Semestrální práce z předmětu PDA

Android Sport app

Testing

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link to a table with test and survey results:

🟩 PDA testing

Goals specification

The primary purpose of the evaluation is to test the functionality of the mobile app in basic usage scenarios, including viewing exercises and their techniques, creating custom workout programs, recording protein intake with associated data, and tracking basic body parameters. The goal of the evaluation is to ensure data accuracy, usability, and identify potential issues within these core functions. Testing will help gather new data on undocumented items, as well as identify new obstacles, test in validation of the data, and help eliminate potential problemsб.

Participant selection

	P1	P2	P3	P4
Age	19	20	19	20
Gender	F	M	M	M
Work and/or study?	Study	Study	Study	Study
Are you going to the gym?	Yes	Yes	Yes	Yes
How often do you go to the gym?	3 times per week	3 times per week	3 times per week	1 time in 2 week
Do you have a stable workout program?	Yes	Yes	Yes	Yes
Do you use an app/notebook to record your workouts?	No	Yes, I use app	Yes, I use app	Yes, I use app
Do you keep track of your nutrition?	No	Yes	Yes	No
Do you count your protein intake?	Yes	Yes	Yes	No
Do you use a notebook/app for this?	Yes	Yeah, I'm using an app.	Yeah, I'm using an app.	No
Do you consider yourself an advanced phone user?	Partially	Advancet level	Advancet level	Advencet level
How many data recording applications (diaries, logs) do you use on a regular basis?	2	3	4	4

Test setup

Location

The prototype was tested in an apartment. The apartment is located in one of the dormitory neighborhoods of Prague, Czech Republic.

Equipment

As the testing mobile device, we used Samsung Galaxy S21

Data collection

During each session, we recorded the screen of the mobile device and notes about the problems. photos taken when adding the product to the protein tracker will also be collected.

Procedure

- Session Duration:

Each session lasts between 20 and 35 minutes.

Preparation of participants:

- Introduction:

Briefly introduce the purpose of the study and explain what will happen during the session.

- Consent Form:

Ask each participant to sign a consent form indicating their participation and use of data.

- Pre-survey:

Conduct a survey of participants according to the list of questions

Age
Gender
Work and/or study?
Are you going to the gym?
How often do you go to the gym?
Do you have a stable workout program?
Do you use an app/notebook to record your workouts?
Do you keep track of your nutrition?
Do you count your protein intake?
Do you use a notebook/app for this?
Do you consider yourself an advanced phone user?

How many data recording applications (diaries, logs) do you use on a regular basis?

App Overview:

- Explain the goals:

Briefly explain the purpose of the app and its main features.

- Demonstration:

Give a short demonstration, show how to navigate the app without revealing the tasks they will need to complete.

Instructions for completing the tasks:

- Instructions:

Give each participant 7 simple tasks that they must complete in a given order.

- Observation:

Observe the participants during each task, noting any difficulties or confusion.

- Time Measurement:

Record the time taken to complete each task to assess usability and effectiveness.

Post-test procedure:

- Evaluation table:

Ask each participant to fill in a table with their overall opinion of the app, rating different aspects such.

How did you enjoy using the app overall?
How intuitive was the process of completing tasks?
How does the application meet your functionality expectations?
How convenient was it to add exercises to your training program?
How convenient was it to record your protein intake?
How would you rate the visual design and attractiveness of the interface?
How comfortable was it to read the text and view the images?
How would you rate the speed of the application?

Were there any errors or glitches with the application?(Full answer)
How likely are you to use this app in the future?
How likely are you to recommend this app to others?
How easy was it to understand the application interface?

Data collection and analysis:

- Collect feedback:

Compile all responses from surveys and notes from interviews.
Find common themes or problems experienced by multiple participants.

- Problem Prioritization:

Prioritize problems by severity and frequency to guide further development and improvements.

Trail run

Before performing the test is needed

1. Make sure that the tester understands the essence of the application and what needs to be done in the test.
2. Conduct a mini survey of the subject,
3. Reset the application to factory settings.
4. Prepare an environment for recording results

Testing

Task 1: Check if the data is saved in Settings after entering it and quitting the application:

Recommended walkthrough:
1. The user opens a mobile app.

2. The user accepts permission to send notifications and use the camera
3. The user enters Settings.
4. The user fills in the data.
5. The user logs out of the application / turns off the phone.
6. The user logs back into the app and into settings mode.

Test 2: Find where the daily required protein intake can be changed and check if the value in the tracker changes

Recommended walkthrough:
1. The user opens a mobile app.
2. The user goes into the settings.
3. The user changes the value in the ProteinNorm field.
4. The user enters the protein tracker section.
5. The user checks the entered values against what the application shows.

Test 3: Add a meal to the protein tracker

Recommended walkthrough:
1. The user opens a mobile app.
2. The user enters the protein tracker section.
3. The user enters the Products subsection.
4. The user clicks on the plus sign in the bottom right corner.
5. The user fills in the data.
6. The user takes a photo or adds from the gallery.
7. The user clicks Save.

Test 4: Find a place where you can set a protein reminder and see if the notifications come in

Recommended walkthrough:
1. The user logs into the mobile app.
2. The user enters the protein tracker section.
3. The user clicks on the button to set notifications.
4. The user sets the notification to be sent in a couple of minutes.
5. The user waits for the notification to arrive.

Test 5: View description of any exercise

Recommended walkthrough:
1. The user logs into the mobile app.
2. The user goes to the Exercises section.
3. The user selects any category of exercises.
4. The user selects any exercise.
5. The user looks at the description/picture of the exercise.

Test 6: Create own training program in the Workouts section and view it after creation

Recommended walkthrough:
1. The user logs into the mobile app.
2. The user goes to the Workouts section.
3. The user clicks on the plus sign in the bottom right corner.
4. The user selects the name of the training program.
5. The user selects the exercises that will be in the program.
6. The user clicks on the check mark in the upper right corner.
7. The user clicks on the name of their workout.
8. The user looks at his workout program

Test 7: User discretion test

The user will choose the sections to test based on past tests. Recommendation: test different input fields for non-standard data and try to do non-standard actions in the program.

Result

Post-test survey

	P1	P2	P3	P4
Age	19	20	19	20
Gender	F	M	M	M
Work and/or study?	Study	Study	Study	Study
Are you going to the gym?	Yes	Yes	Yes	Yes
How often do you go to the gym?	3 times per week	3 times per week	3 times per week	1 time in 2 week
Do you have a stable workout program?	Yes	Yes	Yes	Yes
Do you use an app/notebook to record your workouts?	No	Yes, I use app	Yes, I use app	Yes, I use app
Do you keep track of your nutrition?	No	Yes	Yes	No
Do you count your protein intake?	Yes	Yes	Yes	No
Do you use a notebook/app for this?	Yes	Yeah, I'm using an app.	Yeah, I'm using an app.	No
Do you consider yourself an advanced phone user?	Partially	Advancet level	Advancet level	Advencet level
How many data recording applications (diaries, logs) do you use on a regular basis?	2	3	4	4

Results of each test taker

P1

start time: 20:31		P1	
		T1	
		T2	
	20:40	T3	Exit from camera able only after taking a photo
		T4	
		T5	
		T6	
end time 20:55		T7	

P2

start time: 20:31		P2	
		T1	
		T2	
	20:37	T3	Protein tracker is faulty when entering a string where an Integer is needed
	20:40	T4	The user did not allow notifications to be sent when the application was first launched, which is why the notification was not received.
		T5	
		T6	
end time 20:49		T7	

P3

start time: 11:52		P3	
		T1	
	11:55	T2	A bug was found in which the entered protein rate was not displayed correctly
		T3	
		T4	
		T5	
		T6	
end time12:20	12:17	T7	If you quickly open the keyboard when opening the camera, it will be visible in front of the camera

P4

start time 20:42		P4	
		T1	
	20:47	T2	It was difficult for the user to find where to record calories in the settings.
	20:55	T3	Protein tracker is faulty when entering a string where an Integer is needed
		T4	
		T5	
		T6	
end time 21:05		T7	

# Results for each test task

Task 1

None of the testers had any problems. Everyone found the settings section and entered the data and checked that it was saved.

Task 2

Only the third tester had problems. All other testers had no problems finding and entering data. For the third user, the protein tracker did not work when entering a String into the daily value value.

Task 3

Two testers found a place when the input was incorrect, the application does not work correctly. For another, it was problematic to find exactly where to add a meal. It was also noticed that you can exit the camera mode only after taking a photo.
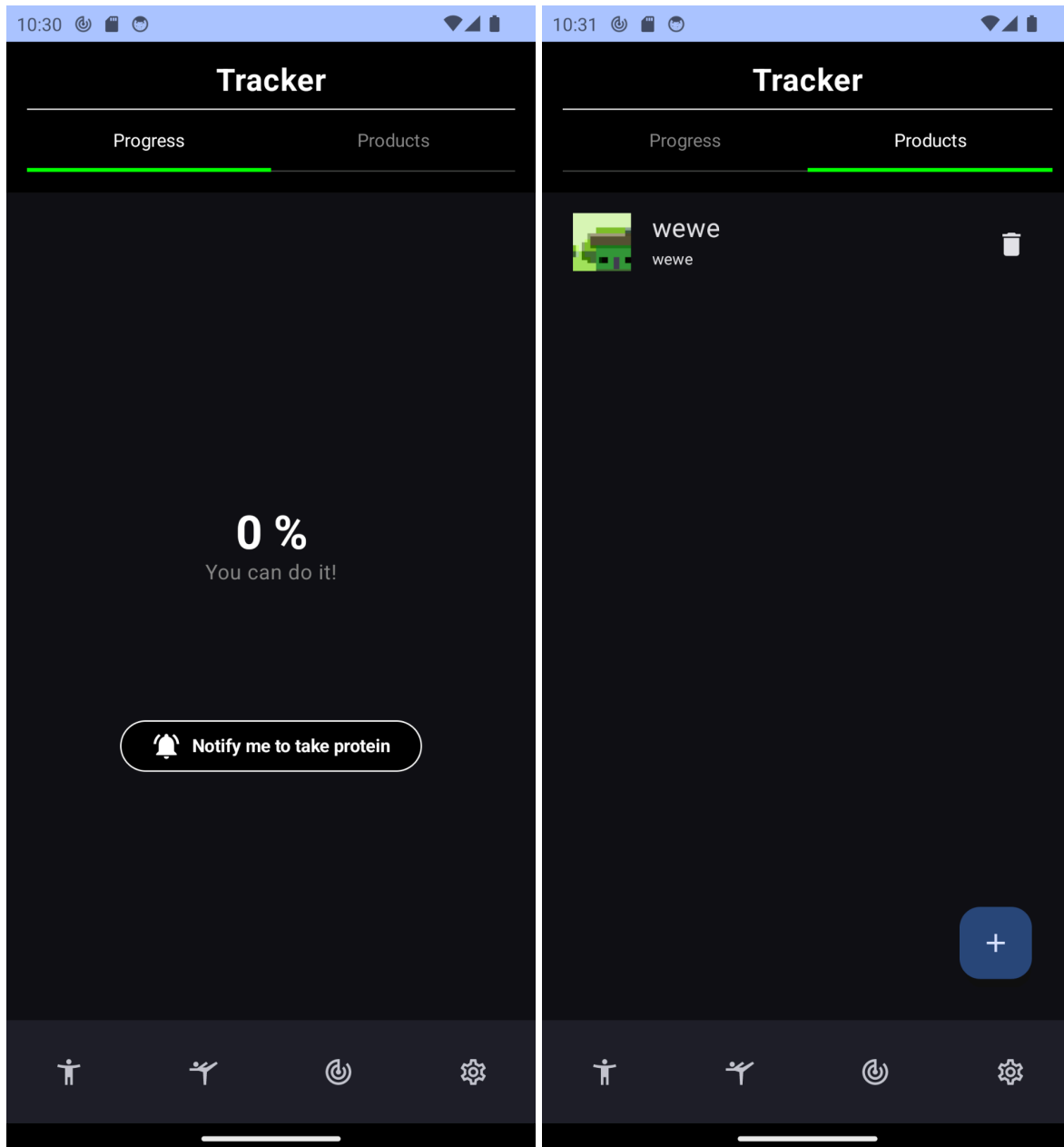
Task 4

Only one user had problems, he did not give permission to send notifications to the application. Other users found where to put the notification without any problems.

Task 5

Testers had no problems with this task. Everyone found the section with workouts, selected a workout and read the description.

Task 6

Testers had no problems with this task. All participants were able to navigate and click on the button to create a workout and select exercises.

Task 7

During own testing, only 1 user found a new bug. In this bug, when quickly opening the camera and keyboard, the keyboard was on top of the camera.

Note: P3 was the first to test, and after testing it, the bugs he encountered were fixed.

Findings and recommendations

1) Possibility of entering incorrect data type.

Description: Users had the opportunity to enter the wrong type of data that is necessary for the correct operation of the program.
Recommendation: Remove the option to enter all types of data except the necessary ones.

2) Exit from camera mode only by taking a photo.

Description: Once enter camera mode, the only way to close it is to take a photo
Recommendation: Add the ability to select camera mode at any time by clicking on the sign.

3) Keyboard on top of camera.

Description: When quickly open the camera and click on the text field, the keyboard will open on top of the camera.

Recommendation: Make the keyboard auto-close when opening the camera.

4) It's hard to find where to set your daily protein intake.

Description: Set daily protein intake possible only in the settings, which is not very intuitive given there is a separate section for the protein tracker. Recommendation: A solution could be to duplicate the entry of the protein norm into the tracker section, so that you can configure it both in the settings and in the tracker section. Or add a small guide on using applications. Or add a small exclamation point to the protein tracker menu, where it will tell you how to change the daily value.

Post-test survey

Answers to most questions on a scale from 1 to 10

	P1	P2	P3	P4
How did you enjoy using the app overall?	10	10	9	7
How intuitive was the process of completing tasks?	10	10	10	7
How does the application meet your functionality expectations?	7	8	7	10
How convenient was it to add exercises to your training program?	10	10	10	10
How convenient was it to record your protein intake?	8	10	7	3
How would you rate the visual design and attractiveness of the interface?	9	8	10	10
How comfortable was it to read the text and view the images?	10	10	9	10
How would you rate the speed of the application?	7	5	10	8
Were there any errors or glitches with the application?(Full answer)	Exit from camera able only after taking a photo	String insted of int values	incorrect protein display	String insted of int values
How likely are you to use this app in the future?	10	10	8	6
How likely are you to recommend this app to others?	10	10	7	4

How easy was it to understand the application interface?	10	9	9	5
average	9,18	9,09	8,73	7,27