LAB5- LINEAR QUEUE

- WAP to simulate the working of a queue of integers using an array. Provide the following operations
a) Insert
b) Delete
c) Display.
The program should print appropriate message for queue empty and queue Overflow.
conditions

```
#include <stdio.h>
#include <stdlib.h>
#define QUE_SIZE 3

int item, front=0, rear=-1, q[10];

void insertRear(int n)
{
  if (rear==>n-1)
  {
     printf("Queue Overflow \n");
  }
  else
  {
    rear=rear+1;
```

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

int deleteFront()
{
    if (front > rear)
    {
        front = 0;
        rear = -1;
        return -1;
    }
    return q[front++];
}

void display()
{
    int i;
    if (front > rear)
    {
        printf("queue is empty\n");
    }
    printf("Contents of the queue\n");
    for (i = front; i <= rear; i++)
    {
        printf("%d\n", q[i]);
```

```
    }
}

int main()
{
  int n;
  printf("Enter size of Queue:\n");
  scanf("%d", &n);
  int choice=0;
  for(;;)
  {
    printf("\n1: InsertRear \n2. Delete Front \n3. Display
          \n4. Exit \n");
    printf("enter the choice \n");
    scanf("%d", &choice);

    switch(choice)
    {
      case1: printf("Enter the item to be
             inserted \n");
             scanf("%d", &item);
             insertRear(n);
             break;
      case2: item = deleteFront();
             if(item==-1)
             {  printf("Queue is empty \n");
```

```
        else
            printf("\nItem deleted = %d\n", item);
        break;
    case 3: display();
        break;
    default();
        break;
    default : exit(0)
        break;
  }
 }
}
```