MULTIPLE PRIORITY QUEUE:

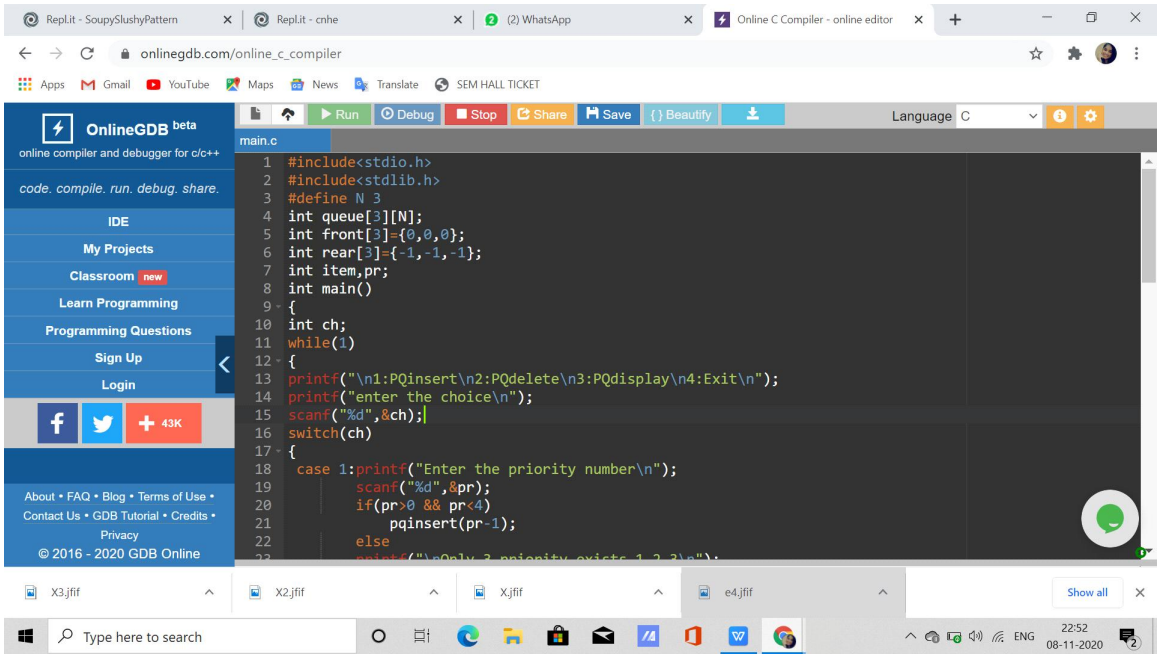
```
#include<stdio.h>
#include<stdlib.h>
#define N 3
int queue[3][N];
int front[3]={0,0,0};
int rear[3]={-1,-1,-1};
int item,pr;
int main()
{
int ch;
while(1)
{
printf("\n1:PQinsert\n2:PQdelete\n3:PQdisplay\n4:Exit\n");
printf("enter the choice\n");
scanf("%d",&ch);
switch(ch)
{
  case 1:printf("Enter the priority number\n");
                scanf("%d",&pr);
                if(pr>0 && pr<4)
                pqinsert(pr-1);
                else
                printf("\nOnly 3 priority exists 1 2 3\n");
                break;
```

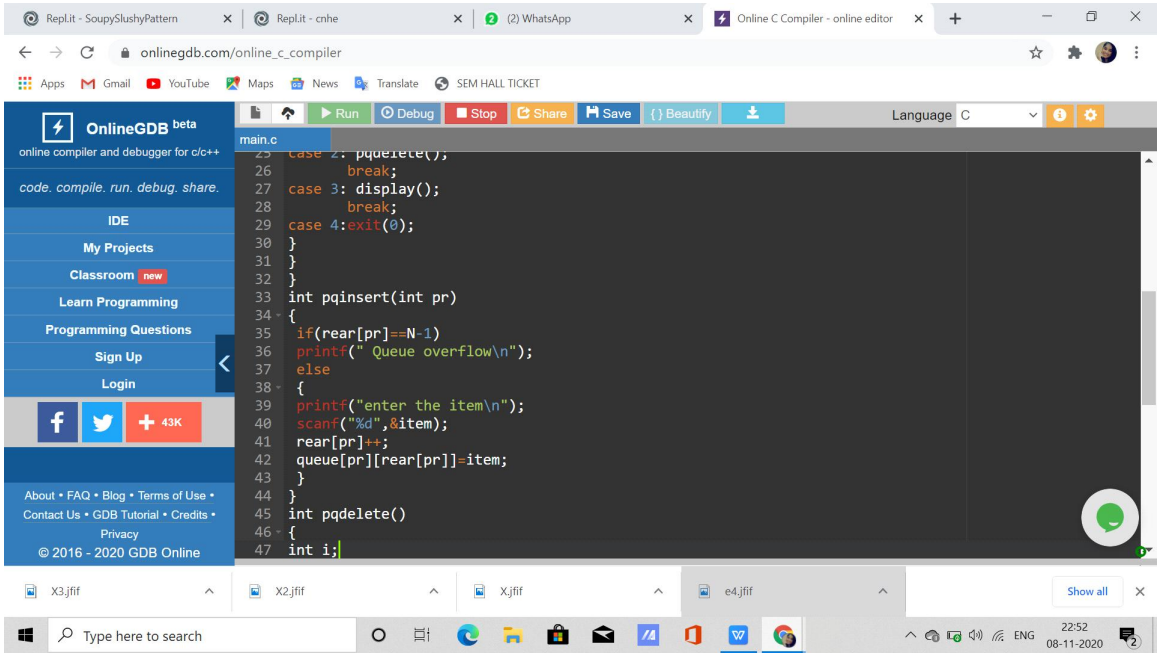
```
case 2: pqdelete();
                break;
case 3: display();
                break;
case 4:exit(0);
}
}
}
int pqinsert(int pr)
{
  if(rear[pr]==N-1)
  printf(" Queue overflow\n");
  else
  {
  printf("enter the item\n");
  scanf("%d",&item);
  rear[pr]++;
  queue[pr][rear[pr]]=item;
  }
}
int pqdelete()
{
int i;
for(i=0;i<3;i++)
{
```

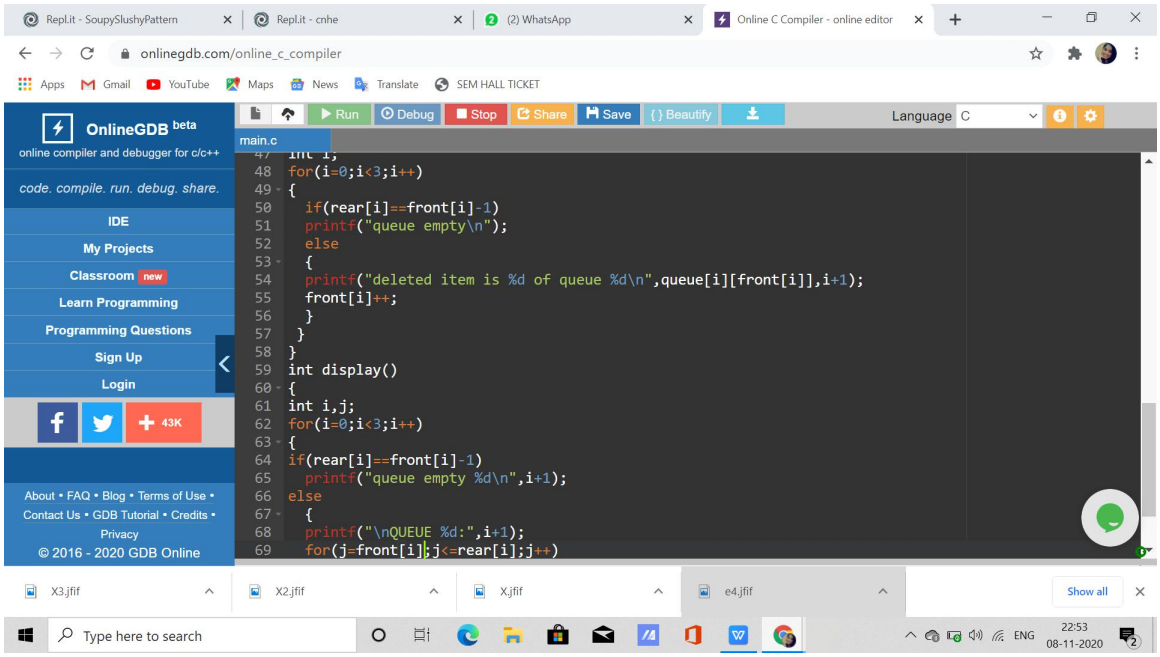
```
    if(rear[i]==front[i]-1)
    printf("queue empty\n");
    else
    {
    printf("deleted item is %d of queue %d\n",queue[i][front[i]],i+1);
    front[i]++;
    }
  }
}
int display()
{
int i,j;
for(i=0;i<3;i++)
{
if(rear[i]==front[i]-1)
    printf("queue empty %d\n",i+1);
else
    {
    printf("\nQUEUE %d:",i+1);
    for(j=front[i];j<=rear[i];j++)
        printf("%d\t",queue[i][j]);
    }
}


}
```

SCREENSHOTS:

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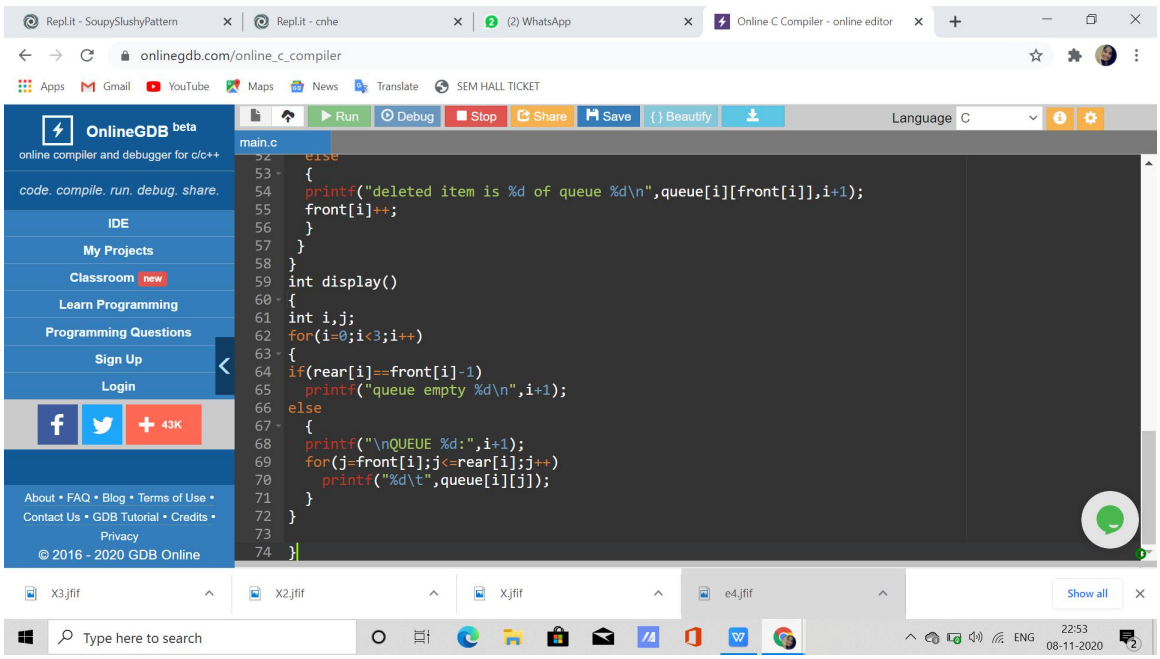
main.c
for(i=0;i<3;i++)
{
if(rear[i]==front[i]-1)
printf("queue empty\n");
else
{
printf("deleted item is %d of queue %d\n",queue[i][front[i]],i+1);
front[i]++;
}
}
}
int display()
{
int i,j;
for(i=0;i<3;i++)
{
if(rear[i]==front[i]-1)
printf("queue empty %d\n",i+1);
else
{
printf("\nQUEUE %d:",i+1);
for(j=front[i];j<=rear[i];j++)
X3.jfif
X2.jfif
X.jfif
e4.jfif
Show all
Type here to search
ENG
22:53
08-11-2020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main.c
{
printf("deleted item is %d of queue %d\n",queue[i][front[i]],i+1);
front[i]++;
}
}
}
int display()
{
int i,j;
for(i=0;i<3;i++)
{
if(rear[i]==front[i]-1)
printf("queue empty %d\n",i+1);
else
{
printf("\nQUEUE %d:",i+1);
for(j=front[i];j<=rear[i];j++)
printf("%d\t",queue[i][j]);
}
}
}
X3.jfif
X2.jfif
X.jfif
e4.jfif
Show all
Type here to search
ENG
22:53
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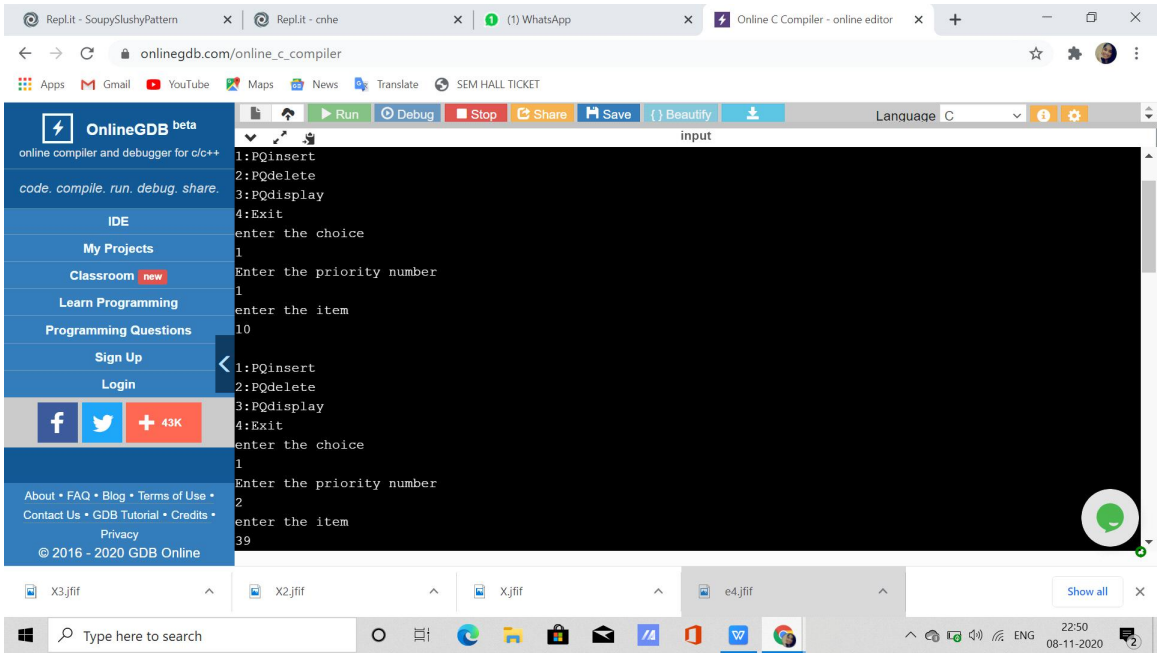
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input
1:PQinsert
2:PQdelete
3:PQdisplay
4:Exit
enter the choice
1
Enter the priority number
1
enter the item
10
1:PQinsert
2:PQdelete
3:PQdisplay
4:Exit
enter the choice
1
Enter the priority number
2
enter the item
39
X3.jfif
X2.jfif
X.jfif
e4.jfif
Show all
Type here to search
ENG
22:50
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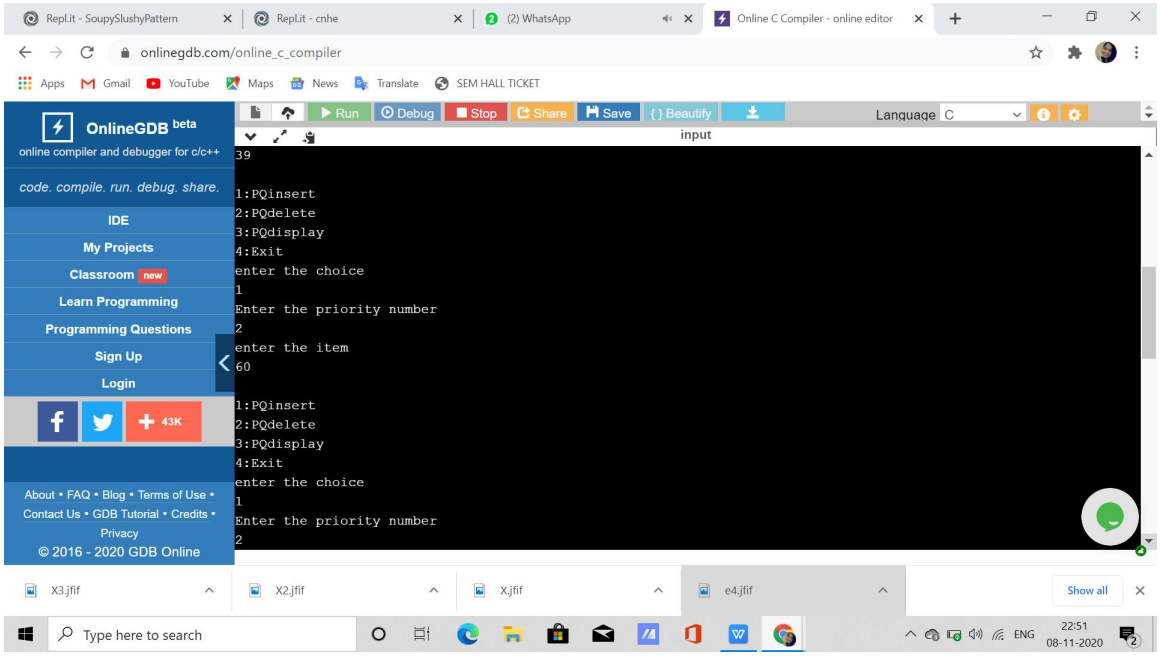
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input
39
1:PQinsert
2:PQdelete
3:PQdisplay
4:Exit
enter the choice
1
Enter the priority number
2
enter the item
60
1:PQinsert
2:PQdelete
3:PQdisplay
4:Exit
enter the choice
1
Enter the priority number
2
X3.jfif
X2.jfif
X.jfif
e4.jfif
Show all
Type here to search
ENG
22:51
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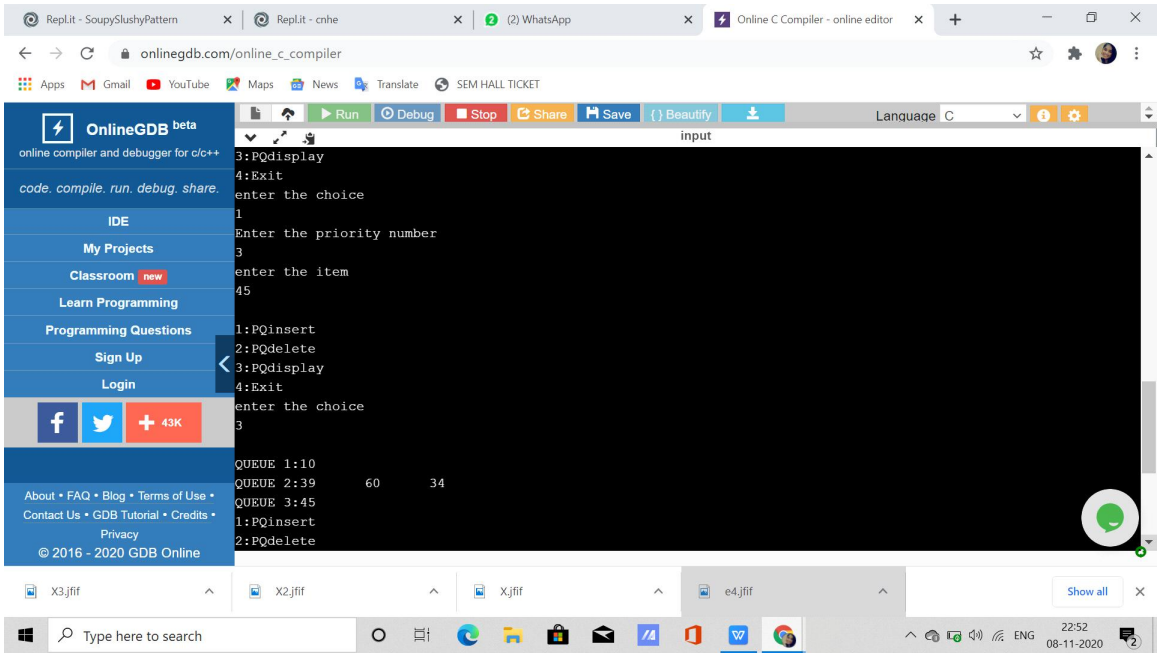
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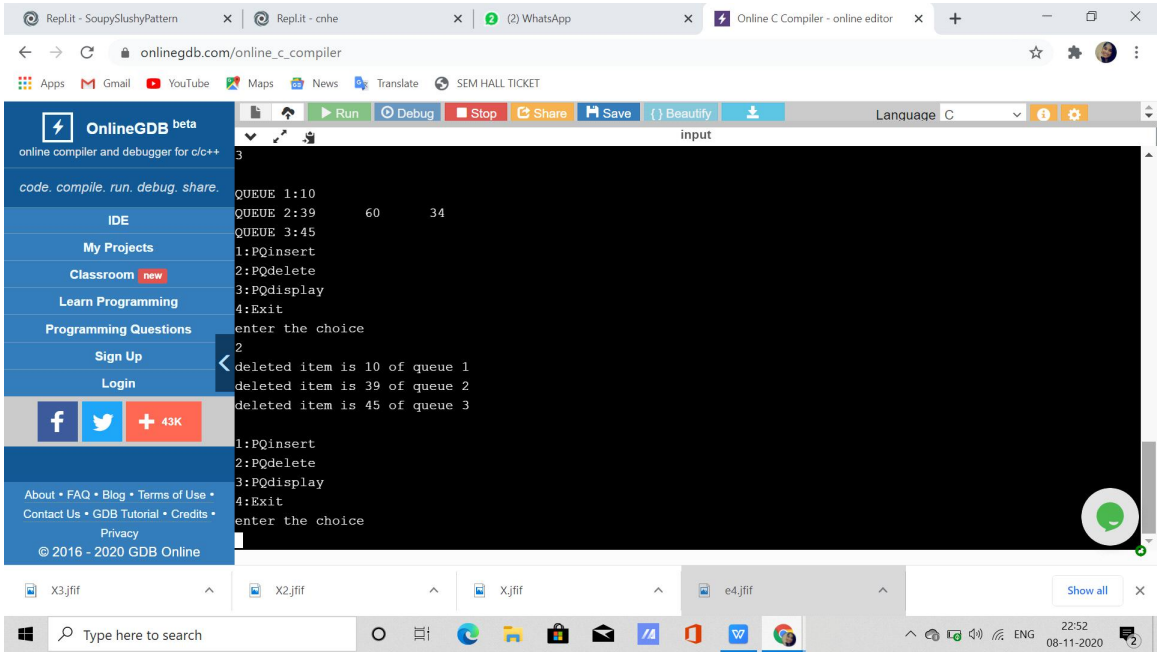
input
3:PQdisplay
4:Exit
enter the choice
1
Enter the priority number
3
enter the item
45
1:PQinsert
2:PQdelete
3:PQdisplay
4:Exit
enter the choice
3
QUEUE 1:10
QUEUE 2:39 60 34
QUEUE 3:45
1:PQinsert
2:PQdelete
X3.jfif
X2.jfif
X.jfif
e4.jfif
Show all
Type here to search
ENG
22:52
08-11-2020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input
3
QUEUE 1:10
QUEUE 2:39 60 34
QUEUE 3:45
1:PQinsert
2:PQdelete
3:PQdisplay
4:Exit
enter the choice
2
deleted item is 10 of queue 1
deleted item is 39 of queue 2
deleted item is 45 of queue 3
1:PQinsert
2:PQdelete
3:PQdisplay
4:Exit
enter the choice
X3.jfif
X2.jfif
X.jfif
e4.jfif
Show all
Type here to search
ENG
22:52
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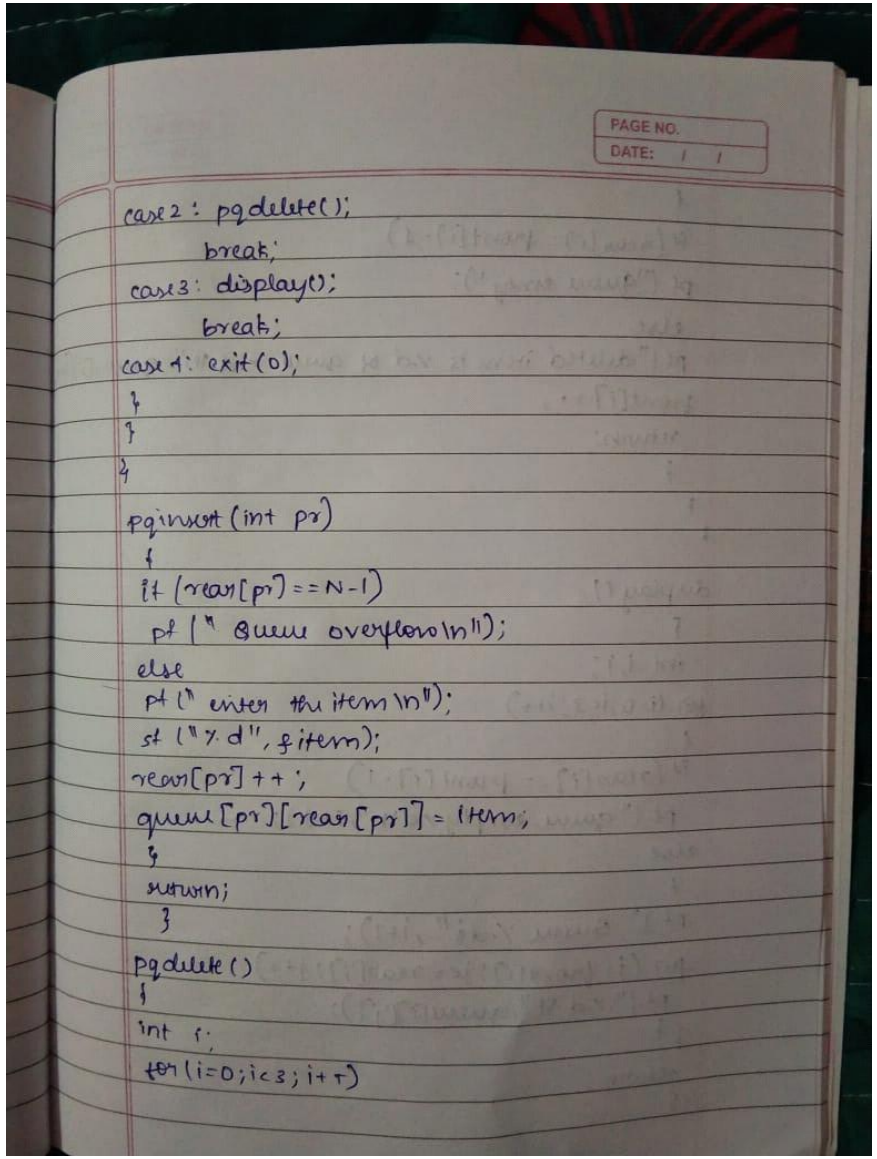
WRITTEN:

→ Multiple priority queue.

```
#include<stdio.h>
#define N 3
int queue[3][N];
int front[3] = {0,0,0};
int rear[3] = {-1,-1,-1};
int item, pr;

void main()
{
int ch;
while(1)
{ pf("1:PQ insert \n2. PQ delete \n3. PQdisplay
\n4 : Exit \n");
pf("enter the choice \n");
sf("%d", &ch);
switch(ch)
{
case 1: print("enter the priority number\n")
        sf("%d", &pr)
    if (pr>0 && pr<4)
    pqinsert(pr-1);
else
 pf("only 3 priority exists 1 2 3 \n");
   break;
}
if(rear[i] = front[i]-1)
pf("queue empty");
else
pf("deleted item is %d of queue %d \n", queue[i][front[i]],
front[i]++;
 return;
 }
}
}

display()
 {
 int i,j;
for(i=0;i<3;i++)
 {
 if(rear[i] == front[i]-1)
  pf("queue empty %d\n", i+1);
else
 {
 pf("Queue %d:", i+1);
 for(j=front[i]; j<=rear[i]; j++)
  pf("%d \t", queue[i][j]);
 }}
 return;
 }
```



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```
case 2 : pqdelete();
        break;
case 3 : display();
        break;
case 4 : exit(0);
}
}
}

pqinsert (int pr)
{
if (rear[pr] == N-1)
pf ("Queue overflow\n");
else
pf ("enter the item\n");
sf ("%d", &item);
rear[pr]++;
queue[pr][rear[pr]] = item;
}
return;
}

pqdelete()
{
int i;
for(i=0; i<3; i++)
```