

## ASSIGNMENT INSTRUCTIONS

**Time: 40 minutes**

Read instructions **carefully** before starting your exam.

1. Just use materials on YOUR computer (including **JDK 1.8**, **NetBeans 8.x**, etc.) for the exam
  2. Create a folder to save given projects, e.g., CSD\_given (1), then download given materials to (1).
  3. You just code in the file:
    - **MyQueue.java**
  4. Before submission:
    - **"Clean and Build Project"** (Shift+F11), then
    - rename the folder 'dist' to 'run' (if the folder 'run' exists, delete it before renaming).
  5. **Submission: Do not submit** the un-edited given project.
  6. **Do not use accented Vietnamese** when writing comments in programs.
  7. **Do not** use 'import' statement(s) in the given files.
  8. **Trouble shooting:** if the given project runs with error, you need to run "Clean and Build Project" (Shift+F11). If still error, rename or copy the project to another folder.
  9. If at least one of the above requirements is not followed, the exam score gets **ZERO**.
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**Requirements:** The owner of a laptop shop would like to build an application managing all laptops in the shop. Each laptop is defined by **name (string)**, **price (number)**, and **color (number)**. While using this application, the user can add, remove, and update laptops in the shop. Students are required to build such application that satisfies requirements as described below.

**Class description:** Each Laptop object has three attributes: name (string), price (number) and color (number). This class is defined in the project **Queue**.

Code provided: **Queue** java project about Queue

Student tasks:

- **open** and **build** the project, if there is no error then open file **MyQueue.java**
- find the following methods, read the description and implement them accordingly
  1. void enqueue(String xName, double xPrice, int xColor)
  2. void updateQueue ()
  3. Laptop dequeue()
  4. void reverse()
- In this question, we consider:
  - 'front' of queue is equivalent to 'head' of list
  - 'rear' of queue is equivalent to 'tail' of list
  - 'size': the number of elements in the 'current' queue
- That means:
- dequeue() means remove the first node in the list (e.g., removeFirst())

- `enqueue(Laptop laptop)` means insert 'laptop' into the tail of the list (e.g., `addLast(Laptop laptop)`)
- Follow the instructions to submit the project Q1
- You may add more methods into the class **MyQueue** to help you answer the exam's Questions