

## Lesson – 9 - Lab Homework – Stack and Queue

1. Implement Queue using Array (User defined) to perform the following operations.
  - a. add()
  - b. remove()
  - c. peek()
  - d. size()
  - e. isEmpty()
  - f. Override the toString() method to display all items in the Queue.
2. Check the given String is palindrome or not using Java API java.util. Stack class.
3. Implement predefined PriorityQueue for the Course Registration

```
class Registration
{
    int regno; // Registration number
    String cname; // Name of the Course
    String sname; // Name of the student
    String sid; // Student id

    // Create a constructor to initialize the values
}
```

In your main class do the following.

- a) Create a Queue object for the class Registration. Give the priority using regno or sid. [ Use Comparator Interface] – Refer - PriorityQueueSale(2).java
- b) Add five elements to the Queue.
- c) Get the peek object and display the information.
- d) Get the size of the queue
- e) Display all the queue elements by invoking remove() method.
- f) Check the Queue isEmpty() or not.