Queue Interface

Assignment 2

```
import java.util.ArrayDeque;
import java.util.ArrayList;
import java.util.Deque;
import java.util.List;

class Patient {

   private String name;
   private String gender;
   private int age;

   public Patient(String name, String gender, int age) {
      this.name = name;
      this.gender = gender;
      this.age = age;
   }

   public String getName() {
      return name;
   }
   public void setName(String name) {
      this.name = name;
   }
   public String getGender() {
```

```
        return gender;
    }
    public void setGender(String gender) {
        this.gender = gender;
    }
    public int getAge() {
        return age;
    }
    public void setAge(int age) {
        this.age = age;
    }

    @Override
    public String toString() {
        return "Name: " + this.name + ", Gender: " + this.gender + ", Age: " + this.age;
    }
}

class Tester {

    public static List<Deque<Patient>> splitQueue(Deque<Patient> patientsQueue) {
        Deque<Patient> seniorQueue = new ArrayDeque<>();
        Deque<Patient> normalQueue = new ArrayDeque<>();

        while (!patientsQueue.isEmpty()) {
            Patient patient = patientsQueue.poll();
```

```
        if (patient.getAge() >= 60) {
            seniorQueue.add(patient);
        } else {
            normalQueue.add(patient);
        }
    }

    List<Deque<Patient>> queuesList = new ArrayList<>();
    queuesList.add(seniorQueue);
    queuesList.add(normalQueue);

    return queuesList;
}

public static void main(String[] args) {
    Patient patient1 = new Patient("Jack", "Male", 25);
    Patient patient2 = new Patient("Tom", "Male", 64);
    Patient patient3 = new Patient("Simona", "Female", 24);

    Deque<Patient> patientsQueue = new ArrayDeque<Patient>();
    patientsQueue.add(patient1);
    patientsQueue.add(patient2);
    patientsQueue.add(patient3);

    List<Deque<Patient>> queuesList = splitQueue(patientsQueue);
```

```
      int counter = 0;
      for (Deque<Patient> queue : queuesList) {
        if (counter == 0)
          System.out.println("Patients in the senior
queue\n============================");
        else
          System.out.println("Patients in the normal
queue\n============================");

        for (Patient patient : queue) {
          System.out.println("Name: " + patient.getName());
          System.out.println("Age: " + patient.getAge());
          System.out.println();
        }
        counter++;
      }
    }
}
```

```
C:\Users\Sarvesh\OneDrive\Desktop>java Tester5
Patients in the senior queue
============================
Name: Tom
Age: 64

Patients in the normal queue
============================
Name: Jack
Age: 25

Name: Simona
Age: 24
```