

USER STUDY FORM: HEALTH MONITORING APP

Section 1: Participant Information

- **Participant Name:**
- **Date:**
- **Age:**
- **Gender:**
- **Occupation:**
- **Do you regularly use health apps or wearables?**
☐ Yes ☐ No
- **How many times do you use it?**
☐ Daily ☐ 2-4 times a week ☐ Weekly ☐ 1-3 times a month ☐ Monthly
- **For what do you use it?**

- **How would you rate your technical skills (e.g. use of smartphone, wearables, digital tools, ...)?**
☐ Beginner ☐ Intermediate ☐ Advanced

DISCLAIMER: the following measurements and stress states can differ from your real values. This user study focuses on user-friendly design and not on the accuracy of the parameter measurements.

Section 1: Device and App Setup

Task 1: User Profile Selection

Create and setup your own user profile (you can use your own name and age).

Task 2: Device Pairing

Pair the device (named nano esp32) with the app via Bluetooth.

Task 3: Measure Individual Measurements

Measure each parameter separately. Heart rate, galvanic skin response, oxygen saturation and respiration rate.

Task 4: Combined Measurement

Use the "All" function to measure all parameters at once.

Section 1.2: Questions

1. For each parameter, answer:

- Heart Rate

What was your heart rate?

- Galvanic Skin Response

What was your GSR?

- Oxygen Saturation

What was your blood-oxygen saturation?

- Respiration Rate

How many breaths/min were measured?

2. How easy was it to pair the device?

(1 = Very difficult, 5 = Very easy):

☐1 ☐2 ☐3 ☐4 ☐5

3. Did you encounter any issues?

☐ Yes ☐ No

If yes, please describe:

4. Was the user profile selection/creation process intuitive?

(1 = Not at all, 5 = Very intuitive):

☐1 ☐2 ☐3 ☐4 ☐5

5. How easy was it to start the measurement?

(1 = Very difficult, 5 = Very easy):

☐1 ☐2 ☐3 ☐4 ☐5

6. How clearly did the app display the result?

(1 = Not clear at all, 5 = Very clear):

☐1 ☐2 ☐3 ☐4 ☐5

7. Did you understand what this parameter means for your health?

☐ Yes ☐ No ☐ Not sure

8. Did you use the info button for more explanation? ☐ Yes ☐ No

If yes, how helpful was the explanation?

(1 = Not helpful at all, 5 = Very helpful): ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

9. Was it clear that the "All" function provides the most accurate stress indicator?

☐ Yes ☐ No

10. Did you notice any difference in results or app behavior compared to individual measurements?

☐ Yes ☐ No

If yes, please describe:

Section 2: Data Visualization and Interpretation

Before starting the following tasks, please return to the user selection screen and use the username 'Mika'.

Task 5: Data Display

Observe the gauges for each parameter.

Task 6: Stress Indicator

Review the stress indicator and open the info dialog.

Task 7: Historical Data & Filtering

View your historical data for each parameter. Filter data by "Today," "Last 7 days," and "Last 30 days."

Switch between graph and table views.

Task 8: Information panel

Click on the information panel of each parameter. Read through the information. You can come back to reread if you need it to help answering the questions.

Task 9: Threshold Configuration

Adjust your min/max values for heart rate and GSR gauges.

Section 2.2: Questions

What was the lowest and highest heart rate in the last 30 days?

And what about the last 7 days?

1. How clear were the visualizations (gauges, progress bars, charts)?
(1 = Not clear at all, 5 = Very clear): ☐1 ☐2 ☐3 ☐4 ☐5
2. How helpful was the color coding (e.g., red/orange/green) in helping you interpret your state?
(1 = Not helpful at all, 5 = Very helpful): ☐1 ☐2 ☐3 ☐4 ☐5
3. How helpful were the gauges in helping you interpret your state?
(1 = Not helpful at all, 5 = Very helpful): ☐1 ☐2 ☐3 ☐4 ☐5
4. What color did the stress indicator show?
☐ Green (No stress) ☐ Orange (Moderate stress) ☐ Red (Stressed)
5. How helpful was the explanation in the info dialog for understanding your stress level?
(1 = Not helpful at all, 5 = Very helpful): ☐1 ☐2 ☐3 ☐4 ☐5
Remarks:
6. How easy was it to find and use the history feature?
(1 = Very difficult, 5 = Very easy): ☐1 ☐2 ☐3 ☐4 ☐5
7. How easy was it to understand how to filter by date range?
(1 = Not easy at all, 5 = Very easy): ☐1 ☐2 ☐3 ☐4 ☐5
8. Which view did you prefer for reviewing your data?
☐ Graph ☐ Table ☐ Both equally
9. How helpful were the min/max data rows of the table in helping you understand your health trends?
(1 = Not helpful at all, 5 = Very helpful): ☐1 ☐2 ☐3 ☐4 ☐5
10. How helpful was the graph in helping you understand your health trends?
(1 = Not helpful at all, 5 = Very helpful): ☐1 ☐2 ☐3 ☐4 ☐5

11. How easy was it to find and adjust the gauge settings?

(1 = Very difficult, 5 = Very easy):

☐1 ☐2 ☐3 ☐4 ☐5

12. How useful do you think these gauge settings are?

(1 = Not useful at all, 5 = Very useful):

☐1 ☐2 ☐3 ☐4 ☐5

Remarks:

Section 3: System Usability Scale (SUS)

Please rate your agreement with the following statements (1 = Strongly disagree, 5 = Strongly agree):

1. I think I would like to use this app frequently.

☐1 ☐2 ☐3 ☐4 ☐5

2. I found the app unnecessarily complex.

☐1 ☐2 ☐3 ☐4 ☐5

3. I thought the app was easy to use.

☐1 ☐2 ☐3 ☐4 ☐5

4. I think I would need the support of a technical person to use this app.

☐1 ☐2 ☐3 ☐4 ☐5

5. I found the various functions in this app were well integrated.

☐1 ☐2 ☐3 ☐4 ☐5

6. I thought there was too much inconsistency in this app.

☐1 ☐2 ☐3 ☐4 ☐5

7. I would imagine that most people would learn to use this app very quickly.

☐1 ☐2 ☐3 ☐4 ☐5

8. I found the app very cumbersome to use.

☐1 ☐2 ☐3 ☐4 ☐5

9. I felt very confident using the app.

☐1 ☐2 ☐3 ☐4 ☐5

10. I needed to learn a lot of things before I could get going with this app.

☐1 ☐2 ☐3 ☐4 ☐5

Section 4: Open Feedback

1. What did you like most about the app?
2. What did you like least about the app?
3. Was there anything confusing or frustrating?
4. Do you have suggestions for new features or improvements?

5. Would you recommend this app to others? Why or why not?

Thank you for your participation!