CIRCULAR QUEUE

```
#include<stdio.h>
#define q_size 5
int item,front=0,rear=-1,q[q_size],count=0;
void insert_rear()
{
   if(count==q_size)
   {
      printf("Queue Overflow\n");
      return;}

   rear=(rear+1)%q_size;
   q[rear]=item;
   count++;
   return;
}
int delete_front()
{
   if(count==0)
      return -1;
   else{
   item=q[front];
   front=(front+1)%q_size;
   count=count-1;
   return item;}
}
void display()
{
   int i,f;
   if (count==0)
   {
```

```
        printf("Queue is empty\n ");
        return;
    }
    f=front;
    printf("Content of Queue:\n");
    for(i=0;i<=count;i++)
    {
        printf("%d\n",q[f]);
        f=(f+1)%q_size;
    }
}
void main()
{
int choice;

for(;;)
{
    printf("1:INSERT\n 2:DELETE \n 3:DISPLAY \n");
     printf("Enter the choice\n");
     scanf("%d",&choice);
    switch(choice){
    case 1:printf("Enter an element to be inserted \n");
           scanf("%d",&item);
           insert_rear();
           break;
    case 2:item=delete_front();
           if(item==-1)//{
            printf("Queue is empty\n");


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

```
        break;
    case 3:display();
        break;
    default: exit(0);
    }
}
}
```

```
1:INSERT
 2:DELETE
 3:DISPLAY
Enter the choice
1
Enter an element to be inserted
12
1:INSERT
 2:DELETE
 3:DISPLAY
Enter the choice
1
Enter an element to be inserted
23
1:INSERT
 2:DELETE
 3:DISPLAY
Enter the choice
1
Enter an element to be inserted
24
1:INSERT
 2:DELETE
 3:DISPLAY
Enter the choice
3
Content of Queue:
12
23
24
0
1:INSERT
 2:DELETE
 3:DISPLAY
Enter the choice
```