



Co-funded by
the European Union

Course: **Human-Computer Interaction**

Topic: **Statistical data analysis in HCI research**

Resource: **A mock-up case (student assignment)**

The aim of the experiment was to compare the usability of three different designs for a specific mobile application. The names of these designs are "Light theme", "Dark theme" and "Joy theme". It was decided that usability should not be examined on the basis of individual usability attributes, but on the basis of a standardized SUS (System Usability Score) questionnaire.

30 participants responded to the call for experimental testing and tested all three different designs in a predetermined order by going through the corresponding checklist of representative tasks. After testing each design, the participants had to complete the SUS questionnaire. The SUS questionnaire is based on 10 questions in a Likert scale format, and a final metric ranging from 0 to 100 is formed based on the answers. A higher score indicates a higher level of usability. The SUS score values for each mobile app design, as rated by individual users, are available in an Excel file (below).

Perform a statistical analysis of the available data and draw appropriate conclusions.

DATA

CASE 06	Light	Dark	Joy
	SUS score [0-100]		
Participant 01	59.5	65.0	84.5
Participant 02	69.5	71.5	84.5
Participant 03	72.0	73.5	75.0
Participant 04	64.5	84.5	85.0
Participant 05	70.0	71.5	84.5
Participant 06	62.0	69.5	74.5

Participant 07	65.0	63.0	77.0
Participant 08	69.5	71.5	92.5
Participant 09	69.0	75.5	76.5
Participant 10	64.0	70.0	78.5
Participant 11	73.0	73.5	77.5
Participant 12	74.5	89.0	79.0
Participant 13	71.5	67.0	82.0
Participant 14	69.0	73.5	93.5
Participant 15	62.5	72.0	85.0
Participant 16	68.0	64.5	79.0
Participant 17	67.0	84.5	80.0
Participant 18	74.5	73.0	73.5
Participant 19	72.5	67.0	81.5
Participant 20	73.5	77.0	81.5
Participant 21	72.0	78.0	73.5
Participant 22	69.0	61.0	82.5
Participant 23	61.5	55.0	77.5
Participant 24	75.0	74.0	75.5
Participant 25	58.0	78.0	81.5
Participant 26	61.5	76.0	79.0
Participant 27	72.5	62.0	73.0
Participant 28	68.5	73.0	82.5
Participant 29	69.0	71.5	93.5
Participant 30	71.0	81.0	79.0