LAB PROGRAM :- 3

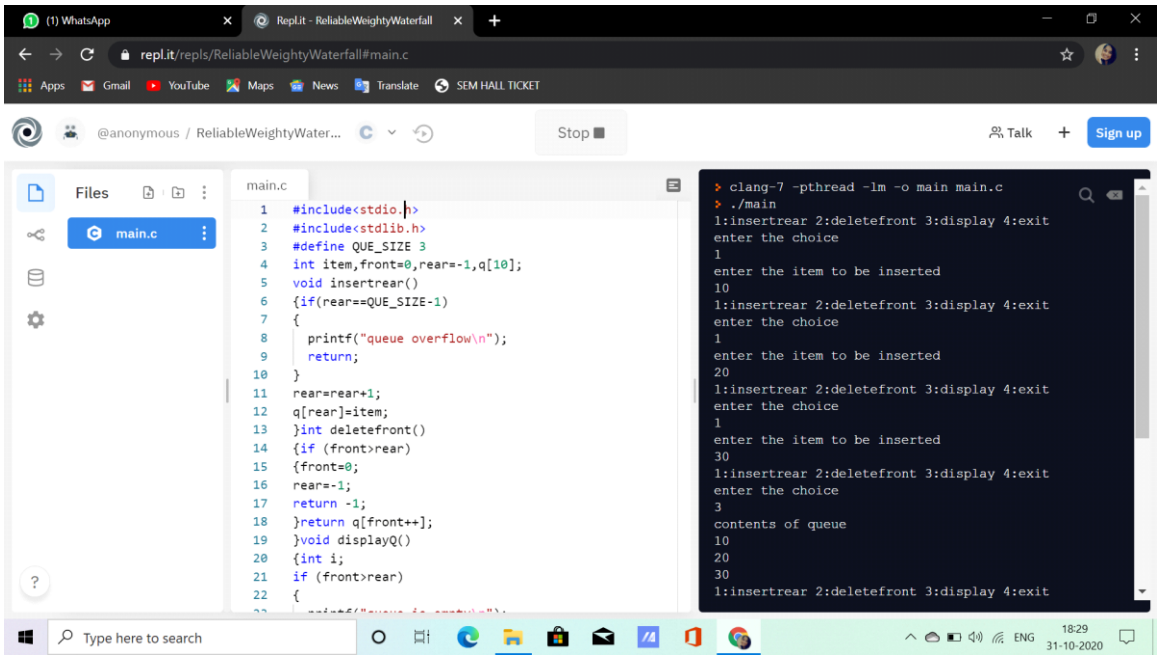
ORDINARY QUEUE:

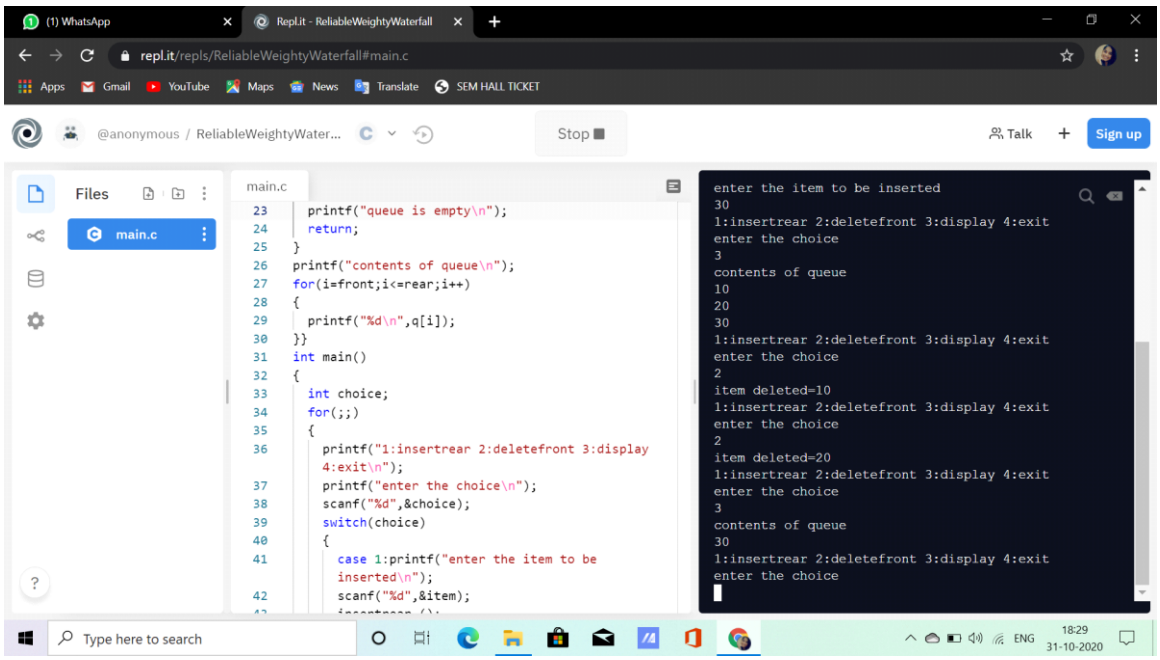
```
#include<stdio.h>
#include<stdlib.h>
#define QUE_SIZE 3
int item,front=0,rear=-1,q[10];
void insertrear()
{if(rear==QUE_SIZE-1)
{
        printf("queue overflow\n");
        return;
}
rear=rear+1;
q[rear]=item;
}int deletefront()
{if (front>rear)
{front=0;
rear=-1;
return -1;
}return q[front++];
}void displayQ()
{int i;
if (front>rear)
{
        printf("queue is empty\n");
        return;
}
printf("contents of queue\n");
```

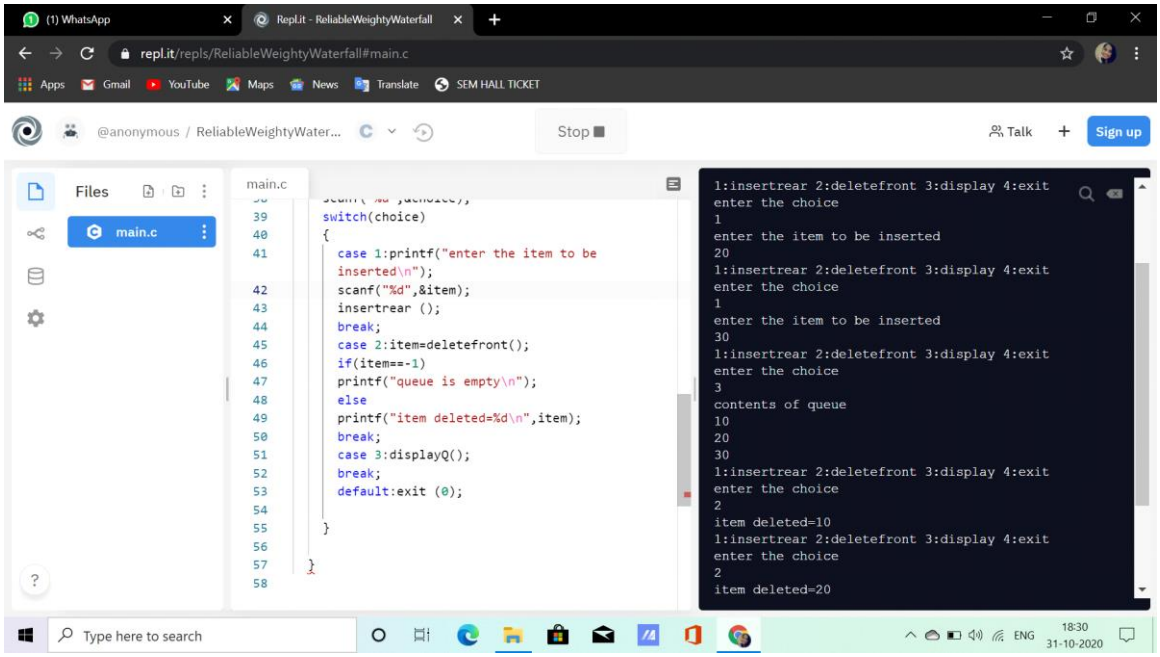
```
for(i=front;i<=rear;i++)
{
        printf("%d\n",q[i]);
}}
int main()
{
        int choice;
        for(;;)
        {
                printf("1:insertrear 2:deletefront 3:display 4:exit\n");
                printf("enter the choice\n");
                scanf("%d",&choice);
                switch(choice)
                {
                        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);
```

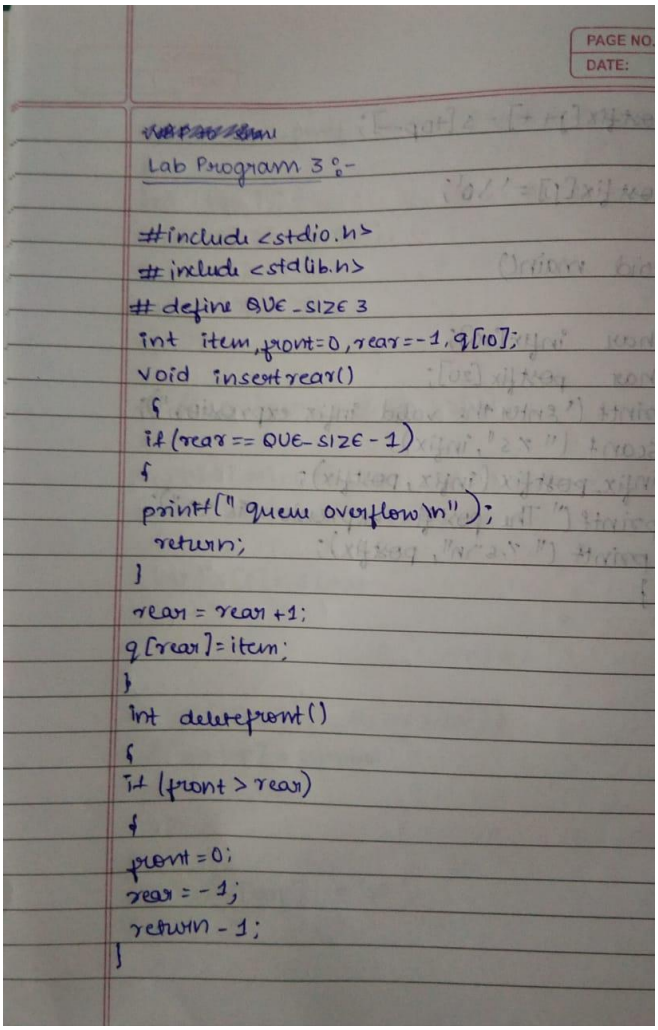
```
        }
    }
    }
```

SCREENSHOTS OF PROGRAM AND OUTPUT:






(1) WhatsApp
Repl.it - ReliableWeightyWaterfall
repl.it/repls/ReliableWeightyWaterfall#main.c
Apps Gmail YouTube Maps News Translate SEM HALL TICKET
@anonymous / ReliableWeightyWater...
Stop
Talk
Sign up
Files
main.c
39 switch(choice)
40 {
41 case 1:printf("enter the item to be inserted\n");
42 scanf("%d",&item);
43 insertrear ();
44 break;
45 case 2:item=deletefront();
46 if(item==-1)
47 printf("queue is empty\n");
48 else
49 printf("item deleted=%d\n",item);
50 break;
51 case 3:displayQ();
52 break;
53 default:exit (0);
54
55 }
56
57 }
58
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
1
enter the item to be inserted
20
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
1
enter the item to be inserted
30
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
3
contents of queue
10
20
30
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
2
item deleted=10
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
2
item deleted=20
Type here to search
ENG
18:30
31-10-2020


PAGE NO.
DATE:
Lab Program 3 :-
#include <stdio.h>
#include <stdlib.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 display Q()
{
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]);
}
}
int main()
{
int choice;
for(;;)
{
printf("1.insertrear 2:deletefront 3:display 4:exit
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);
 }
}
```