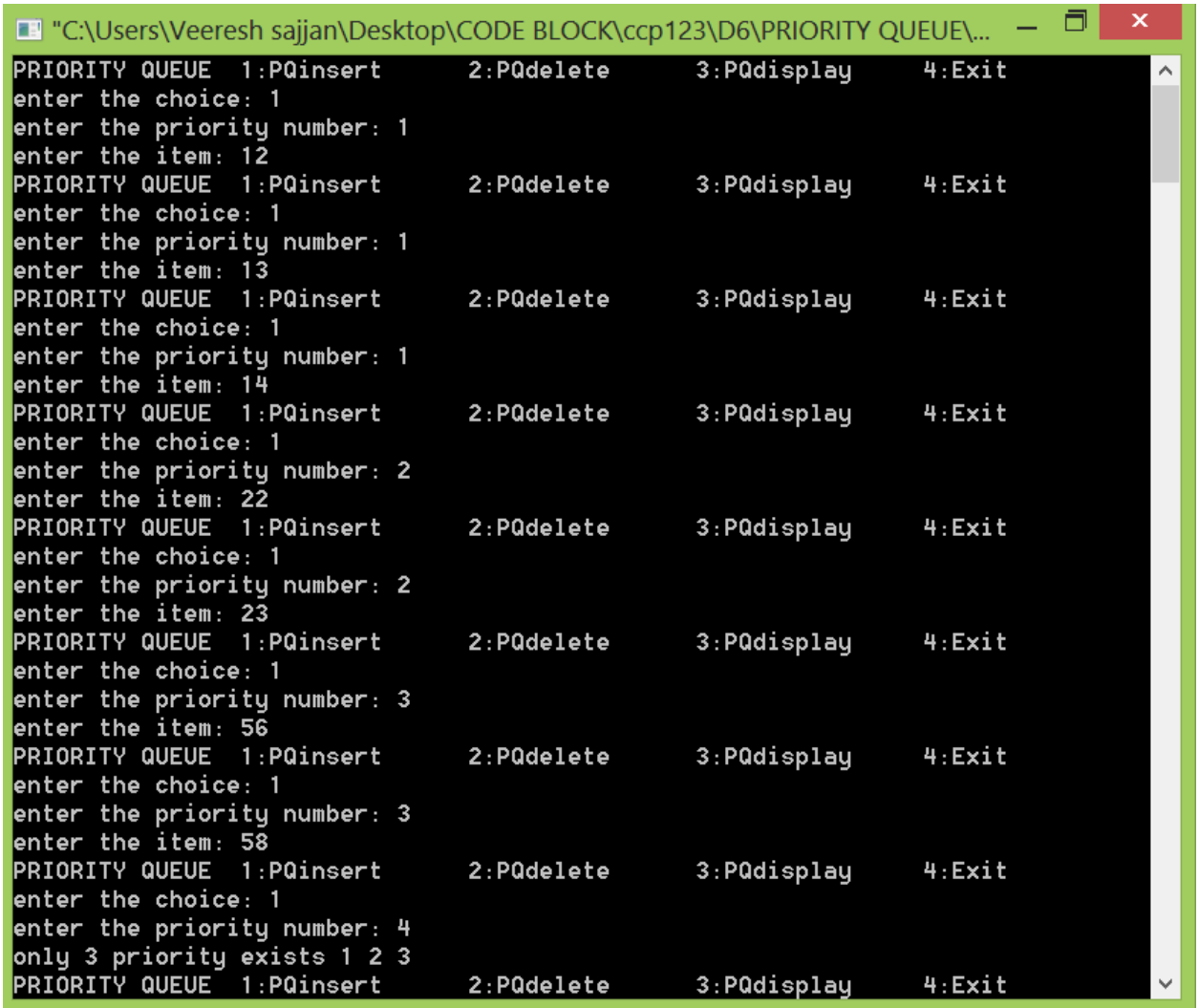
PRIORITY QUEUE:

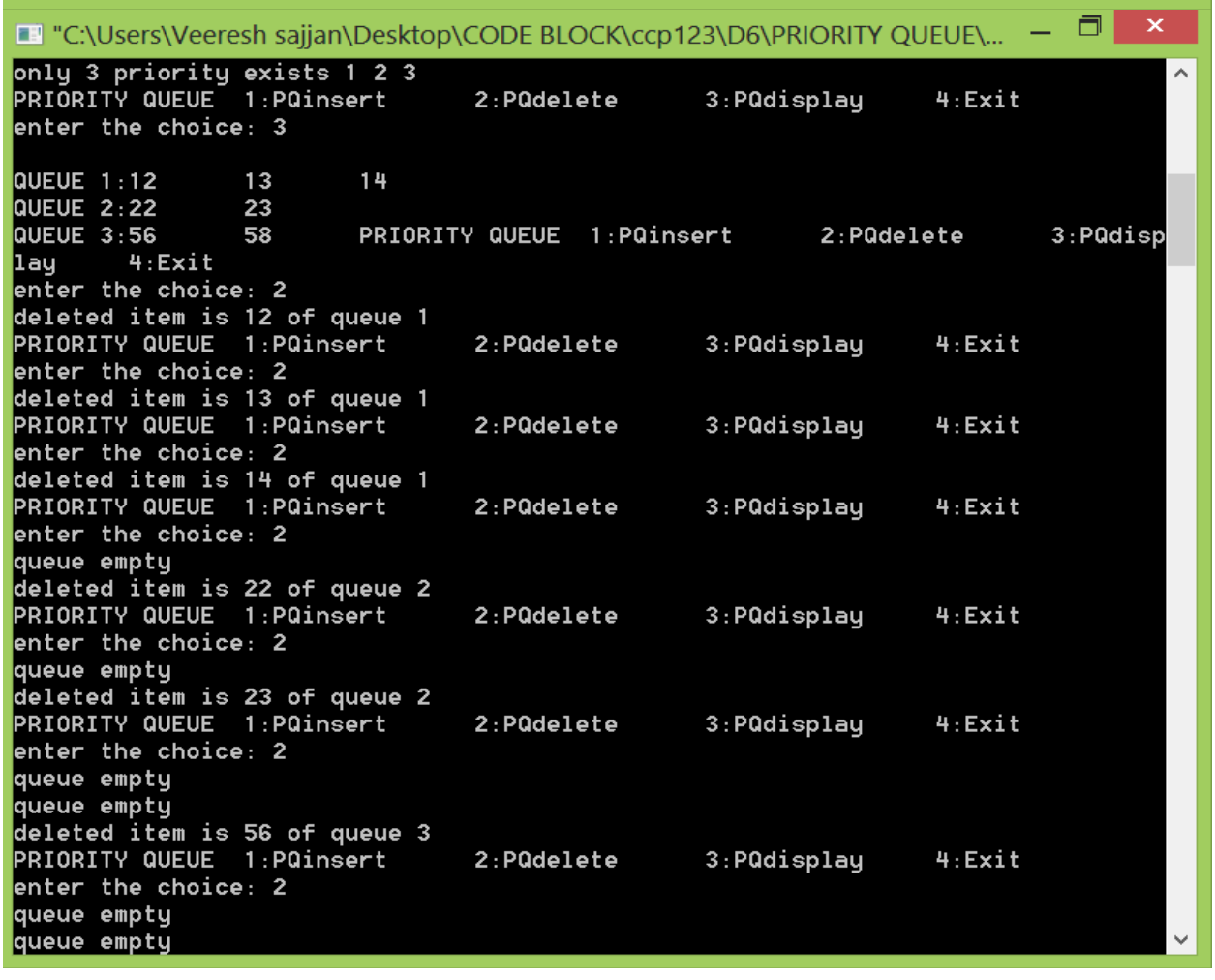
```
#include<stdio.h>
#include<conio.h>
#define N 3
int queue[3][N];
int front[3]={0,0,0};
int rear[3]={-1,-1,-1};
int item,pr;
void main()
{
int ch;
clrscr();
while(1)
{
printf("PRIORITY QUEUE\n");
printf("*****************\n");
printf("\n\t1:PQinsert\n");
printf("\n\t2:PQdelete\n");
printf("\n\t3:PQdisplay\n");
printf("\n\t4:Exit\n");
printf("\nenter the choice\n");
scanf("%d",&ch);
switch(ch)
{
 case 1:printf("\nenter the priority number\n");
                        scanf("%d",&pr);
                        if(pr>0 && pr<4)
                        pqinsert(pr-1);
                        else
```

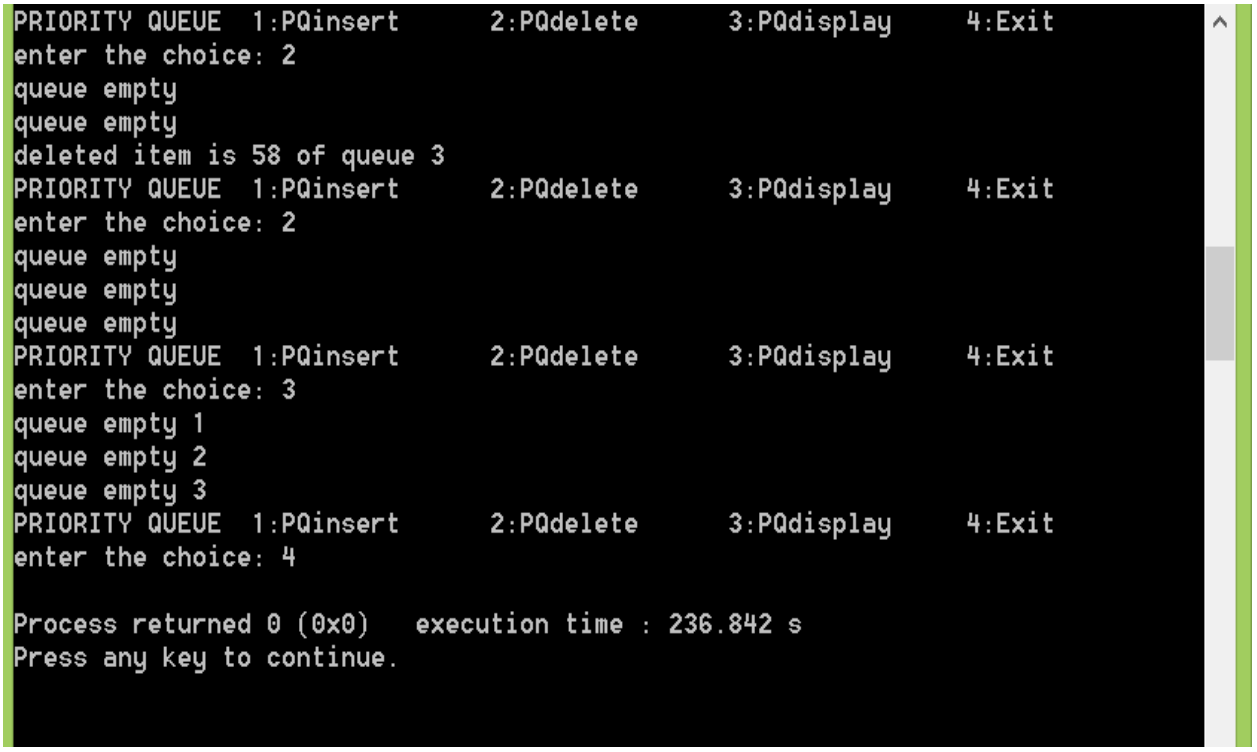
```
                printf("\only 3 priority exists 1 2 3\n");
                break;
case 2:pqdelete();
        break;
case 3:display();
        break;
case 4:exit(0);
}
}
getch();
}
pqinsert(int pr)
{
 if(rear[pr]==N-1)
 printf("\n Queue overflow\n");
 else
 {
 printf("\nenter the item\n");
 scanf("%d",&item);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

OUTPUT :


"C:\Users\Veeresh sajjan\Desktop\CODE BLOCK\ccp123\D6\PRIORITY QUEUE\...
PRIORITY QUEUE 1:PQinsert 2:PQdelete 3:PQdisplay 4:Exit
enter the choice: 1
enter the priority number: 1
enter the item: 12
PRIORITY QUEUE 1:PQinsert 2:PQdelete 3:PQdisplay 4:Exit
enter the choice: 1
enter the priority number: 1
enter the item: 13
PRIORITY QUEUE 1:PQinsert 2:PQdelete 3:PQdisplay 4:Exit
enter the choice: 1
enter the priority number: 1
enter the item: 14
PRIORITY QUEUE 1:PQinsert 2:PQdelete 3:PQdisplay 4:Exit
enter the choice: 1
enter the priority number: 2
enter the item: 22
PRIORITY QUEUE 1:PQinsert 2:PQdelete 3:PQdisplay 4:Exit
enter the choice: 1
enter the priority number: 2
enter the item: 23
PRIORITY QUEUE 1:PQinsert 2:PQdelete 3:PQdisplay 4:Exit
enter the choice: 1
enter the priority number: 3
enter the item: 56
PRIORITY QUEUE 1:PQinsert 2:PQdelete 3:PQdisplay 4:Exit
enter the choice: 1
enter the priority number: 3
enter the item: 58
PRIORITY QUEUE 1:PQinsert 2:PQdelete 3:PQdisplay 4:Exit
enter the choice: 1
enter the priority number: 4
only 3 priority exists 1 2 3
PRIORITY QUEUE 1:PQinsert 2:PQdelete 3:PQdisplay 4:Exit


"C:\Users\Veeresh sajjan\Desktop\CODE BLOCK\ccp123\D6\PRIORITY QUEUE\...
only 3 priority exists 1 2 3
PRIORITY QUEUE 1:PQinsert 2:PQdelete 3:PQdisplay 4:Exit
enter the choice: 3
QUEUE 1:12 13 14
QUEUE 2:22 23
QUEUE 3:56 58 PRIORITY QUEUE 1:PQinsert 2:PQdelete 3:PQdisp
lay 4:Exit
enter the choice: 2
deleted item is 12 of queue 1
PRIORITY QUEUE 1:PQinsert 2:PQdelete 3:PQdisplay 4:Exit
enter the choice: 2
deleted item is 13 of queue 1
PRIORITY QUEUE 1:PQinsert 2:PQdelete 3:PQdisplay 4:Exit
enter the choice: 2
deleted item is 14 of queue 1
PRIORITY QUEUE 1:PQinsert 2:PQdelete 3:PQdisplay 4:Exit
enter the choice: 2
queue empty
deleted item is 22 of queue 2
PRIORITY QUEUE 1:PQinsert 2:PQdelete 3:PQdisplay 4:Exit
enter the choice: 2
queue empty
deleted item is 23 of queue 2
PRIORITY QUEUE 1:PQinsert 2:PQdelete 3:PQdisplay 4:Exit
enter the choice: 2
queue empty
queue empty
deleted item is 56 of queue 3
PRIORITY QUEUE 1:PQinsert 2:PQdelete 3:PQdisplay 4:Exit
enter the choice: 2
queue empty
queue empty


PRIORITY QUEUE 1:PQinsert 2:PQdelete 3:PQdisplay 4:Exit
enter the choice: 2
queue empty
queue empty
deleted item is 58 of queue 3
PRIORITY QUEUE 1:PQinsert 2:PQdelete 3:PQdisplay 4:Exit
enter the choice: 2
queue empty
queue empty
queue empty
PRIORITY QUEUE 1:PQinsert 2:PQdelete 3:PQdisplay 4:Exit
enter the choice: 3
queue empty 1
queue empty 2
queue empty 3
PRIORITY QUEUE 1:PQinsert 2:PQdelete 3:PQdisplay 4:Exit
enter the choice: 4
Process returned 0 (0x0) execution time : 236.842 s
Press any key to continue.