

Assignment 1 - Software Unit Testing Framework

[New Attempt](#)

- Due Jan 22, 2023 by 11:59pm
- Points 40
- Submitting a file upload

You are expected to write an academic paper which discuss and elaborates on material in question below. You are expected to provide an in-depth analysis, evaluation, or interpretation of a single topic, based on empirical evidence. Evidences are provided by making reference to another research result done and published by someone or by referring to a study you conducted yourself. Proofread your document for grammar, formatting errors.

If you are not sure what constitute a graduate level academic paper, pls refer to a guide [as such](#) 

(<https://libguides.usc.edu/writingguide/academicwriting#:~:text=Characteristics%20of%20academic%20writing%20include,investigation%2C%20and%20prec>

or work with [ASU's academic writing center](#) (<https://tutoring.asu.edu/graduate-writing-tutoring>).

Part 1.



Perform a web search on unit testing frameworks. Provide an overview describing:

1. What is a unit testing framework? Explain its scope, purpose, and example of its usage with a use case.
2. How would a developer utilize a framework?
3. What benefits does a framework provide?
4. Identify 2 frameworks for a language such as Java, C++, Python, and Javascript for further consideration. Compare the frameworks in terms of common capabilities as well as any differences.

Part 2.

Download or write code to implement the Heapsort algorithm. You can use Java, C++, Python, and Javascript language to implement the code. Utilize a unit testing framework of your choice to test your code. Submit a copy of the code to test, the test cases generated and an output report (screenshot from the tool).

Submission

- Submit PDF document including all parts
- Use high resolution images in your report
- Use [MLA](#)  (<https://www.grammarly.com/blog/mla-format/>) (Modern Language Association) or [APA](#)  (<https://www.grammarly.com/blog/apa-format/>) (American Psychological Association) citation style
- Submit Zipped file containing your code

In CSE 565, all work must be done individually unless otherwise instructed and must be original. Papers must be written in your own words (no cutting and pasting). References to all work must be cited where used in the paper and included in a bibliography at the end of the paper.

Assignment #1

Criteria	Ratings			Pts
Part 1-Describe Unit Testing frame work. Explain its scope, purpose, and example of its usage with a use case.	2 pts Full Marks		0 pts No Marks	2 pts
Part 1-Explanation of how a developer would utilize a framework.	3 pts Full Marks		0 pts No Marks	3 pts
Part 1-What benefits does a framework provides and explain them.	3 pts Full Marks		0 pts No Marks	3 pts
Part 1-Student correctly identifies two unit-testing frameworks.	2 pts Full Marks		0 pts No Marks	2 pts
Part 1-Include the comparison of two unit-testing frameworks in terms of common capabilities as well as differences between them.	10 pts Full Marks	5 pts Half Marks Partial comparison of capabilities	0 pts No Marks	10 pts
Part 2- Student included the code implemented under testing.	4 pts Full Marks		0 pts No Marks	4 pts
Part 2- Student included the test cases generated by the unit testing framework.	8 pts Full Marks		0 pts No Marks	8 pts
Part 2- Student included the output report from the unit testing framework.	6 pts Full Marks		0 pts No Marks	6 pts
General: Cite references used in the report and include a references list.	1 pts Full Marks		0 pts No Marks	1 pts
General: Proofreading with no grammar or formatting errors	1 pts Full Marks		0 pts No Marks	1 pts
Total Points: 40				