C:\Users\Nikita\Desktop\programs\priority queue.cpp - Dev-C++ 5.11

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TDM-GCC 4.9.2 64-bit Release

(globals)

Project Classes

priority queue.cpp circularqueue.cpp

```
1  #include<stdio.h>
2  #include<stdlib.h>
3  #define qsize 5
4  int f=0,r=-1,ch;
5  int item,q[10];
6
7  int isfull()
8    {
9     return(r==qsize-1)?1:0;
10   }
11 int isempty()
12   {
13    return(f>r)?1:0;
14   }
15 void insert_rear()
16   {
17    if(isfull())
18      {
19       printf("queue overflow\n");
20       return;
21      }
22    r=r+1;
23    q[r]=item;
24   }
25 void delete_front()
26   {
27    if(isempty())
28      {
29       printf("queue empty\n");
30       return;
31      }
32    printf("item deleted is %d\n",q[(f)++]);
33    if(f>r)
34      {
35       f=0;
36       r=-1;
37      }
38   }
39 void insert_front()
40   {
```

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(globals)

Project Classes

priority queue.cpp circularqueue.cpp

```
38   }
39 void insert_front()
40   {
41    if(f!=0)
42     {
43      f=f-1;
44      q[f]=item;
45      return;
46     }
47    else if((f==0)&&(r==-1))
48     {
49      q[++(r)]=item;
50      return;
51     }
52    else
53      printf("insertion not possible\n");
54   }
55 void delete_rear()
56   {
57    if(isempty())
58     {
59      printf("queue is empty\n");
60      return;
61     }
62    printf("item deleted is %d\n",q[(r)--]);
63    if(f>r)
64     {
65      f=0;
66      r=-1;
67     }
68   }
69 void display()
70   {
71    int i;
72    if(isempty())
73     {
74      printf("queue empty\n");
75      return;
76     }
77    for(i=f;i<=r;i++)
```

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(globals)

Project Classes

priority queue.cpp circularqueue.cpp

```
69  void display()
70    {
71     int i;
72     if(isempty())
73       {
74        printf("queue empty\n");
75        return;
76       }
77     for(i=f;i<=r;i++)
78      printf("%d\n",q[i]);
79    }
80  int main()
81   {
82
83
84    for(;;)
85     {
86      printf("1.insert_rear\n2.insert_front\n3.delete_rear\n4.delete_front\n5.display\n6.exit\n");
87      printf("enter choice\n");
88      scanf("%d",&ch);
89      switch(ch)
90        {
91         case 1:printf("enter the item\n");
92                scanf("%d",&item);
93                insert_rear();
94                break;
95         case 2:printf("enter the item\n");
96                scanf("%d",&item);
97                insert_front();
98                break;
99         case 3:delete_rear();
100               break;
101        case 4:delete_front();
102               break;
103        case 5:display();
104               break;
105        default:exit(0);
106       }
107    }
108
```

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C:\Users\Nikita\Desktop\programs\priority queue.exe

```
1.insert_rear
2.insert_front
3.delete_rear
4.delete_front
5.display
6.exit
enter choice
1
enter the item
10
1.insert_rear
2.insert_front
3.delete_rear
4.delete_front
5.display
6.exit
enter choice
1
enter the item
20
1.insert_rear
2.insert_front
3.delete_rear
4.delete_front
5.display
6.exit
enter choice
1
enter the item
30
1.insert_rear
2.insert_front
3.delete_rear
4.delete_front
5.display
6.exit
enter choice
1
enter the item
40
1.insert_rear
```

C:\Users\Nikita\Desktop\programs\priority queue.exe

```
enter choice
1
enter the item
40
1.insert_rear
2.insert_front
3.delete_rear
4.delete_front
5.display
6.exit
enter choice
1
enter the item
50
1.insert_rear
2.insert_front
3.delete_rear
4.delete_front
5.display
6.exit
enter choice
1
enter the item
60
queue overflow
1.insert_rear
2.insert_front
3.delete_rear
4.delete_front
5.display
6.exit
enter choice
3
item deleted is 50
1.insert_rear
2.insert_front
3.delete_rear
4.delete_front
5.display
6.exit
enter choice
```

C:\Users\Nikita\Desktop\programs\priority queue.exe

```
1.insert_rear
2.insert_front
3.delete_rear
4.delete_front
5.display
6.exit
enter choice
3
item deleted is 50
1.insert_rear
2.insert_front
3.delete_rear
4.delete_front
5.display
6.exit
enter choice
4
item deleted is 10
1.insert_rear
2.insert_front
3.delete_rear
4.delete_front
5.display
6.exit
enter choice
5
20
30
40
1.insert_rear
2.insert_front
3.delete_rear
4.delete_front
5.display
6.exit
enter choice
```