LAB-4 PROGRAM

CIRCULLAR QUEUE:-

Program:

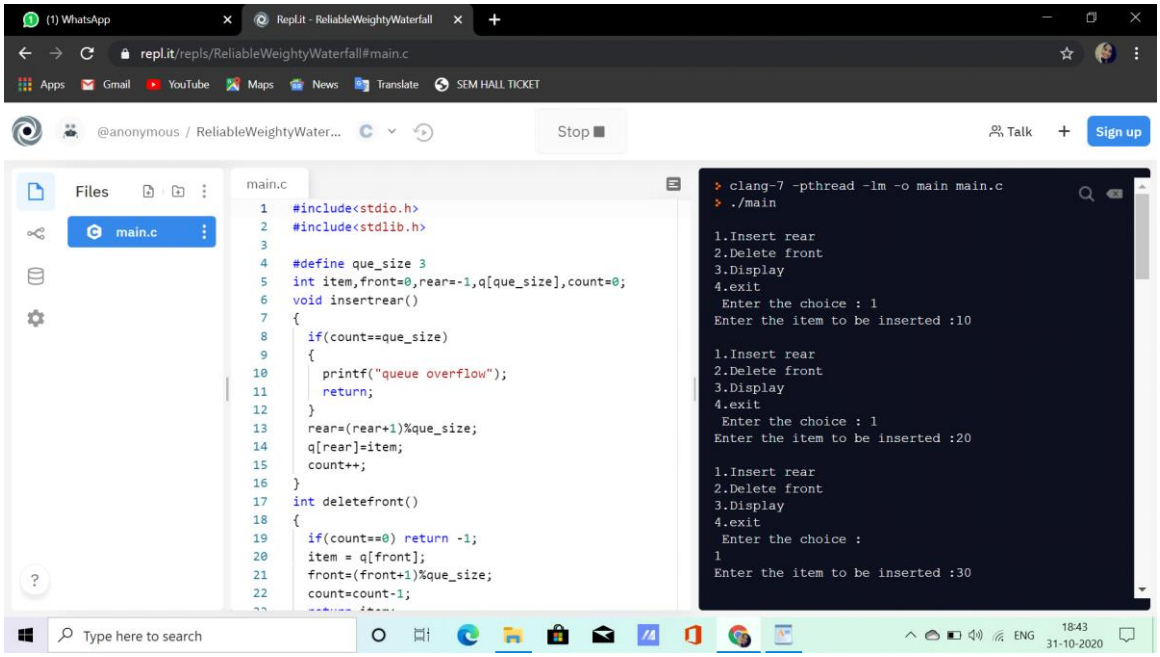
```
#include<stdio.h>
#include<stdlib.h>

#define que_size 3
int item,front=0,rear=-1,q[que_size],count=0;
void insertrear()
{
        if(count==que_size)
        {
                printf("queue overflow");
                return;
        }
        rear=(rear+1)%que_size;
        q[rear]=item;
        count++;
}
int deletefront()
{
        if(count==0) return -1;
        item = q[front];
        front=(front+1)%que_size;
        count=count-1;
        return item;
```

```
}
void displayq()
{
	int i,f;
	if(count==0)
	{
		printf("queue is empty");
		return;
	}
	f=front;
	printf("contents of queue \n");
	for(i=0;i<=count;i++)
	{
		printf("%d\n",q[f]);
		f=(f+1)%que_size;
	}
}
void main()
{
	int choice;
	for(;;)
	{
		printf("\n1.Insert rear \n2.Delete front \n3.Display \n4.exit \n ");
		printf("Enter the choice : ");
		scanf("%d",&choice);
		switch(choice)
```

```
            {
                case 1:printf("Enter the item to be inserted :");
                    scanf("%d",&item);
                    insertrear();
                    break;
                case 2:item=deletefront();
                        if(item==-1)
                        printf("queue is empty\n");
                        else
                        printf("item deleted is %d \n",item);
                        break;
              case 3:displayq();
                        break;
              default:exit(0);
            }
        }

}
```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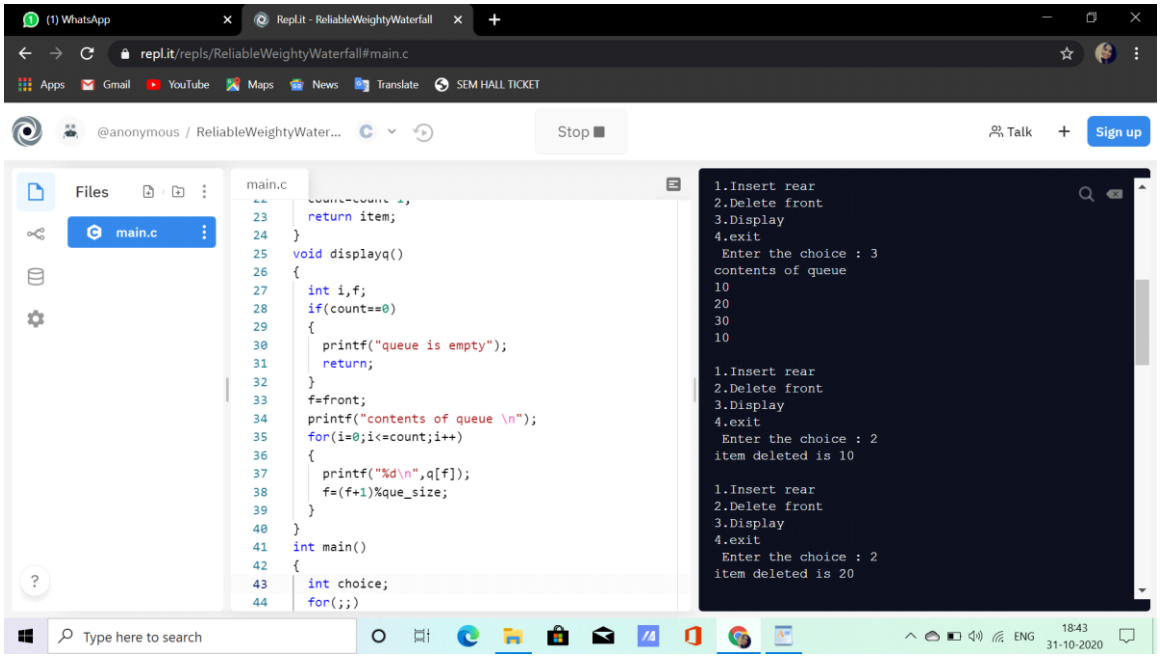
@anonymous / ReliableWeightyWater...
Stop
Talk
Sign up
Files
main.c
#include<stdio.h>
#include<stdlib.h>
#define que_size 3
int item,front=0,rear=-1,q[que_size],count=0;
void insertrear()
{
if(count==que_size)
{
printf("queue overflow");
return;
}
rear=(rear+1)%que_size;
q[rear]=item;
count++;
}
int deletefront()
{
if(count==0) return -1;
item = q[front];
front=(front+1)%que_size;
count=count-1;
clang-7 -pthread -lm -o main main.c
./main
1.Insert rear
2.Delete front
3.Display
4.exit
Enter the choice : 1
Enter the item to be inserted :10
1.Insert rear
2.Delete front
3.Display
4.exit
Enter the choice : 1
Enter the item to be inserted :20
1.Insert rear
2.Delete front
3.Display
4.exit
Enter the choice :
1
Enter the item to be inserted :30
Type here to search
ENG
18:43
31-10-2020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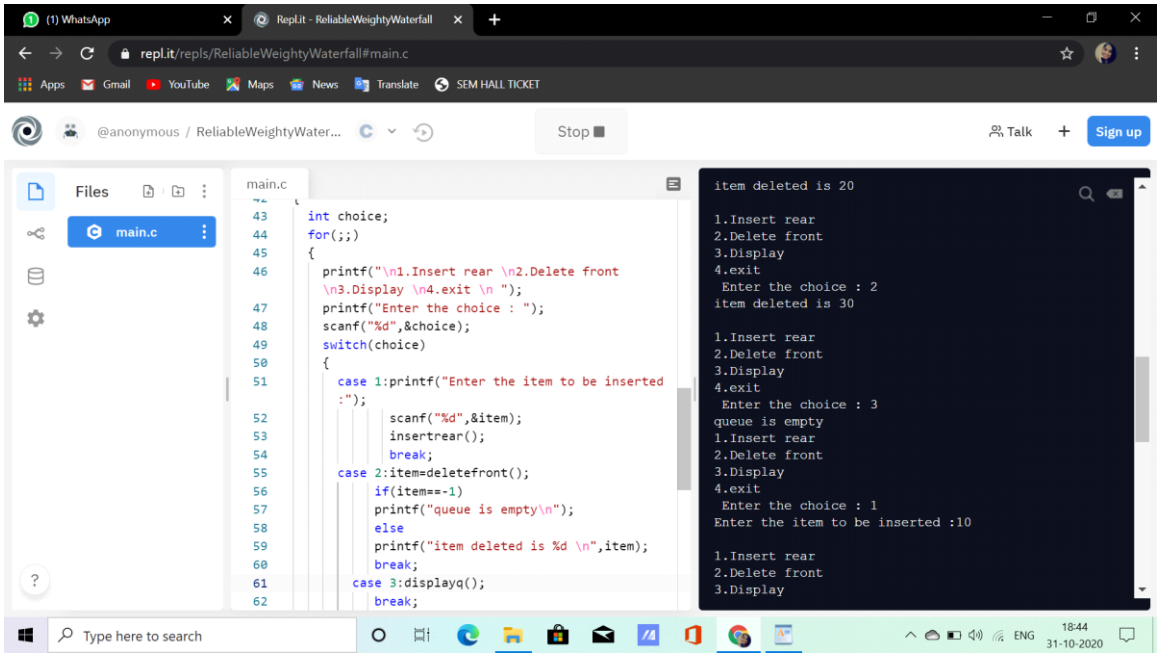
repl.it/repls/ReliableWeightyWaterfall#main.c
Apps Gmail YouTube Maps News Translate SEM HALL TICKET
@anonymous / ReliableWeightyWater...
Stop
Talk
Sign up
Files
main.c
return item;
}
void displayq()
{
int i,f;
if(count==0)
{
printf("queue is empty");
return;
}
f=front;
printf("contents of queue \n");
for(i=0;i<=count;i++)
{
printf("%d\n",q[f]);
f=(f+1)%que_size;
}
}
int main()
{
int choice;
for(;;)
1.Insert rear
2.Delete front
3.Display
4.exit
Enter the choice : 3
contents of queue
10
20
30
10
1.Insert rear
2.Delete front
3.Display
4.exit
Enter the choice : 2
item deleted is 10
1.Insert rear
2.Delete front
3.Display
4.exit
Enter the choice : 2
item deleted is 20
Type here to search
ENG
18:43
31-10-2020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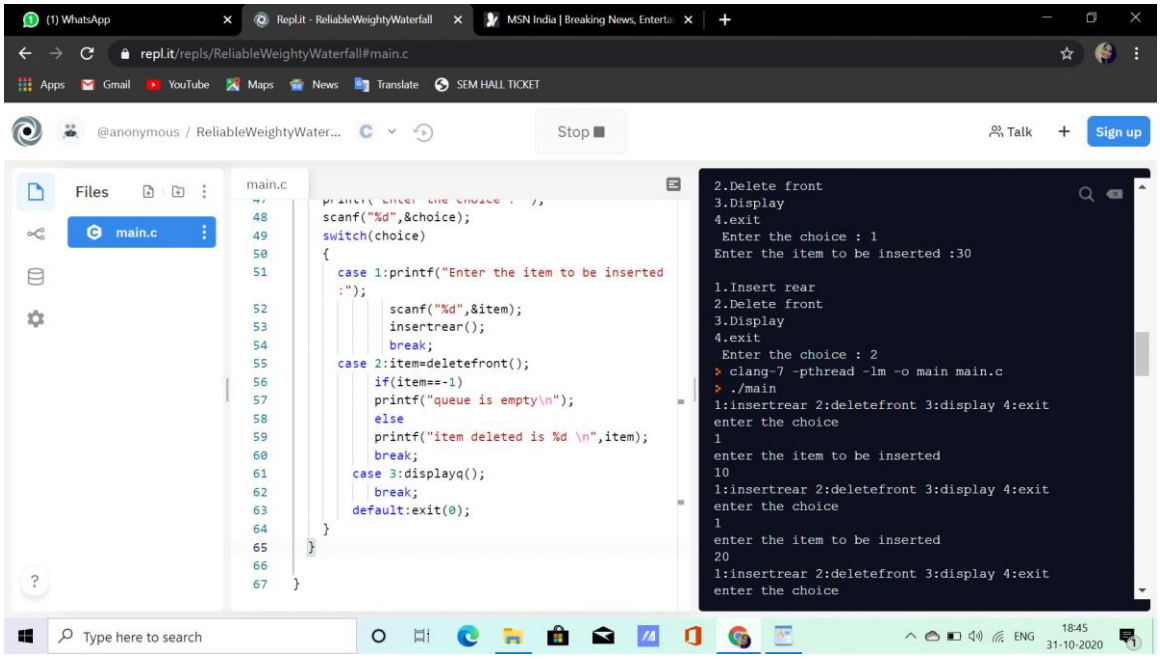
repl.it/repls/ReliableWeightyWaterfall#main.c
Apps Gmail YouTube Maps News Translate SEM HALL TICKET
@anonymous / ReliableWeightyWater...
Stop
Talk
Sign up
Files
main.c
int choice;
for(;;)
{
printf("\n1.Insert rear \n2.Delete front \n3.Display \n4.exit \n ");
printf("Enter the choice : ");
scanf("%d",&choice);
switch(choice)
{
case 1:printf("Enter the item to be inserted :");
scanf("%d",&item);
insertrear();
break;
case 2:item=deletefront();
if(item==-1)
printf("queue is empty\n");
else
printf("item deleted is %d \n",item);
break;
case 3:displayq();
break;
item deleted is 20
1.Insert rear
2.Delete front
3.Display
4.exit
Enter the choice : 2
item deleted is 30
1.Insert rear
2.Delete front
3.Display
4.exit
Enter the choice : 3
queue is empty
1.Insert rear
2.Delete front
3.Display
4.exit
Enter the choice : 1
Enter the item to be inserted :10
1.Insert rear
2.Delete front
3.Display
Type here to search
ENG
18:44
31-10-2020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repl.it/repls/ReliableWeightyWaterfall#main.c
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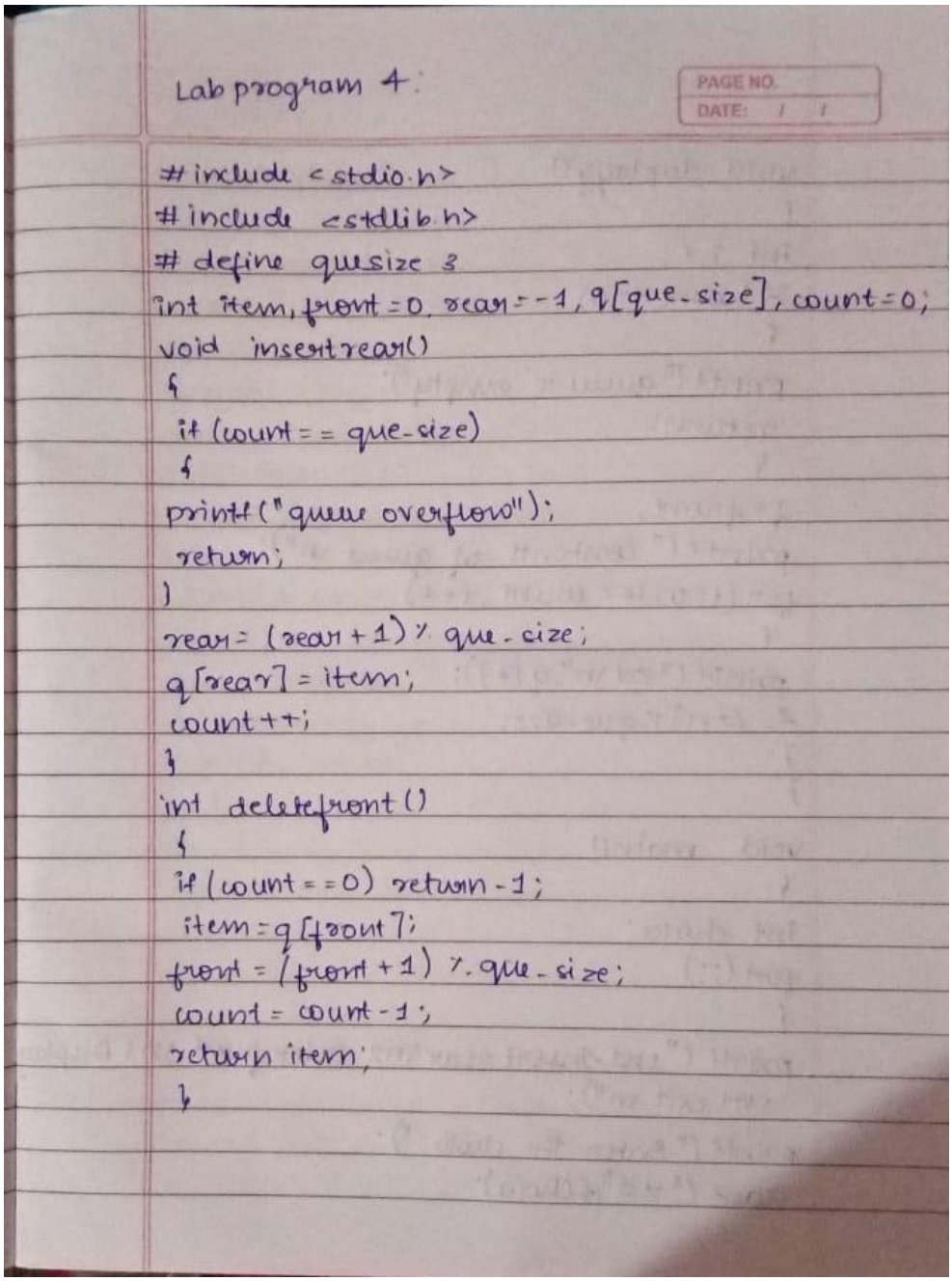
@anonymous / ReliableWeightyWater...
Stop
Talk
Sign up
Files
main.c
scanf("%d",&choice);
switch(choice)
{
case 1:printf("Enter the item to be inserted :");
scanf("%d",&item);
insertrear();
break;
case 2:item=deletefront();
if(item==-1)
printf("queue is empty\n");
else
printf("item deleted is %d \n",item);
break;
case 3:displayq();
break;
default:exit(0);
}
}
}
2.Delete front
3.Display
4.exit
Enter the choice : 1
Enter the item to be inserted :30
1.Insert rear
2.Delete front
3.Display
4.exit
Enter the choice : 2
clang-7 -pthread -lm -o main main.c
./main
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
1
enter the item to be inserted
10
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
Type here to search
ENG
18:45
31-10-2020

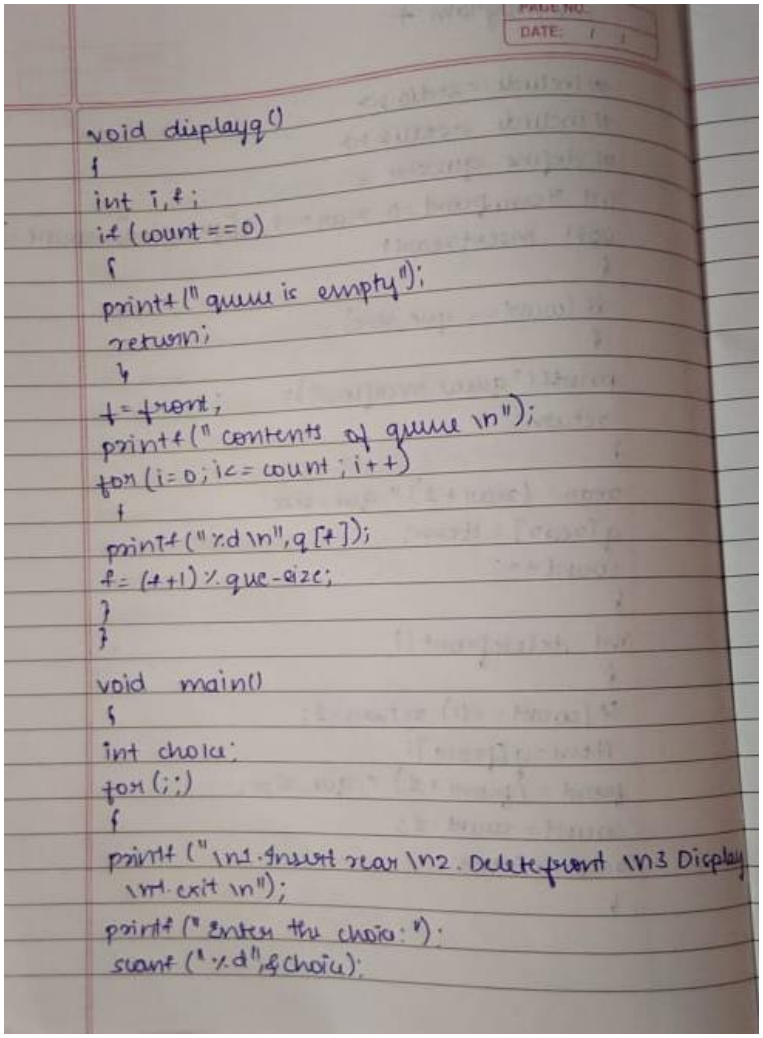
SCREENSHOTS OF PROGRAM AND OUTPUT:-



Lab program 4:

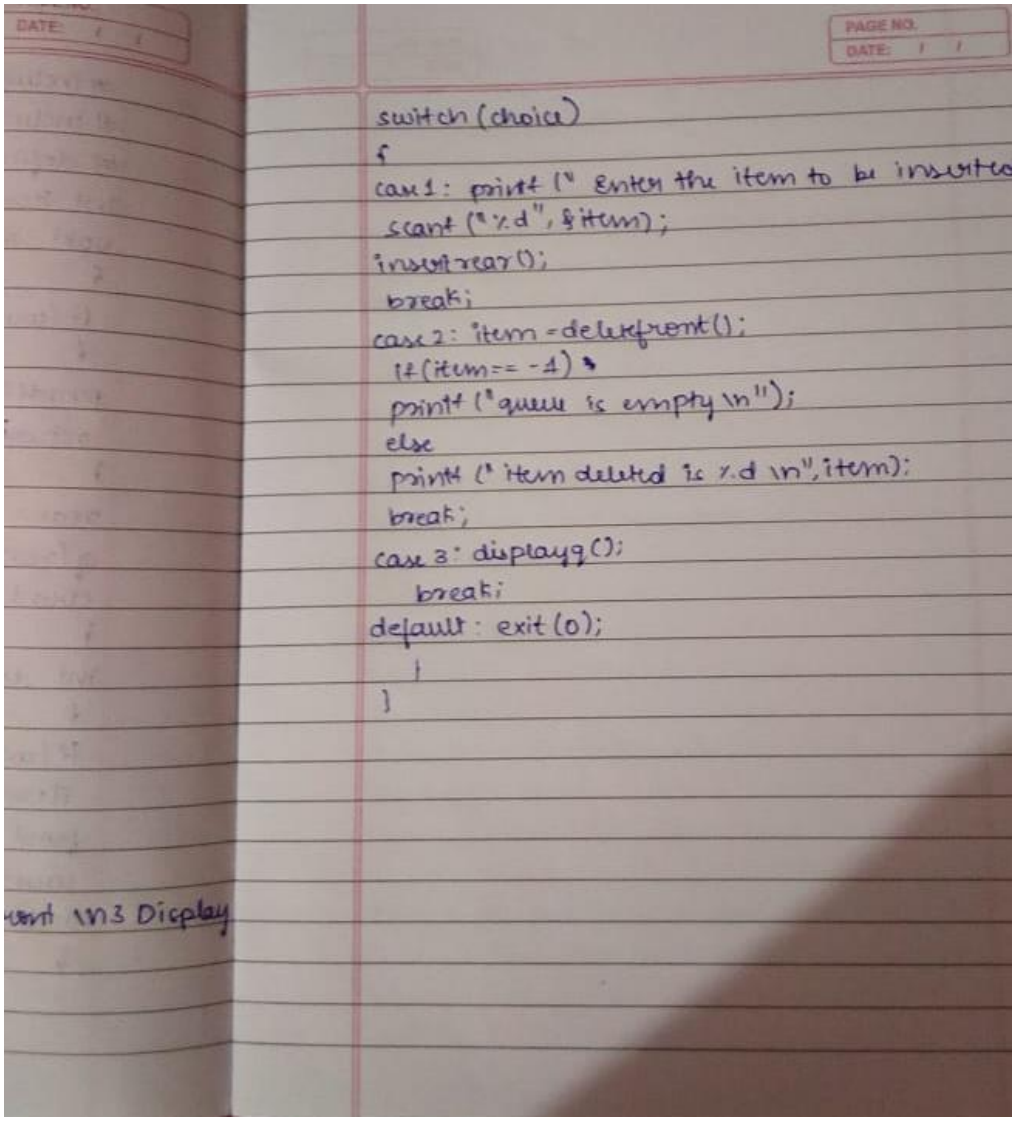
PAGE NO.
DATE: / /

```
#include <stdio.h>
#include <stdlib.h>
#define quesize 3
int item, front=0, rear=-1, q[que_size], count=0;
void insertrear()
{
 if (count == que_size)
 {
printf("queue overflow");
 return;
}
rear = (rear+1) % que_size;
q[rear] = item;
count++;
}
int deletefront()
{
if (count==0) return -1;
 item = q[front];
front = (front+1) % que_size;
count = count-1;
return item;
}
```



```
void displayq()
{
int i,t;
if (count==0)
{
printf("queue is empty");
return;
}
t=front;
printf("contents of queue \n");
for(i=0;i<=count;i++)
{
printf("%d \n",q[t]);
t=(t+1)%que_size;
}
}

void main()
{
int choice;
for(;;)
{
printf("\n1.Insert rear \n2. Delete front \n3 Display
\n4. exit \n");
printf("Enter the choice:");
scanf("%d",&choice);
```



```
switch (choice)
{
case 1: printf (" Enter the item to be inserted
 scanf ("%d", &item);
insertrear();
 break;
case 2: item = delerfront();
 if (item == -1)
 printf ("queue is empty \n");
 else
 printf (" item deleted is %d \n", item);
 break;
case 3: display();
   break;
default: exit (0);
   }
}
```

ert 3 Display