```
#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;
 int main()
⊟{
int ch;
 while (1)
printf("PRIORITY QUEUE\n");
printf("*************************);
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)
         pginsert(pr-1);
         else
         printf("Only 3 priority exists 1 2 3\n");
         break;
 case 2:pgdelete();
        break;
 case 3:display();
        break;
 case 4:exit(0);
return 0;
```

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```
37
     return 0;
38
     int pginsert (int pr)
40
    B{
      if(rear[pr] == N-1)
41
      printf("\n Queue overflow\n");
42
43
      else
44
      printf("\nenter the item\n");
45
      scanf("%d", &item);
46
      rear[pr]++;
47
      queue[pr][rear[pr]]=item;
48
49
50
      return;
51
     int pgdelete()
52
53
    ⊟ {
    int i;
54
     for(i=0;i<3;i++)
55
56
    ₫{
       if(rear[i] == front[i]-1)
57
       printf("queue empty\n");
58
59
       else
60
       printf("deleted item is %d of queue %d\n", queue[i][front[i]], i+1);
61
62
       front[i]++;
       return;
63
64
65
66
     int display()
67
68
     int i, j;
69
     for (i=0; i<3; i++)
70
71
     if (rear[i] == front[i]-1)
       printf("Queue empty %d\n",i+1);
74
    else
                                                                                                                                                                                     >
```

```
46
      scanf ("%d", &item);
47
      rear[pr]++;
      queue[pr][rear[pr]]=item;
48
49
50
      return;
51
     int pgdelete()
53
54
     int i;
55
     for(i=0;i<3;i++)
56
57
       if(rear[i] == front[i]-1)
58
       printf("queue empty\n");
59
       else
60
       printf("deleted item is %d of queue %d\n", queue[i][front[i]], i+1);
61
       front[i]++;
62
63
       return;
64
65
66
     int display()
67
68
     int i, j;
69
     for(i=0;i<3;i++)
71
72
     if(rear[i] == front[i]-1)
73
       printf("Queue empty %d\n",i+1);
74
     else
75
76
       printf("\nQUEUE %d:",i+1);
77
       for (j=front[i];j<=rear[i];j++)</pre>
78
         printf("%d\t", queue[i][j]);
79
80
81
       return;
82
83
```

>

```
C:\WINDOWS\SYSTEM32\cmd.exe
PRIORITY QUEUE
        1:PQInsert
        2:PQDelete
        3:PQDisplay
        4:Exit
Enter the Choice :
1
Enter the Priority Number
2
enter the item
5
PRIORITY QUEUE
        1:PQInsert
        2:PQDelete
        3:PQDisplay
        4:Exit
Enter the Choice :
1
Enter the Priority Number
1
enter the item
10
PRIORITY QUEUE
        1:PQInsert
        2:PQDelete
        3:PQDisplay
        4:Exit
Enter the Choice :
1
```

```
Enter the Choice :

Enter the Priority Number

and the item

PRIORITY QUEUE

**************

1:PQInsert

2:PQDelete

3:PQDisplay
```

PRIORITY QUEUE

4:Exit

Enter the Choice :

1:PQInsert

2:PQDelete

3:PQDisplay

deleted item is 10 of queue 1

1:PQInsert

2:PQDelete

3:PQDisplay

4:Exit

Enter the Choice :

4:Exit

Enter the Choice :

PRIORITY QUEUE

QUEUE 1:10 QUEUE 2:5 QUEUE 3:15

3

2

2

```
C:\WINDOWS\SYSTEM32\cmd.exe
deleted item is 5 of queue 2
PRIORITY QUEUE
        1:PQInsert
        2:PQDelete
        3:PQDisplay
        4:Exit
Enter the Choice :
2
queue empty
queue empty
deleted item is 15 of queue 3
PRIORITY QUEUE
        1:PQInsert
        2:PQDelete
        3:PQDisplay
        4:Exit
Enter the Choice :
Queue empty 1
Queue empty 2
Queue empty 3
PRIORITY QUEUE
        1:PQInsert
        2:PQDelete
        3:PQDisplay
        4:Exit
```

Enter the Choice :

(program exited with code: 0)

Press any key to continue \dots

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