

Heuristic Evaluation

Evaluation of Desktop Prototype of group "team-N"

Part I: Your Name

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Part II: Project Description

An application for non-STEM students that needs to learn programming languages.

Part III: Evaluation Execution

The heuristic evaluation has been conducted in-person during the lab session of 29th November 2023 using the paper prototypes made by the evaluated group.

The first step for the evaluation was a short presentation of the project, the needs that it satisfies and how their solution aim to fill the needs.

Then they showed me the three task that I had to complete during the evaluation.

During the evaluation they explained me some features that I didn't understand.

Part IV: List of Violations

Report of the heuristics' violations I identified:

Issue #1. Heuristic #1 Visibility of system status

Where: Simple Task – First Step – Page 1

What: On the first page I don't understand if I'm logged in.

Why: The only way I must understand the state of the system is by looking at the completion status of each topic, while the person icon in the header does not explicitly communicate the state of the system, that is, in this case, whether I am logged in or not.

Severity: [3]

Issue #2. HN Non-heuristic issue

Where: Almost everywhere

What: Every element of the application is too big for a desktop.

Why: I would find it difficult to use an application where the dimensions of the elements are wrong, as it makes interaction tiring.

Severity: [2]

Issue #3. Heuristic #2 Match between system and the real world

Where: Simple Task – Select a topic – Page 1

What: The symbols next to the topic names are not clear and explanatory

Why: These symbols may be unfamiliar to some users and confusing.

Severity: [3]

Issue #4. Heuristic #2 Match between system and the real world

Where: Simple Task – Select an exercise – Page 3

What: Unknown symbol on the last card at the bottom right

Why: The symbol is not explanatory. An hourglass does not necessarily mean that an exercise has not yet been completed or not started, but more that something is due.

Severity: [3]

Issue #5. Heuristic #3 User control and freedom

Where: Simple Task – Select an exercise – Page 3

What: Can't go back from page 3 to topic selection

Why: Limits the user's freedom to recover from the error of selecting the wrong topic

Severity: [2]

Issue #6. Heuristic #5 Error prevention

Where: Simple Task – Submit the exercise – Page 4

What: After clicking the "Confirm" button I am not asked for confirmation to submit the exercise

Why: The application does not present a confirmation option before submitting the exercise

Severity: [3]

Issue #7. Heuristic #3 User control and freedom

Where: Simple Task – Doing the exercise – Page 4

What: Can't go back from page 4 to exercise selection

Why: Limits the user's freedom to recover from the mistake of selecting the wrong exercise

Severity: [3]

Issue #8. Heuristic #2 Match between system and the real world

Where: Simple Task – Select an exercise – Page 3

What: There is no button to start the exercise or anything that clearly explains that by clicking on the card you can carry out the exercise

Why: The application should provide that many users may be unaware of the information that by clicking on the card you can start the exercise

Severity: [4]

Issue #9. Heuristic #5 Error prevention

Where: Simple Task – Select an exercise – Page 3

What: After clicking on the card, I am not asked for confirmation to start the exercise

Why: The application does not present a confirmation option before starting the exercise. The user could accidentally click on an exercise.

Severity: [2]

Issue #10. HN Non-heuristic issue

Where: Simple Task – Doing the exercise – Page 4

What: I cannot upload a file containing the exercise code

Why: The user may want to carry out the exercise in another editor and then load it

Severity: [2]

Issue #11. Heuristic #4 Consistency and standards

Where: Simple Task – Submit the exercise – Page 4

What: The “Confirm” button is not very intuitive

Why: By clicking on the button, the action performed is to submit an exercise, so “Submit” would be more correct

Severity: [2]

Issue #12. Heuristic #9 Help users recognize, diagnose, and recover from errors.

Where: Simple Task – Doing the exercise – Page 4

What: If for some reason the application closes and I was doing the exercise in the editor, I lose all my progress without being able to recover what I was writing

Why: Does not allow the user to recover from a mistake made

Severity: [4]

Issue #13. HN Non-heuristic issue

Where: Simple Task – Doing the exercise – Page 4

What: I don't have the ability to save a draft of the code I was writing

Why: It's not a given that if I start an exercise, I will complete it on the first try. I would like to be able to conveniently save the work done so I can continue it later.

Severity: [4]

Issue #14. Heuristic #5 Error prevention

Where: Simple Task – Exercise completed – Page 5

What: I am not asked for confirmation when I click “Retry”

Why: A user who does not intend to repeat the exercise could click on “Retry” by mistake and lose the score for the exercise.

Severity: [4]

Issue #15. Heuristic #7 Flexibility and efficiency of use

Where: Complex Task – Exercise completed – Page 1

What: A shortcut to propose an exercise is missing

Why: To propose a new exercise, I necessarily must go in a specific topic

Severity: [0]

Issue #16. Heuristic #4 Consistency and standards

Where: Simple Task – Exercise completed – Page 5

What: The “Back” button isn't very intuitive

Why: By clicking on the button, the action performed is to return to the page with the list of exercises, but the previous page in the flow was the page for submitting an exercise

Severity: [3]

Issue #17. Heuristic #5 Error prevention

Where: Complex Task – Proposing an exercise – Page 7

What: I am not asked for confirmation when I click “Propose”

Why: A user might click “Propose” by mistake before finishing entering data

Severity: [4]

Issue #18. HN Non-heuristic issue

Where: Complex Task – Proposing an exercise – Page 7

What: I don't have the possibility to save a draft of the information I was writing

Why: It is not a given that if I start an exercise proposal, I will complete it. I would like to be able to conveniently save the work done so I can continue it later.

Severity: [3]

Issue #19. Heuristic #7 Flexibility and efficiency of use

Where: Complex Task – Checking if my proposal has been approved – Page 1 or 6

What: There is no shortcut to go to page 8 without having to make a new proposal

Why: The process is not flexible if not downright wrong, if to check the status of a proposal I must make a new one due to the page not being reachable

Severity: [4]

Issue #20. Heuristic #10 Help and documentation

Where: Everywhere

What: The prototype design does not contain any explanatory content that provides the user with guidance on how to perform an exercise, complete a programming topic or propose a new exercise

Why: Help and documentation totally absent

Severity: [2]

Part V: Summary and Recommendations

Report in the table below the total number of identified violations.

Heuristic	# violations
H1: Visibility of system status	1
H2: Match between system and the real world	3
H3: User control and freedom	2
H4: Consistency and standards	2
H5: Error prevention	4
H6: Recognition rather than recall	0
H7: Flexibility and efficiency of use	2
H8: Aesthetic and minimalist design	0
H9: Help users recognize, diagnose, and recover from errors	1
H10: Help and documentation	1
HN: Non-heuristic issue	4

Impressions and recommendation to improve the interface

Overall the interface has been designed well. It is simple and minimalistic, characteristics that make it suitable for the purpose of being a learning platform.

The first advice I feel I can give is to make the interface less confusing, especially by making it more explanatory where there are symbols and icons. An important and urgent aspect to improve is the management of error conditions, asking the user for confirmation for the most important actions. The last piece of advice I give is to make the interface elements much smaller as the inadequate size could make navigating the application much more annoying.