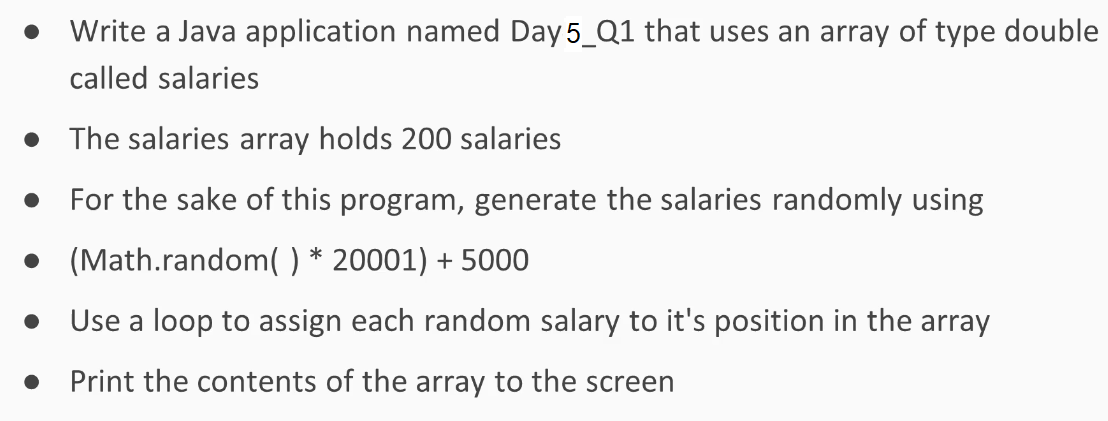
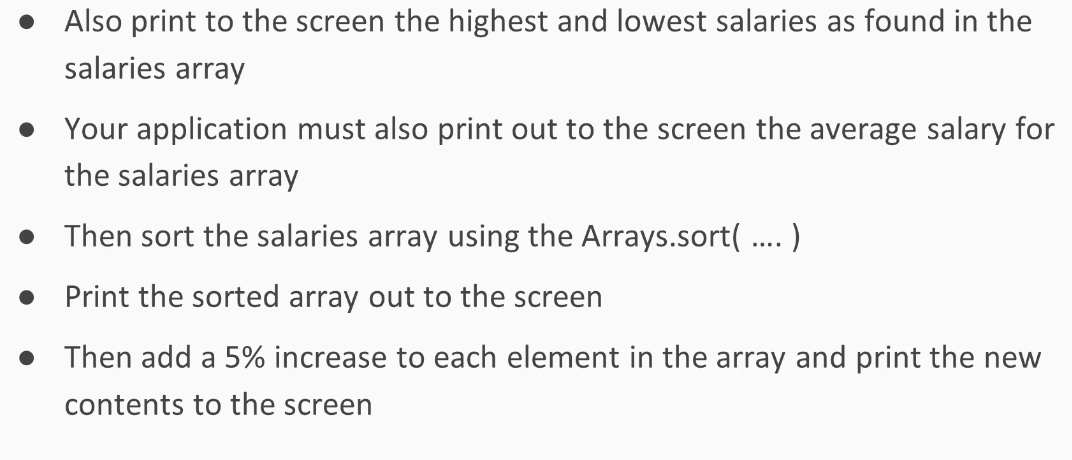
Hands On Exercises - Collections

**Setup Instructions:**

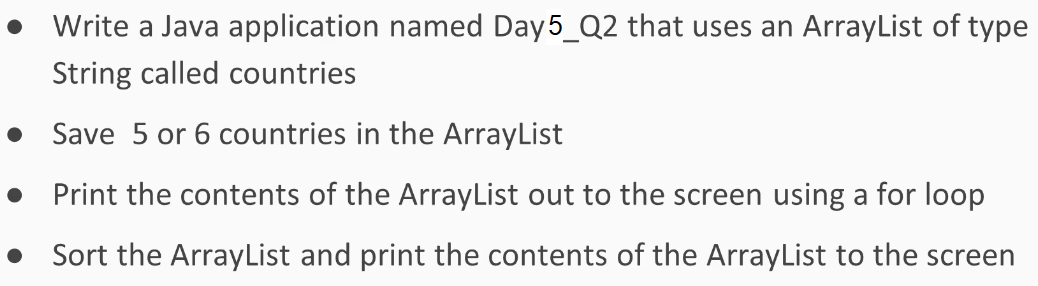
1. Create a new Java Project called “FullStackDay5”.
2. Create your classes in the package “collections”.
3. Define your classes as given below for each assignment.

Assignment 01

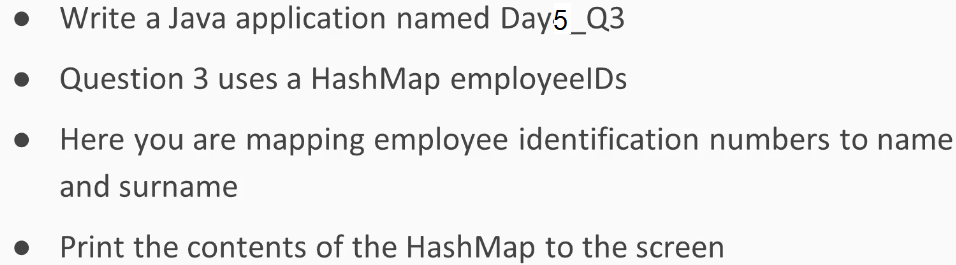


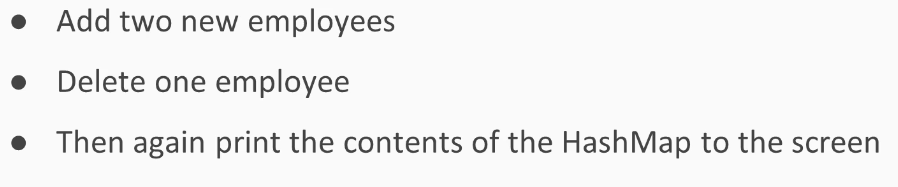


Assignment 02



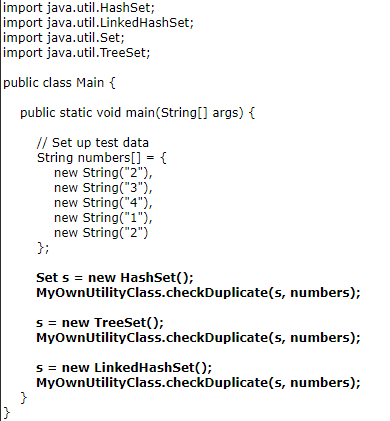
Assignment 03



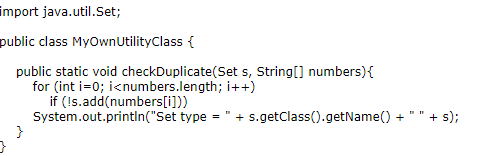


Assignment 04

* Write a Java application as follows.
* “setpolymorphism” is the sub-package name under package “collections”.
* Create a class ”Main” with a main method as follows:



* Write MyOwnUtilityClass.java.



* Build and run the project

**Output:**



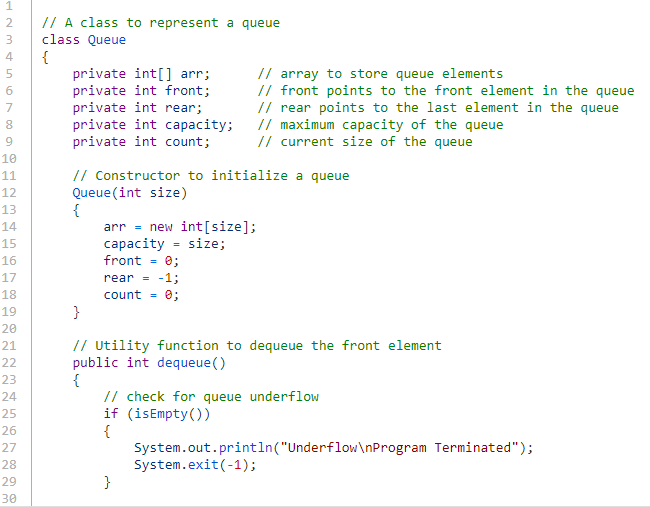
Assignment 05

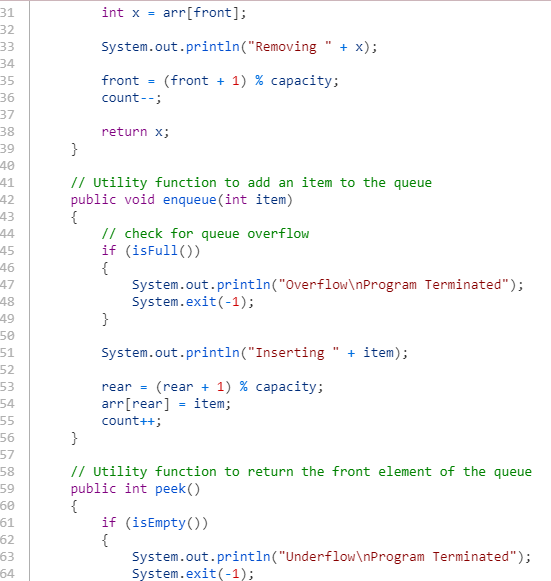
The next two assignments cover queue implementation in Java. A queue is a linear data structure that follows the FIFO (First–In, First–Out) principle. That means the object inserted first will be the first one out, followed by the object inserted next.

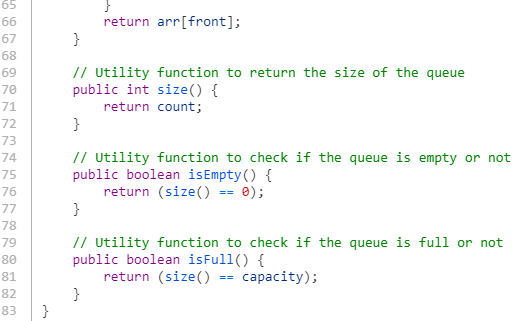
The queue supports the following core operations:

1. Enqueue: Inserts an item at the rear of the queue.
2. Dequeue: Removes the object from the front of the queue and returns it, thereby decrementing queue size by one.
3. Peek: Returns the object at the front of the queue without removing it.
4. IsEmpty: Tests if the queue is empty or not.
5. Size: Returns the total number of elements present in the queue.

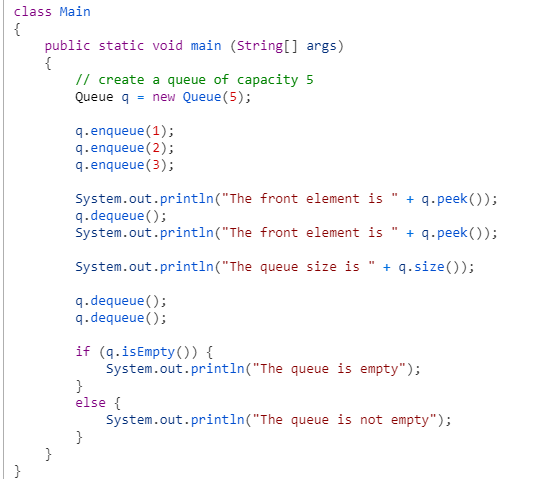
* Write a Java application named Queue.
* “queuewitharray” is the sub-package name under package “collections”.
* Create the following class :

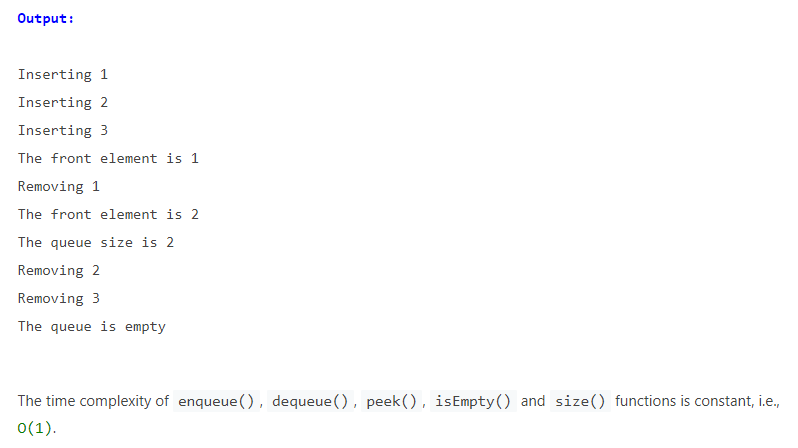






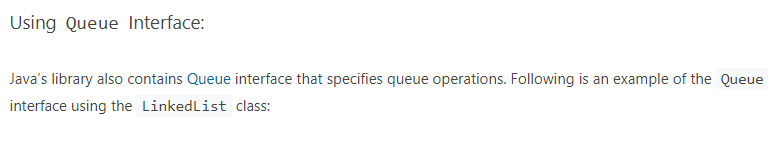
* Create a class ”Main” with a main method as follows:



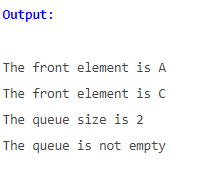


Assignment 06

* Write a Java application as follows.
* “queuewithlinkedlist” is the sub-package name under package “collections”.
* Create a class ”Main” with a main method as follows:







Assignment 07

* Do the Homework Assignment on Slide # 8 of *“5. Collection for Insertions - Queues”* presentation.

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