

Group Project

Goal: Develop a novel user interface (UI) for a mobile/web app (or other medium/artifact, if it is better suited - needs teacher approval).

Groups: 4 students

Topic: Energy.

Examples: monitor consumption/generation, help reduce consumption, control smart appliances, etc.

Requirements:

1. User and Task Analysis will define the specific requirements, but the UI must allow users to:
 - a. Browse / filter information
 - b. Input data (that changes the internal system status)
2. Be creative!
 - a. You can assume any kind of sensor, technology, etc... even if not invented yet

Class planning:

Phase	Class	Topics
Phase I - User and Task Analysis	1	Identify related apps/services/systems, prepare questionnaires
	2	Revise questionnaires, deploy questionnaires
	3	Perform PACT analysis based on questionnaires, create personas and activity scenarios, identify functionalities
	4	Presentations (5 + 3 min per group)
Phase II - Lo-fi prototype and heuristic evaluation	5	Choose functionalities, define tasks and usability requirements, develop lo-fi prototype
	6	Revise tasks, finish lo-fi prototype
	7	Conduct heuristic evaluations (in class)
	8	Presentations (5 + 3 min per group)
Phase III - Hi-fi prototype and user evaluation	9	Develop hi-fi prototype, write evaluation protocol
	10	Revise evaluation protocol, finish hi-fi prototype, conduct user evaluations (outside class)
	11	Perform results analysis
	12	Presentations (5 + 3 min per group)

Phase I - User and Task Analysis

Goals

1. Identify related apps/services/systems
2. User and task analysis
 - a. Prepare and deploy questionnaires
 - b. Perform PACT analysis based on questionnaires
 - c. Create personas and activity scenarios
3. Identify functionalities

Deliverables

Presentation

Week: 14-18 October 2024 (24h before class)

Structure (1 slide per topic, max 5 minutes):

1. Project's idea description
2. Related apps/services/systems
3. Questionnaire highlights
 - o Who, how, how many...
4. PACT Analysis
 - o 1 or 2 bullets for each of the four items
5. Personas
 - o 1 example
6. Activity scenarios
 - o 1 example
7. Functionalities

Submissions in Moodle, with strict filename identification (details there)

Report

Week: 21-25 October 2024 (before class)

Structure:

1. Project's idea description
2. Related apps/services/systems
3. Questionnaire highlights
 - o Who, how, how many...
 - o More details in the annex
4. PACT Analysis
 - o Complete
5. Personas
 - o 2 personas
6. Activity scenarios
 - o 2 (1 per persona)
7. Functionalities
8. Annexes
 - o Questionnaires
 - o Summary of results

Evaluation

Item	Weight
Project's idea + Related apps	1.0
Questionnaire quality	2.0
Questionnaire highlights	2.0
PACT analysis	3.0
Personas	3.0
Activity scenarios	3.0
Functionalities	3.0
Presentation Quality	1.5
Report Quality	1.5
Total	20

Phase II - Lo-fi prototype and heuristic evaluation

Goals

1. Define 3 tasks and usability requirements
2. Develop low-fidelity prototype
3. Conduct heuristic evaluations (**in class**)

Deliverables

Presentation

Week: 18-22 November 2024 (24h before class)

Structure (max 5 minutes):

1. Project abridged description (1 slide)
 - Including the chosen functionalities and the 3 tasks
2. Prototype's Wireflow (max 3 slides)
 - Only the most complex task
3. Summary of Heuristic Evaluation results (max 2 slides)
 - From the received evaluations
4. Summary of corrections to perform in Phase 3 (max 2 slides)
 - According to the evaluations received

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Report

Week: 25-29 November 2024 (before class)

Structure:

1. Project abridged description
 - Including the chosen functionalities and the 3 tasks
2. Prototype's Wireflow
 - All tasks
3. Digested Heuristic Evaluation Results
 - From the received evaluations
 - If an error is pointed twice, it should be merged, and its severity averaged
4. Corrections to perform in Phase 3
 - According to the evaluations received
5. Annexes
 - Sent Heuristic Evaluation Reports
 - Received Heuristic Evaluation Reports

Evaluation

Item	Weight
Tasks definition	1.5
Prototype - Task 1	2.5
Prototype - Task 2	2.5
Prototype - Task 3	2.5
Heuristic Evaluation Analysis	1.5
Corrections to perform	2.0
Heuristic Evaluation Report 1	2.5
Heuristic Evaluation Report 2	2.5
Presentation Quality	1.0
Report Quality	1.5
Total	20

Phase III - Hi-fi prototype and user evaluation

Goals

1. Develop high-fidelity prototype
2. Prepare and conduct user evaluations (**outside class**)
3. Perform statistical analysis of the results

Deliverables

Final Presentation

Week: 16-20 December 2024 (24h before class)

Structure (max 5 minutes):

Project brief description (1 slide)

Parts I and II - Main takeaways (1 slide)

Part III - Hi-fi prototype and user evaluation

1. Prototype's Wireflow (max 3 slides)
 - Only the most complex task
2. Sample characterization (1 slide)
3. Results and statistical analysis (up to 3 slides)
 - Only complete for one task
 - Highlights for the others

Submissions in Moodle, with strict filename identification (details there)

Final Report

Due: 6 January 2025

Structure:

Introduction

Part I - User and Task Analysis

- Same structure as 1st report

Part II - Lo-fi prototype and heuristic evaluation

- Same structure as 2nd report

Part III - Hi-fi prototype and user evaluation

1. Changes to Parts I and II
 - To the delivered reports
 - Include only if there are any
2. Prototype's Wireflow
 - All tasks
 - Include URL for live version
3. User evaluation protocol
 - According to the TP slides
4. Results
 - Sample characterization
 - Statistical analysis (per task and per measure)
 - Discussion
5. Conclusion

Evaluation

Item	Weight
Final prototype	6
User evaluation protocol	6
Results	6.5
Presentation Quality	1.5
Total	20

The final report quality (including correct inclusion of previous phases and conclusions) does not count for Phase 3 evaluation. Instead, it weighs 10% of the final project grade.