

THEORY QUESTIONS ASSIGNMENT

Software Stream

**Maximum
score: 100**

KEY NOTES

- This assignment to be completed at student's own pace and submitted before given deadline.
- There are 10 questions in total and each question is marked on a scale 1 to 10. The maximum possible grade for this assignment is 100 points.
- Students are welcome to use any online or written resources to answer these questions.
- The answers need to be explained clearly and illustrated with relevant examples where necessary. Your examples can include code snippets, diagrams or any other evidence-based representation of your answer.

Theory questions	10 point each
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1. How does Object Oriented Programming differ from Process Oriented Programming?
2. What's polymorphism in OOP?
3. What's inheritance in OOP?
4. If you had to make a program that could vote for the top three funniest people in the office, how would you do that? How would you make it possible to vote on those people?
5. What's the software development cycle?
6. What's the difference between agile and waterfall?
7. What is a reduced function used for?
8. How does merge sort work
9. Generators - Generator functions allow you to declare a function that behaves like an iterator, i.e. it can be used in a for loop. What is the use case?
10. Decorators - A page for useful (or potentially abusive?) decorator ideas. What is the return type of the decorator?