Lab Program - 3

c - Program to stimulate the working of queue of integers using an array: ~~Provide it~~

```
# include <stdio.h>
# include <conio.h>
# include <stdlib.h>
# define QUE_SIZE 3
  int item, q[10];
  int front=0, rear=-1;
  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 the Queue\n");
  for(i=front; i<=rear; i++)
  {
    Printf("%d\n", q[i]);
  }
}
int main()
{
  int choice;
  for(;;)
  {
    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);
              insertrear();
              break;
```

```
{
    case 2 : item=deletefront();
             if(item==-1)
             Printf("Queue is Empty\n");
             else
             Printf("Item Deleted=%d\n",item);
             break;

    case 3 : displayQ();
             break;

    default : exit(0);
    }
  }

  return 0;
}
```