

Deliverable #2

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Question 1

Which type of user interface is used?

Answer. Graphical

Question 2

Which debugger has been used ?

Answer. Troubleshooting a method for recognizing blunders in your code by executing the code. We can check the accuracy of the code variable by factor. For our task we have utilized the in-assembled Debugger from Eclipse IDE.

Question 3

What are the advantages of using this debugger?

Answer.

1. Debuggers can do specially appointed review or modification of factors, code, or some other part of the runtime condition, while manual investigating requires to stop, alter, and re-execute the application (potentially requiring recompilation).
2. It made simpler to check the code due to the recognition of the IDE with the language information and The debugger associates with the libraries utilized.
3. Debuggers offer numerous approaches to lessen the time and tedious work to do practically any investigating undertakings.
4. Coding, recompiling and updating everything in same window using the IDE debugger makes it simpler for the software engineer.

Question 4

Disadvantages of JDT debugger:

Answer.

1. Investigating different code ways simultaneously not yields the turnaround with a debugger.
2. It is anything but difficult to lose direction in the multi-threaded haze when the debugger's breakpoints are being hit in one string at point A and a totally discrete string at point B.

Question 5

Endeavors in accomplishing the Quality Attributes:

1. **Correctness**
 - (a) Application is tested thoroughly.
 - (b) Junit test cases are also written to check the correctness.
 - (c) Also performed acceptance testing by fellow colleagues.
2. **Efficiency**
3. Using Version Control on Git Repository.
4. **Robustness**
5. Use of proper error handling mechanism to cope with errors during execution to maintain application robustness
6. **Usability**
7. User friendly interface to access the functionality of application.
8. **Maintainability**
9. It's easy to maintain application using Git version control.
10. If proper versions of the application are maintained then its easy to revert back to previous versions.

Question 6**Answer.**

Checkstyle Description, advantages and disadvantages

Brief description.

Checkstyle is an improvement instrument to enable software engineers to compose Java code that holds fast to a coding standard. It robotizes the way toward checking Java code to save people of this exhausting (yet significant) task. This makes it perfect for undertakings that need to implement a coding standard

Advantages.

1. The programming style received by a product advancement venture can guarantee that the code agrees to great programming rehearses which improves the quality, meaningfulness, re-convenience of the code and may decrease the expense of improvement.
2. Such instruments accompany readymade decides that help in keeping up code guidelines.
3. Checkstyle is profoundly configurable and can be made to help practically any coding standard.

Disadvantages.

1. The checks performed by Checkstyle are basically constrained to the introduction of the code while rightness or fulfillment of the code is not affirmed.
2. There's almost no documentation on the internals of code audit instruments, and not many instructional exercises tell the best way to make custom checks.

1. References

- (a) <https://en.m.wikipedia.org/wiki/Checkstyle> (60)
- (b) <https://stackoverflow.com/questions/426569/why-is-debugging-better-in-an-ide> (45)
- (c) <https://github.com/kranonit/calculator-unit-test-example-java> (30)
- (d) <http://functions.wolfram.com/> (75)
- (e) <https://www.latextemplates.com/> (45)
- (f) <https://ieeexplore.ieee.org/document/8559686> (10)

2. Repository Address

<https://github.com/karamveer28/soen-6011-project>