King Saud University

College of Computer and Information Sciences

Information Technology Department

IT214 User Experience Design

Second semester, 2023

Step 1: Participants

Participant Profiles

We conducted our usability testing with 6 participants of ages 18-30, five of them were females, and one were males.

All our test participants have prior Knowledge of experiencing mobile and website interfaces. Mazen, Lama, and Deemah have experienced products like our product, whereas Raneem, Raghad, and Aljory have not.

Participant name	Age	Gender	Experience with similar products (1-5)	Use of mobile/website interface (1-5)
1 Raneem	18	Female	2	5
2 Mazen	30	Male	4	5
3 Lama	20	Female	4	5
4 Raghad	22	Female	1	5
5 Aljory	19	Female	1	5
6 Deemah	21	Female	3	5

Step 2: Procedure

Outline of the procedure

After being done with the prototype of TRACKY, we prepared a consent form, questionnaires and a

facilitator script, and then chose 6 participants of our research sample to conduct the usability test.

We arranged one-to-one sessions with our participants at the date and time they preferred. At the

Beginning of each session we welcomed our participants and provided them with the consent form to take their

confirmation for using the results of their test to improve TRACKY.

We asked the participants to think aloud while performing the task to tell us what they were doing and why they were doing it this way. Then we read

the scenario and gave them the 5 tasks that they will test using the application.

After the participant finished the tasks, we gave them a questionnaire to answer it. We

thanked the participants for their cooperation in the end.

Timeline

The test was conducted between 11th of April to 14th of April 2024, Deemah finished the test in 7 minutes which is the least test time, while Lama finished the test in 20 minutes. Session's time varied between 7-20 minutes.

Participant name	Day	Date	Start session time	Finish session time	Duration of session
1 Raneem	Thursday	11/4/2024	4:00 AM	4:10 AM	10m
2 Mazen	Thursday	11/4/2024	4:20 AM	4:28	8m
3 Lama	Thursday	11/4/2024	7:40 AM	8:00 AM	20m
4 Raghad	Thursday	11/4/2024	8:10 AM	8:20 AM	10m
5 Aljory	Sunday	14/4/2024	3:05 PM	3:16 PM	11m
6 Deemah	Sunday	14/42024	3:30 PM	3:37 PM	7m

Tasks

We tested the participants using 5 tasks that will mature the smoothness of the interface, navigation and readability.

Task #	Task (as it is was presented to users)	Objective of the task (What was this task designed for measuring?)
1	Create a new account.	Checks if the user can easily create an account.
2	Add a goal to sleep for 8 hours a day for a week.	Checks if the user can add a goal with no issues.
3	Add a new profile in the Meals section, then delete it.	Checks if the user will be familiar with how to add a new profile, then delete it.
4	Check your private messages in the Steps Section and react to the sent message, then share your results for today.	Checks if the user will know how to reach the private messages section and will use it correctly.
5	Change your privacy settings.	Checks if the user will know where to find options related to the account's privacy and such.

Performance Measures and Feedback

We used Effectiveness, Efficiency and satisfaction as metrics to measure the performance.

By counting the number of tasks completed successfully and the number of errors per task,

we were able measured the effectiveness of the app.

By calculating the time to finish the task, and the average of times. we were able to measure the

efficiency.

We made a survey to take the participants feedback about the tasks to measure the satisfaction.

Metric	How was it measured?	How was the data created/captured?
Effectiveness	Task success	By observing the participant's performance and checking out the tasks they were able to complete successfully.
	Number of Errors	By observing the participant's performance and counting the number of errors they made throughout the task.
Efficiency	Time on Task	By setting a timer for every task and calculating the average time.
Satisfaction	User surveys	By creating a form for the participants to full in order to gather information about them.

Step 3: Usability Results and Discussion

Results:

1- Task Completion Success Rate and Time on Task

Display the task completion rates in a table that shows the participant by task completion rates and the mean rate across task (see example table).

Calculate time on task for each participant who completed the task. Some tasks were inherently more difficult to complete than others and is reflected by the average time on task

Participant	Task 1		Task 2		Task 3		Task 4		Task 5	
	complete task	Time on Task	complete task	Time on Task	complete task	Time on Task	complete task	Time on Task	complete task	Time on Task
P1	√	80s	√	30s	√	45s	√	50s	√	15s
P2	√	60s	√	28s	√	40s	√	40s	√	10s
P3	√	34s	√	30s	√	39s	√	20s	√	14s
P4	√	41s	√	45s	√	38s	√	24s	√	19s
P5	√	110s	√	60s	√	80s	√	180s	√	210s
P6	√	90s	√	30s	√	50s	√	130s	√	90s
Completion Rates	6/6 100%		6/6 100%		6/6 100%		6/6 100%		6/6 100%	
AVG . Time on Task		69s		37s		48s		74s		59s

2- Errors

A non-critical error is an error that does not prevent successful completion of the scenario.

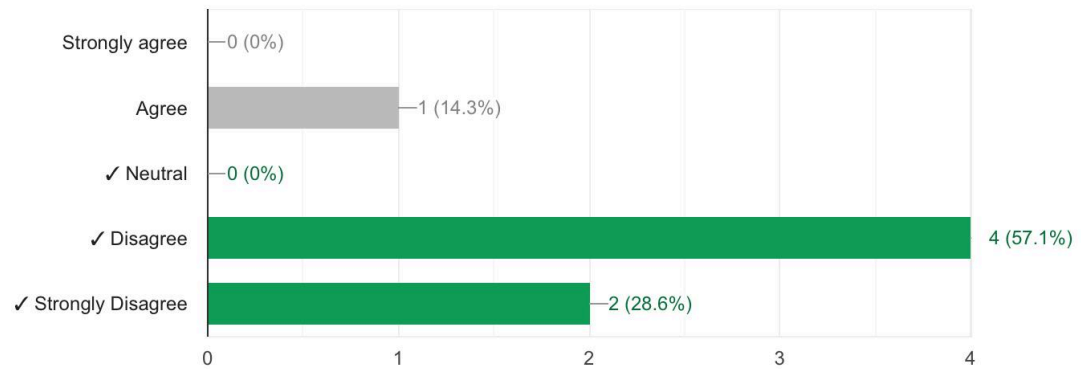| Tasks	Number of errors	Errors description	Critical or non-critical (C,NC)
Task 1	0		
Task 2	1	the user got confused if they need to click the sleep button or the goals in the home	non-criticalal
Task 3	1	The user didn't click save after filling account information, so the app didn't save the account	critical
Task 4	1	The user didn't know how to react to the message	critical
Task 5	2	Both users got lost in settings	non-critical
Task 6	0		

3- Satisfaction questionnaire

Use questionnaire technique to ask the users how they feel about the task in terms of ease of use and understanding. You should have at least 5 closed questions. Check online for examples!

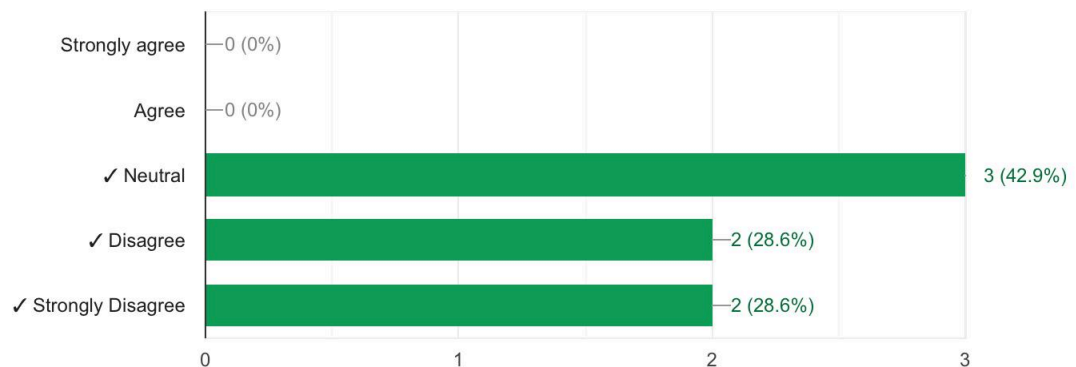*The task procedure is complex and not easy to follow.*   Copy

6 / 7 correct responses

Strongly agree	0 (0%)
Agree	1 (14.3%)
✓ Neutral	0 (0%)
✓ Disagree	4 (57.1%)
✓ Strongly Disagree	2 (28.6%)

The app is inconsistence.   Copy

7 / 7 correct responses

Strongly agree	0 (0%)
Agree	0 (0%)
✓ Neutral	3 (42.9%)
✓ Disagree	2 (28.6%)
✓ Strongly Disagree	2 (28.6%)

I don't understand every function of the app.   Copy

5 / 7 correct responses

Strongly agree	0 (0%)
Agree	2 (28.6%)
✓ Neutral	3 (42.9%)
✓ Disagree	2 (28.6%)
✓ Strongly Disagree	0 (0%)
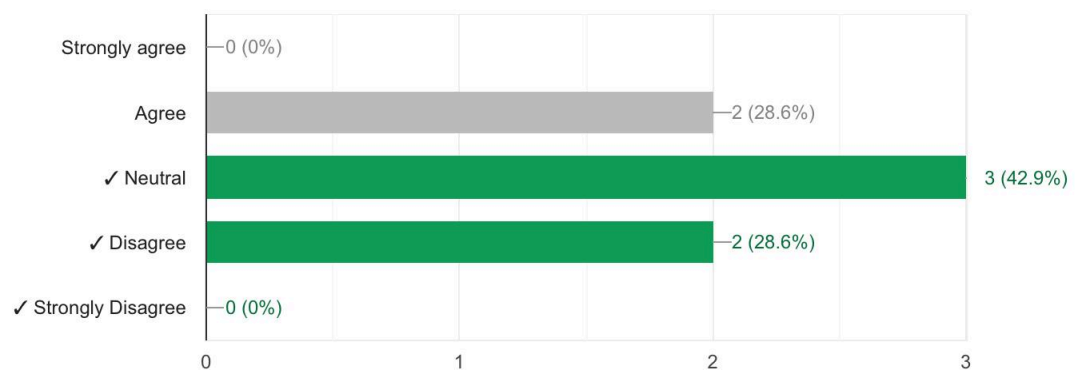
I can't imagine myself using this system in the future.

6 / 7 correct responses

Strongly agree	—0 (0%)
Agree	—1 (14.3%)
✓ Neutral	—0 (0%)
✓ Disagree	6 (85.7%)
✓ Strongly Disagree	—0 (0%)

0   1   2   3   4   5   6
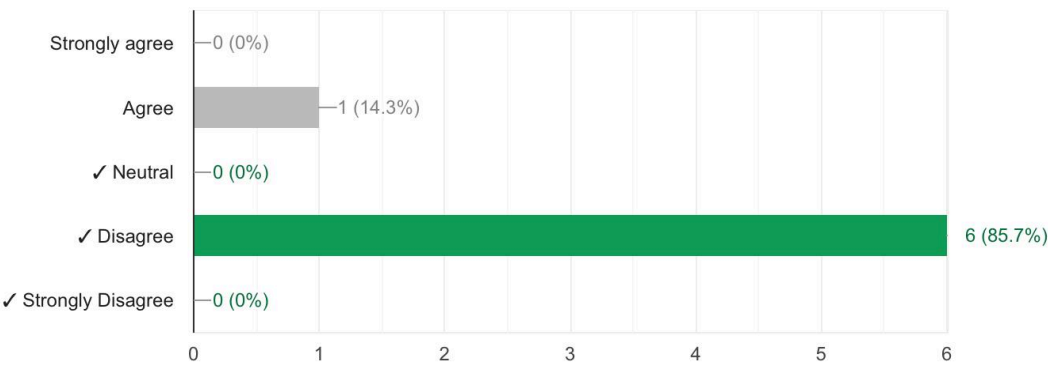
Satisfaction table

Task	Question 1 Avg.	Question 2 Avg.	Question 3 Avg.	Question 4 Avg.	Question 5 Avg.	Overall
1	5.0	4.8	5.0	4.6	4.8	4.84
2	4.8	3.9	4.2	4.0	4.3	4.24
3	3.9	4.1	4.2	5.0	4.0	4.24
4	4.0	3.8	4.1	4.8	3.9	4.12
5	4.3	4.6	3.7	4.0	4.5	4.22

4- Summary of Data

The table below displays a summary of the test data. Low completion rates and satisfaction ratings and high errors and time on tasks are highlighted in red.

For example:

Summary of Completion, Errors, Time on Task, Average Satisfaction

Task	Task Completion	Errors	Time on Task	Satisfaction*
1	6	0	69	4.84
2	6	1	37	4.24
3	6	1	48	4.24
4	6	1	74	4.12
5	6	2	59	4.22

* Satisfaction = Average you got from the questionnaire for each task.

Discussion:

1- Describe a <u>critical problem</u> + screenshot that shows this problem

There is no "change password" option.

2- Describe a <u>major problem</u> + screenshot that shows this problem

the user adds the goal in these categories but doesn't receive notifications to complete them and can easily forget about them.

3- Describe a <u>minor problem</u> + screenshot that shows this problem

The user didn't know how to react to the message.

Step 5: Recommendations

After we completed the interviews we asked the participants if they had any ideas to help us improve the usability of the application. As a first idea they suggested adding a "meals history" button which allows the user to see her/his recent meals. The second suggestion would be the "dark mode" option, for users to be able to use the app in the dar