MutiplePriorQ.c

Saved

```c
#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;
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;
}
void main()
{
    int ch;
    while(1)
    {
        printf("PRIORITY QUEUE\n");
        printf("\n\t1:PQ Insert\n");
        printf("\n\t2:PQ Delete\n");
        printf("\n\t3:PQ Display\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);
        }
    }
}
```

```
Terminal
PRIORITY QUEUE

1:PQ Insert

2:PQ Delete

3:PQ Display

4:Exit

Enter the choice
1

Enter the priority number
1

Enter the item
11
PRIORITY QUEUE

1:PQ Insert

2:PQ Delete

3:PQ Display

4:Exit

Enter the choice
1

Enter the priority number
2

Enter the item
21
PRIORITY QUEUE

1:PQ Insert

2:PQ Delete

3:PQ Display

4:Exit

Enter the choice
1

Enter the priority number
1

Enter the item
12
PRIORITY QUEUE

1:PQ Insert

2:PQ Delete

3:PQ Display

4:Exit

Enter the choice
1

Enter the priority number
3

Enter the item
31
PRIORITY QUEUE

1:PQ Insert

2:PQ Delete

3:PQ Display

4:Exit

Enter the choice
1

Enter the priority number
1

Enter the item
13
PRIORITY QUEUE

1:PQ Insert

2:PQ Delete

3:PQ Display

4:Exit

Enter the choice
1

Enter the priority number
2

Enter the item
32
PRIORITY QUEUE

1:PQ Insert

2:PQ Delete

3:PQ Display

4:Exit

Enter the choice
3

QUEUE 1:11 12 13
QUEUE 2:21
QUEUE 3:31 32PRIORITY QUEUE

1:PQ Insert

2:PQ Delete

3:PQ Display

4:Exit

Enter the choice
2
Deleted item is 11 of queue 1
PRIORITY QUEUE

1:PQ Insert

2:PQ Delete

3:PQ Display

4:Exit

Enter the choice
2
Deleted item is 12 of queue 1
PRIORITY QUEUE

1:PQ Insert

2:PQ Delete

3:PQ Display

4:Exit

Enter the choice
2
Deleted item is 13 of queue 1
PRIORITY QUEUE

1:PQ Insert

2:PQ Delete

3:PQ Display

4:Exit

Enter the choice
2
Queue empty
Deleted item is 21 of queue 2
PRIORITY QUEUE

1:PQ Insert

2:PQ Delete

3:PQ Display

4:Exit

Enter the choice
2
Queue empty
Queue empty
Deleted item is 31 of queue 3
PRIORITY QUEUE

1:PQ Insert

2:PQ Delete

3:PQ Display

4:Exit

Enter the choice
2
Queue empty
Queue empty
Deleted item is 32 of queue 3
PRIORITY QUEUE

1:PQ Insert

2:PQ Delete

3:PQ Display

4:Exit

Enter the choice
2
Queue empty
Queue empty
Queue empty
PRIORITY QUEUE

1:PQ Insert

2:PQ Delete

3:PQ Display

4:Exit

Enter the choice
3
Queue empty 1
Queue empty 2
Queue empty 3
```