

→ LAB-3

```
#include <stdio.h>
#include <conio.h>
#include <process.h>
#define QUE - SIZE 3
int item, front = 0, rear = -1, q[10];
```

```
void insertrear()
```

```
{ if (rear == QUE - SIZE - 1)
```

```
{ printf("Queue @ Overflow\n");
return;
```

```
}
```

```
rear = rear + 1;
```

```
q[rear] = item;
```

```
}
```

```
int deletefront()
```

```
{
```

```
if (front > rear)
```

```
{
```

```
front = 0;
```

```
rear = -1;
```

```
return -1;
```

```
}
```

```
return q[front++];
```

```
}
```

```
void displayQ()
```

```
{
```

```
int i;
```

```
if (front > rear)
```

```
{ printf("Queue is empty\n");
```

```
return;
```

```
}
```

```
printf("Contents of queue\n");
```

```
for (i = front; i < rear; i++)
```

```
{  
    printf ("%d\n", q[i]);  
}
```

```
}
```

```
}
```

```
void main ()
```

```
{  
    int choice;
```

```
    for (j = 0;
```

```
    {  
        printf ("\n1: insert rear \n2: delete front  
                \n3: display \n4: exit\n");
```

```
        printf ("enter the choice\n");
```

```
        scanf ("%d", &choice);
```

```
        switch (choice)
```

```
        {
```

```
            case 1: printf ("enter the item to be  
                           inserted\n");
```

```
                    scanf ("%d", &item);
```

```
                    insert_rear ();
```

```
                    break;
```

```
            case 2: item = delete_front ();
```

```
                    if (item == -1)
```

```
                        printf ("queue is empty\n");
```

```
                    else
```

```
                        printf ("item deleted = %d\n", item);
```

```
                    break;
```

```
            case 3: display ();
```

```
                    break;
```

```
            default: exit (0);
```

```
        }
```

```
    }
```