Lab program - 4

```
#include <stdio.h
#include <stdlib.h
# define SIZE 5
 int f=0, r=-1 ,ch;
 int item, q[10];
 int isFull(){
    return (r==SIZE-1) ? 1 : 0;
 }
int isEmpty(){
    return (f>r) ? 1:0;
}
void insertRear(){
   if (isFull()){
      Printf("Queue overflow");
  }  return;
   r+=1
   q[r] =item;
}
```

```
void insertFront(){
    if (f!=0){
        f += 1
        q[f] = item;
        return;
    }else if(f==0 && r==-1){
        q[++r] = item;
        return;
    }else{
        printf("Insertion not possible\n");
    }
}

Void deleteRear(){
    if(isEmpty()){
        printf("Queue is empty");
        f=0;
        r=-1;
        return;
    }
    printf("Item deleted is %d\n", q[r--]);
```

```
void deleteRear(){
    if (isEmpty()){
            printf("Queue is empty");
            f=0;
            r=-1;
           return;
    }
    printf(" item is deleted is %d\n", q[f++]);
void display(){
    if (isEmpty()){
        printf(" Queue is empty");
        return;
    }
    for (i=f; i<=r; i++){
        printf ("%d ", q[i]);
    }
}
```

```
void main(){
    int flag = 1;
while (flag == 1){
    printf("\n\n 1. Insert Rear\n 2. Insert Front\n
        3. Delete Rear\n 4. Delete Front\n 5. Display
        \n 6. Exit\n");
  printf (" Enter choice : ");
  scanf("%d", &ch);
  switch (ch){
      case 1: printf("\n enter the item: ");
          scanf ("%d", &item);
          insertRear();
    case 2: break;
        printf ("\n enter the item ");
        scanf("%d", &item);
        insert Front();
        break;
  case 3: delete Rear();
      break;
case 4: delete Front();
      break;
```

```
        case 5: display();
                break;
        default : exit(0);
    }
  }
}
```