

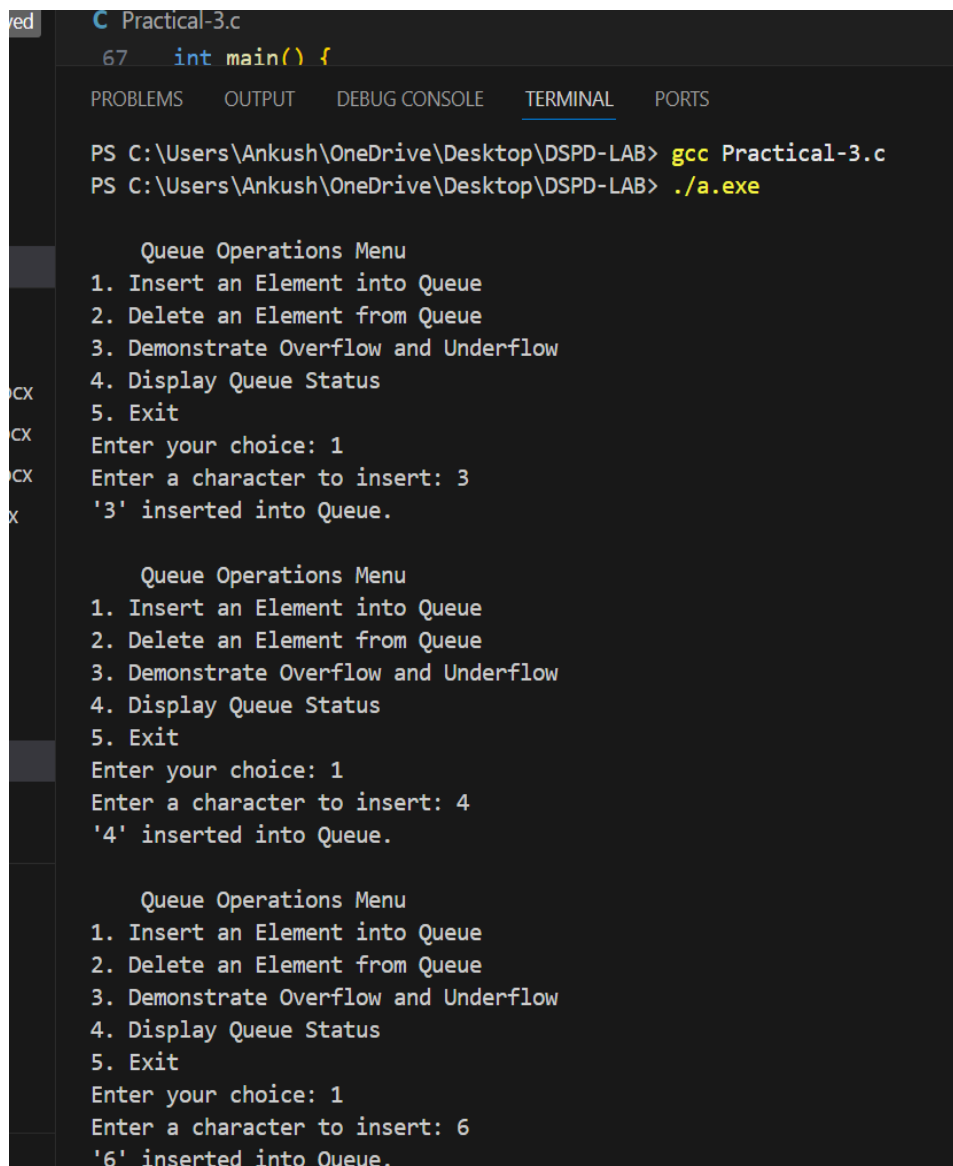
## DATA STRUCTURE AND PROGRAM DESIGN LAB – 03

3. Design, Develop and Implement a menu driven Program in C for the following operations on QUEUE of Characters (Array Implementation of Queue with maximum size MAX)

- a. Insert an Element on to QUEUE
- b. Delete an Element from QUEUE
- c. Demonstrate Overflow and Underflow situations on QUEUE
- d. Display the status of QUEUE
- e. Exit

Support the program with appropriate functions for each of the above operations.

### SAMPLE OUTPUT



```
ved C Practical-3.c
67 int main() {
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\Ankush\OneDrive\Desktop\DSPD-LAB> gcc Practical-3.c
PS C:\Users\Ankush\OneDrive\Desktop\DSPD-LAB> ./a.exe

Queue Operations Menu
1. Insert an Element into Queue
2. Delete an Element from Queue
3. Demonstrate Overflow and Underflow
4. Display Queue Status
5. Exit
Enter your choice: 1
Enter a character to insert: 3
'3' inserted into Queue.

Queue Operations Menu
1. Insert an Element into Queue
2. Delete an Element from Queue
3. Demonstrate Overflow and Underflow
4. Display Queue Status
5. Exit
Enter your choice: 1
Enter a character to insert: 4
'4' inserted into Queue.

Queue Operations Menu
1. Insert an Element into Queue
2. Delete an Element from Queue
3. Demonstrate Overflow and Underflow
4. Display Queue Status
5. Exit
Enter your choice: 1
Enter a character to insert: 6
'6' inserted into Queue.
```

1 unsaved

cal-4.c  
cal-5.c  
cal-1B.c  
cal-1C.c  
cal-2.c  
cal-3.c  
  
output.docx  
output.docx  
output.docx  
tput.docx  
  
A.c  
B.c  
C.c  
c  
c  
c  
c  
  
found in  
ractical-

C Practical-3.c

67 int main() {

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   PORTS

Enter a character to insert: 6  
'6' inserted into Queue.  
  
Queue Operations Menu  
1. Insert an Element into Queue  
2. Delete an Element from Queue  
3. Demonstrate Overflow and Underflow  
4. Display Queue Status  
5. Exit  
Enter your choice: 4  
Current Queue elements are:  
3 4 6  
  
Queue Operations Menu  
1. Insert an Element into Queue  
2. Delete an Element from Queue  
3. Demonstrate Overflow and Underflow  
4. Display Queue Status  
5. Exit  
Enter your choice: 2  
Deleted element: '3'  
  
Queue Operations Menu  
1. Insert an Element into Queue  
2. Delete an Element from Queue  
3. Demonstrate Overflow and Underflow  
4. Display Queue Status  
5. Exit  
Enter your choice: 4  
Current Queue elements are:  
4 6

A\_output.docx

B\_output.docx

C\_output.docx

\_output.docx

al-1A.c

al-1B.c

al-1C.c

al-2.c

al-3.c

al-4.c

al-5.c

ols found in

t 'Practical-

5. Exit

Enter your choice: 4

Current Queue elements are:

4 6

#### Queue Operations Menu

1. Insert an Element into Queue

2. Delete an Element from Queue

3. Demonstrate Overflow and Underflow

4. Display Queue Status

5. Exit

Enter your choice: 5

Exiting program. Goodbye!

PS C:\Users\Ankush\OneDrive\Desktop\DSPD-LAB>