

# ISLAMIC UNIVERSITY OF TECHNOLOGY



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## **SWE 4302**

## **LAB EXAM**

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# 1 TASKS

Create a repository for committing today's tasks. Name it "SWE4302-Lab-Exam-*<StudentID last 3 digits>*". All files/project you create should be committed to this repository. You will get **2 hours** to complete this task. Please submit the tasks within that time.

## 1.1 Task 1

1. Create a text file and rename it "Task-1-*<StudentID last 3 digits>.txt*"
2. Observe the Java project attached with your assignment.
3. Identify code smells as much as you can.
4. Write the identified code smells with line numbers from the code in the created text file. The writing format should be like this:

*<Line number/Range>, <Identified Code Smell>, Reason*

5. Commit the file in the previously created repository.

## 1.2 Task 2: Ice Cream Shop

### 1.2.1 Ice cream Flavor

This ice cream shop will be having 4 flavor ice cream to sell,

- Mint Chocolate Chip - \$2.80 per scoop
- Chocolate Fudge - \$3.00 per scoop
- Strawberry Swirl - \$2.75 per scoop
- Pistachio Delight - \$3.25 per scoop

### 1.2.2 Ice cream Toppings

This ice cream shop will be having 5 flavor ice cream to sell,

- Sprinkles - \$0.30
- Marshmallow - \$0.70

- Crushed Oreo - \$0.85
- Fresh Strawberries - \$1.00
- Chocolate Chips - \$0.50

### 1.2.3 Order

- User can create order with multiple scoops of one or more flavors and toppings
- Each order will a paper cup or a waffle cone to serve the ice cream in. If a user chooses a waffle cone, the price for waffle cone, \$5.00 will be added to the total price If a user chooses a paper cup, no dollar will be increased.
- User will get the total price of his order.
- Each order will have 8% tax added to it.

### 1.2.4 Invoice

- User can get a invoice text file of his order.
- Price breakdown will be included in the invoice. Example,

```
Ice Cream Shop Invoice
Chocolate Fudge - 1 scoop: $3.00
Mint Chocolate Chip - 1 scoop: $2.80
Chocolate Chips - 1 time: $0.50
Fresh Strawberries - 2 time: $1.00
Subtotal: $7.30
Tax : $0.58
Total Amount Due: $7.98
```

**Create a project inside the previously created repository for this task. Write code according to the given requirements for this project. You need to have at least 5 commits and 5 test cases validating the main functionalities.**