DSAD Assignment – 2
Test Plan & Results

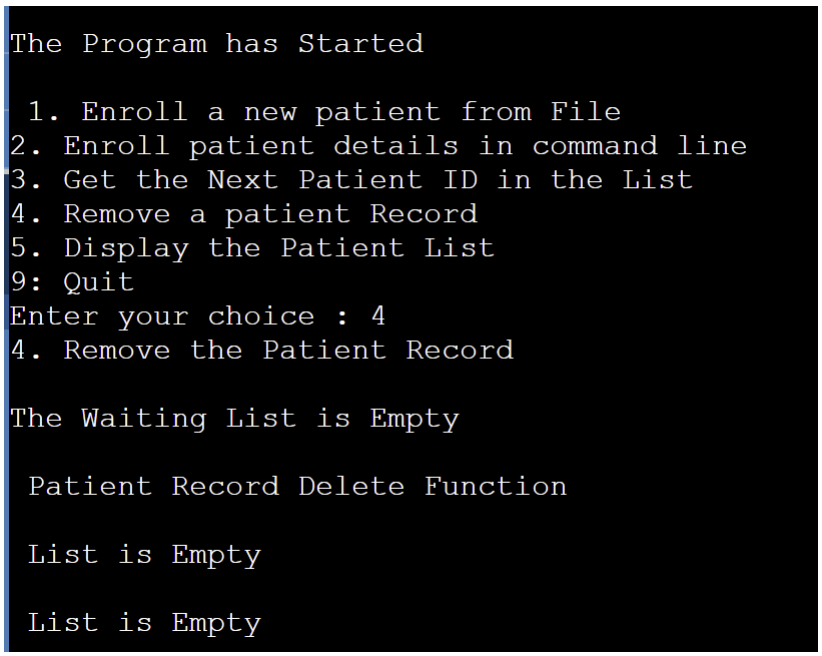
Test Case: Removing a patient from an empty queue

Description: Try to remove a patient from the queue when the queue is empty.

Expected Behaviour: The program should return an error message indicating that the queue is empty and no patient can be removed.

Test result

Trying to remove from empty queue is returning the correct message as shown in below screenshot



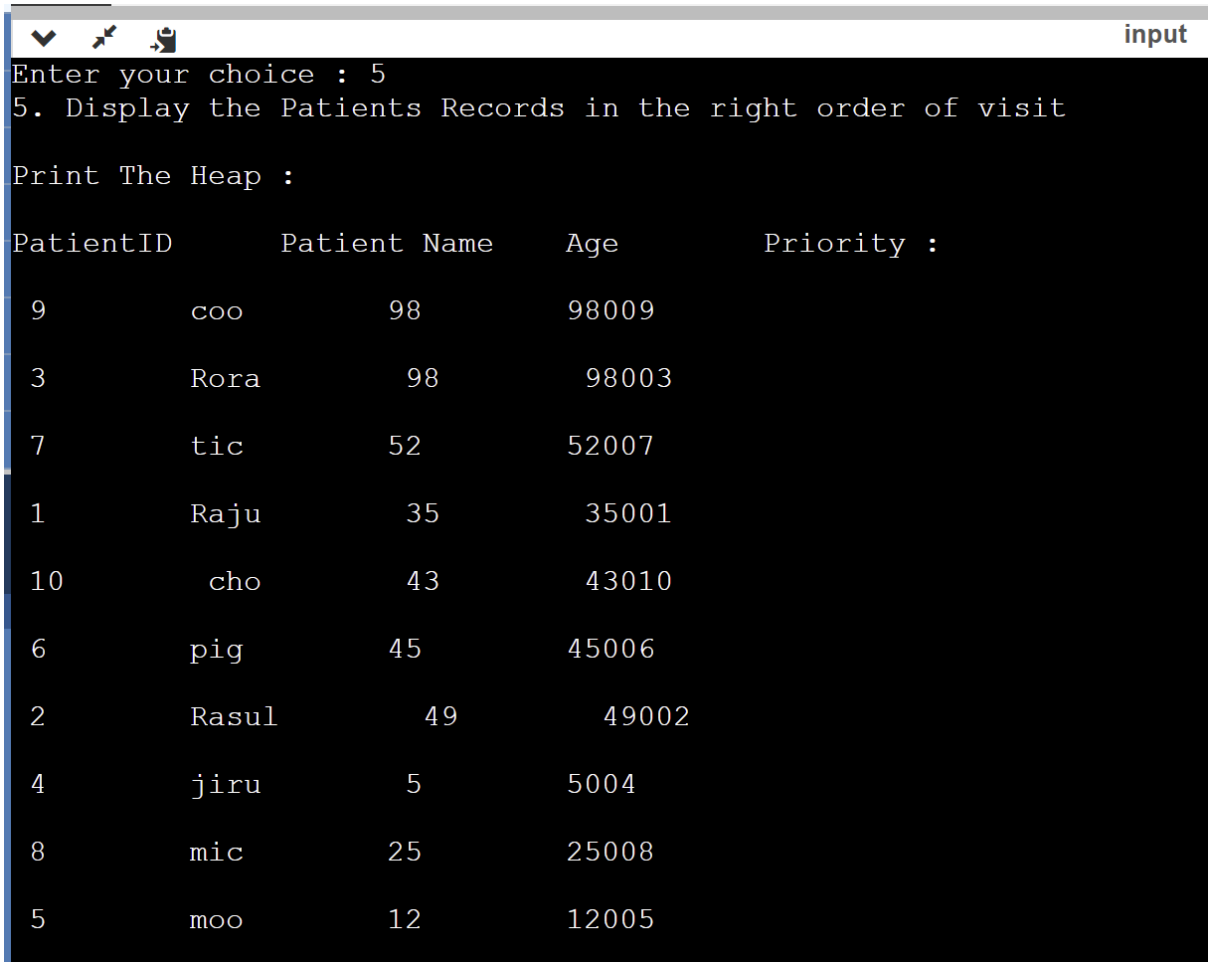
Test Case: Removing a patient from a non-empty queue

Description: Remove a patient from a non-empty queue and check if the patient is removed from the queue and the next patient in the queue is set as the current patient.

Expected Behaviour: The program should remove the patient from the queue and set the next patient as the current patient. If the queue becomes empty, the current patient should be set to None.

Test Result

Current list of patients in the queue



Now delete the patient in the queue. It should delete patient ‘coo’

```
Enter your choice : 4
4. Remove the Patient Record

 Patient Record Delete Function

 Patient Record Identified : Raju (35001)

 Patient Record identified is the First Record: coo (98009)

 Swap Heap Elements : Child : 5
Parent : 3

 Child : 3, 98
Parent : 5, 98

 Swap Heap Elements : Child : 5
Parent : 10

 Child : 10, 43
Parent : 5, 43
```

Verify patient ‘coo’ is no longer in the queue

```
Enter your choice : 5
5. Display the Patients Records in the right order of visit

Print The Heap :

PatientID      Patient Name    Age        Priority :

 3         Rora         98         98003

 10         cho         43         43010

 7         tic         52         52007

 1         Raju         35         35001

 5         moo         12         12005

 6         pig         45         45006

 2         Rasul         49         49002

 4         jiru         5         5004

 8         mic         25         25008
```

Test Case: Adding a patient to the queue

Description: Add a patient to the queue and check if the patient is added to the end of the queue and the next patient in the queue is set as the current patient.

Expected Behaviour: The program should add the patient to the end of the queue and set the next patient as the current patient. If the queue was previously empty, the newly added patient should be set as the current patient.

Test Result

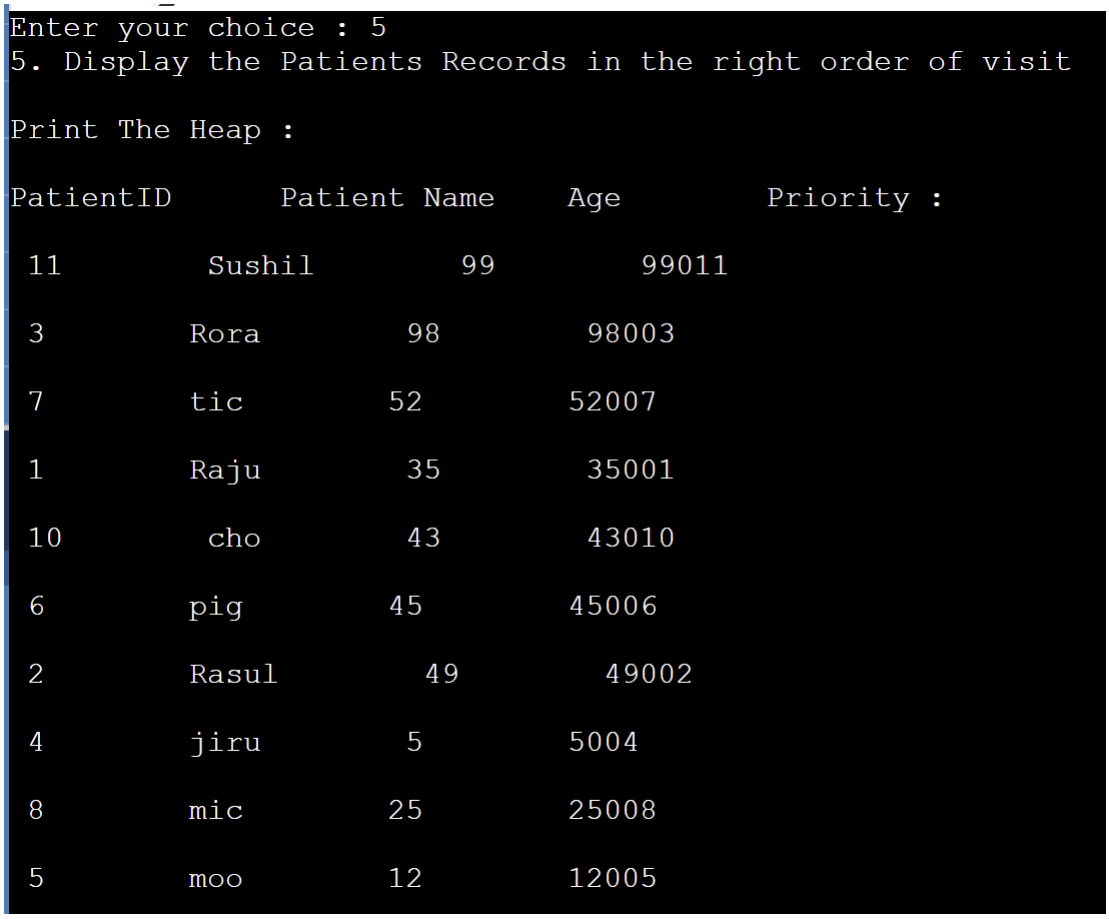
Now add a new patient ‘Sushil’ aged 99.

```
Enter your choice : 2
2. Input Patient Details from command line (Single)

 Enter the Patient Name :
Sushil

 Enter the Patient's Age :
99
```

Printing the list now will show ‘Sushil’ at the top of the queue since age is 99



Test Case: Displaying the queue when the queue has patients

Description: Display the contents of the queue when it has patients.

Expected Behaviour: The program should display the list of patients in the queue in the order in which they are waiting to see the doctor, starting from the current patient.

Test Result

Printing the patient queue is successful

```
PatientID      Patient Name    Age        Priority :
 11         Sushil         99         99011
 3         Rora          98          98003
 7         tic          52          52007
 1         Raju          35          35001
 10          cho          43          43010
 6         pig          45          45006
 2         Rasul           49          49002
 4         jiru          5          5004
 8         mic          25          25008
 5         moo          12          12005
```

Test case: Remove all patients from the queue

Description: Remove all patients from the queue.

Input: A queue with three patients.

Expected output: The queue should be empty after all patients have been removed.

Test Result

Initially there are 12 patients in the queue.

```
Enter your choice : 5
5. Display the Patients Records in the right order of visit

Print The Heap :

PatientID      Patient Name    Age        Priority :

 11         coo         98         98011

 5         Rora         98         98005

 12         cho         43         43012

 4         Rasul          49          49004

 9         tic         52         52009

 3         Raju         35         35003

 7         moo         12         12007

 1         Sushil          45          45001

 8         pig         45         45008

 10         mic         25         25010

 2         Sushil          45          45002

 6         jiru         5         5006
```

Now remove all patients one by one

```
 1. Enroll a new patient from File
2. Enroll patient details in command line
3. Get the Next Patient ID in the List
4. Remove a patient Record
5. Display the Patient List
9: Quit
Enter your choice : 4
4. Remove the Patient Record

 Patient Record Delete Function

 Patient Record identified is the First Record: Raju (35003)

 Patient Record identified is the First Record: cho (43012)

 Swap Heap Elements : Child : 6
Parent : 3

 Child : 3, 35
Parent : 6, 35
```

After removing all patients from queue one by one, finally list is empty as shown below

```
9: Quit
Enter your choice : 5
5. Display the Patients Records in the right order of visit

Print The Heap :

PatientID      Patient Name    Age        Priority :
```