

Usability Testing for Code Critiquer

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Purpose

- The code critiquer
- Antipatterns
- Primary Intended users:
 - Students
 - Independent learners

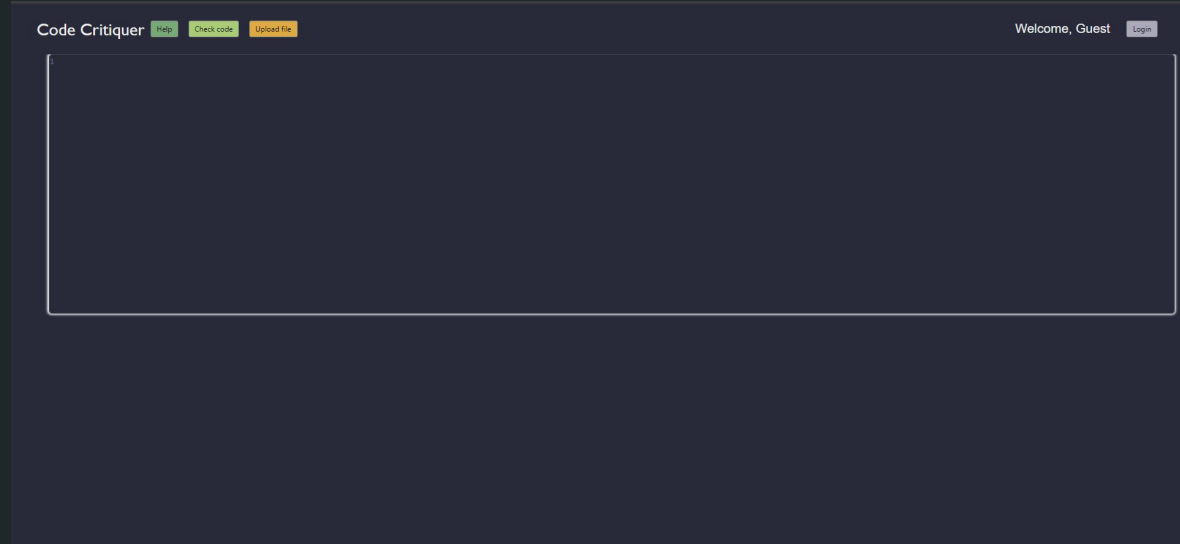


Figure 1: User interface of Code Critiquer

Procedure

- Two Scenarios – one for each method of input
- Scenario one – text entry
 - Participants were prompted to write their own program to increase possible antipatterns
- Scenario two – file upload

Results

- Majority of users quickly understood front end interface design
- File upload has white text on a white background
- All code receive a notification requiring a “comment header block”
 - No participants could determine the exact format required



Figure 2: Common issues with using the code critiquer.

Answers to Questionnaire

Pretest

- Average experience with java: ~1.7 years
- Half of the participants did programming outside of school

Posttest

- 6/8 participant stated that the critiquer was easy to use
- 6/8 would use the critiquer on future homework assignments
- 4/8 would use the critiquer outside of school

Bugs Discovered

Important Bugs:

- Submit file button does not upload file
- Error messages become plain text if check code function is ran a second time
- Running the check code function creates additional, unnecessary lines

Bug Report Form		
Number	Name	Description
1 Instances: 7	False syntax error	syntax error when none is present
2 Instances: 6	Incorrect function	Submit code checks code instead
3 instances:4	No scroll	Scrolling occasionally stops appearing
4 Instances: 19	Redundant lines	Lines created when running code
5 Instances: 2	Close window deletion	Closing pop-up window clears program window
6 Instances: 13	Error misalignment	Syntax error on wrong line
7 Instances: 3	Doubled line numbering	Two numbers on one line
8 Instances: 2	line number misalignment <input type="checkbox"/>	Indented line number
9 Instances 7	Repeated error	Repeated error message
10 Instances 1	Unknown text	Mysterious string of letters at end of program
11 Instances: 16	Error text merging	Error messages become lines of code. Require deletion

Figure 3: Bugs discovered within Code Critiquer

Recommendations

- Additional descriptions for antipatterns
 - Explain why the anti pattern could lead to an error
- Provide examples of best practices
- Make critique downloads available to guests as well as logged in users.

Next Presenter
