



Indian Institute of Information Technology, Vadodara

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Date: December 7, 2023

CS 261 Object Oriented Design and Programming Lab

Assignment 10

Batch: Diu Section

INSTRUCTIONS:

1. This is to be **done within lab hours**, following which you will be evaluated on the **code and some related questions asked by the TA**.
2. Once your evaluation has been done during the lab hours, you are supposed to submit one pdf file through **GOOGLE CLASSROOM** with the following:
 - a. Name and Roll number at the top of the report
 - b. Assignment question. Answer/program code
 - c. Comment the lines of code wherever required such as the declaration of an object, constructor, use of keywords etc.
 - d. For each question related to codes describe the process of your approach in words /diagrams.
 - e. Screenshot of the output which you get after executing the program. Multiple screenshots may be uploaded to clarify the execution of the program.
3. While Submission, name the file to be submitted in the following format: `<OODP_ your roll number>`
4. **No GOOGLE CLASSROOM submission would be considered for those students who were absent during the in-person lab hours.**
5. **DO NOT COPY** from others. **All reports** which are found to be copied will be given 0 marks for the assignment.

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1. Develop an interface named '**Tradeable**' with methods: '**buy(int quantity)**' & '**sell(int quantity)**'. Implement this interface in a class '**Stock**' representing a tradable stock in a stock trading system. In the **Stock** class, modify the stock's available quantity based on buy & sell operations. Write code to demonstrate the usage of these methods, where you instantiate a **Stock** object, perform **buy** and **sell** operations, and display the updated quantity.
 2. Augment the code to execute each '**buy**' and '**sell**' operation in a new thread, simulating concurrent trading.