including performance measuring. The results obtained for effectiveness, efficiency and satisfaction will be checked against optimal values that are defined in this document.

2.2 Dates, places and roles

Test	Date	Place	Comments
1	13/05/2024	IMDEA Software Institute, room 279	Number of expected participants: 2 Estimated time: 15:30 - 17:00 (1h 30min)
2	14/05/2024	IMDEA Software Institute, room 279	Number of expected participants: 2 Estimated time: 12:00 - 13:30 (1h 30min)

3	16/05/2024	IMDEA Software Institute, room 279	Number of expected participants: 2 Estimated time: 14:00 - 15:30 (1h 30min)
4	20/05/2024	IMDEA Software Institute, room 279	Number of expected participants: 2 Estimated time: 15:30 - 17:00 (1h 30min)
5	21/05/2024	IMDEA Software Institute, room 279	Number of expected participants: 2 Estimated time: 14:30 - 16:00 (1h 30min)

Test	Facilitator	Observers
1	Milan Tornier	Carolina Ortega, Francesco Barbanti, Matteo Del Prato
2	Carolina Ortega	Milan Tornier, Francesco Barbanti, Matteo Del Prato
3	Francesco Barbanti	Milan Tornier, Carolina Ortega, Matteo Del Prato
4	Matteo Del Prato	Carolina Ortega, Francesco Barbanti, Milan Tornier
5	Milan Tornier	Carolina Ortega, Francesco Barbanti, Matteo Del Prato

2.3 Participants

Participants	Total number of expected participants: 10 Total number of participant per Jason persona: 6 Total number of participant per Britney persona: 4
Recruiting	The recruiting will depend on the availability of the participants to be able to undergo a 45min testing. They will be contacted via text message and in the UPM Campus. As we are dependent on the time availability of the participants, if they don't show up the day of the testing we might need to find a new participant and time slot for them.

2.4 Sequence

2.4.1 Welcome text

Thank you very much for coming and agreeing to help us during this usability test today. My name is _____ and these are my colleagues _____ : we are conducting this test for the Polytechnic University of Madrid. Our project is to develop an application called SitDown to help students and workers find ideal places for study or work, and we are interested in understanding the challenges they face during the process.

Today we'll be running through a high-fidelity prototype of the SitDown app. During the entire time that we will be conducting the testing, we encourage you to think aloud: this means to say everything that you think and feel in every step of the way, there are no right or wrong thoughts and it will be very beneficial for us to know your first impression, frustrations and thoughts on each prototype. Please have in mind that we are testing the app, not you. Any issue you may find is about the design and not your mistake.

We therefore encourage you to ask questions if you have any, and share your thoughts with us during your performance: our goal is not to judge you, but to learn from you.

We are going to use a stopwatch to time how long it takes you to accomplish a given task and make an accurate note of how you interact with it.

This is the order and pace of our session today:

1. Firstly, we will be asking you for personal information
2. Secondly, we will ask you to do the usability testing of our prototype: you will have to perform three different tasks and we will be gathering data and observations
3. Finally, you will be asked to fill out a user satisfaction questionnaire to enable us to measure your level of satisfaction with the app, as well as a user experience questionnaire, and to give us general impressions you might have had.

Feel free to ask in case something is unclear at any point or if you need more information. Do you have any questions before we start with the test?

2.4.2 Process

1. Say the "welcome text" (2.4.1) to the participant.
2. Gather personal information (2.5).
3. Do the usability testing of the prototype. Ask the participant to perform the tasks (2.6), gather data (2.7) and observations (2.8).
4. After using the prototype, ask the participant to fulfil the user satisfaction questionnaire (2.9), the user experience questionnaire (2.10) and ask for general impressions (2.11).

2.5 Personal information questionnaire

The questionnaire will be in the format of an electronic document, and it is intended to obtain demographic anonymous information from the participants. During the usability test it will be more convenient and fast for the facilitators and observers to gather all the information in one place.

2.6   Tasks to be performed by participants

Task	1
Title	Find a place with requirements
Starting situation	You're at home and are looking for a place to work on your laptop. You open the SitDown App.
Task instructions	Find a place for laptop work for the 27th of May, where you can study 2 hours. It should allow laptop work, have wi-fi, provide vegan lunch and be no farther than 2km from your place. Book two seats for you and a friend from 12:00 -14:00

Task	2
Title	Add a cafe to your wishlist
Starting situation	Your friend Matteo just told you about a halal place that has good food. You open the sitdown app to add it to your wishlist.
Task instructions	Look for a place that is halal and that one of your friends likes. Add this place to your wish list.

Task	3
Title	Leave a review for "Sukis Cafe"
Starting situation	You are at home after coming back from working at Sukis Cafe, you liked it so much that you want to leave a positive review online.
Task instructions	You went to Suki's cafe and want to leave a review. Give it a rating of 5/5 and write "Amazing Coffee".

2.7   Measurements

2.7.1   Objective measurements

Measurement	Description
Time	Time required to complete one task
Actions	Number of elemental actions performed (click, tap, …) to complete one task.
Mistakes	Number of mistakes made during one task.
Success	Yes/no (whether the participant succeeds at completing the task).

2.7.2   Optimal values

Task	Time	Actions
T1	1 min 20 seconds	14
T2	25 seconds	4
T3	40 seconds	8

2.8 Observation sheet

During the usability test, the linked template will be used to collect both objective data (time, actions, mistakes, success), comments said by the participants and relevant observations made.

2.9 User satisfaction: SUS questionnaire

Participant ID	
Date and time	

Reply with your degree of agreement or disagreement to the following ten sentences, where 1 means "I totally disagree with the sentence" and 5 means "I totally agree with the sentence".

	1	2	3	4	5
I think that I would like to use this system frequently.					
I found the system unnecessarily complex.					
I thought the system was easy to use.					
I think that I would need the support of a technical person to be able to use this system.					
I found the various functions in this system were well integrated.					
I thought there was too much inconsistency in this system.					
I would imagine that most people would learn to use this system very quickly.					
I found the system very cumbersome to use.					
I felt very confident using the system.					
I needed to learn a lot of things before I could get going with this system.					

The linked template will be used for the SUS questionnaire.

2.10 User experience: UEQ questionnaire

Participant ID	
Date and time	

For the assessment of the product, please fill out the following questionnaire. The questionnaire consists of pairs of contrasting attributes that may apply to the product. The circles between the attributes represent gradations between the opposites. You can express your agreement with the attributes by ticking the circle that most closely

reflects your impression. Please decide spontaneously. Do not think too long about your decision to make sure that you convey your original impression.

	1	2	3	4	5	6	7		
annoying	☐	☐	☐	☐	☐	☐	☐	enjoyable	1
not understandable	☐	☐	☐	☐	☐	☐	☐	understandable	2
creative	☐	☐	☐	☐	☐	☐	☐	dull	3
easy to learn	☐	☐	☐	☐	☐	☐	☐	difficult to learn	4
valuable	☐	☐	☐	☐	☐	☐	☐	inferior	5
boring	☐	☐	☐	☐	☐	☐	☐	exciting	6
not interesting	☐	☐	☐	☐	☐	☐	☐	interesting	7
unpredictable	☐	☐	☐	☐	☐	☐	☐	predictable	8
fast	☐	☐	☐	☐	☐	☐	☐	slow	9
inventive	☐	☐	☐	☐	☐	☐	☐	conventional	10
obstructive	☐	☐	☐	☐	☐	☐	☐	supportive	11
good	☐	☐	☐	☐	☐	☐	☐	bad	12
complicated	☐	☐	☐	☐	☐	☐	☐	easy	13
unlikable	☐	☐	☐	☐	☐	☐	☐	pleasing	14
usual	☐	☐	☐	☐	☐	☐	☐	leading edge	15
unpleasant	☐	☐	☐	☐	☐	☐	☐	pleasant	16
secure	☐	☐	☐	☐	☐	☐	☐	not secure	17
motivating	☐	☐	☐	☐	☐	☐	☐	demotivating	18
meets expectations	☐	☐	☐	☐	☐	☐	☐	does not meet expectations	19
inefficient	☐	☐	☐	☐	☐	☐	☐	efficient	20
clear	☐	☐	☐	☐	☐	☐	☐	confusing	21
impractical	☐	☐	☐	☐	☐	☐	☐	practical	22
organized	☐	☐	☐	☐	☐	☐	☐	cluttered	23
attractive	☐	☐	☐	☐	☐	☐	☐	unattractive	24
friendly	☐	☐	☐	☐	☐	☐	☐	unfriendly	25
conservative	☐	☐	☐	☐	☐	☐	☐	innovative	26

The linked template will be used for the UEQ questionnaire.

2.11 General impressions

Participant ID	
Date and time	
1. What are the main problems you have found while using this prototype?	

2. What is the part of the prototype that has been more difficult to understand? Why?
3. What have you liked most of the prototype? Why?
4. Can you describe your overall experience with this prototype?

The linked template will be used to collect general impressions.