

## MULTIPLE PRIORITY QUEUE :

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#include<stdio.h>

#include<conio.h>

#define q_size 3

int queue[3][q_size];

int front[3]={0,0,0};

int rear[3]={-1,-1,-1};

int item,priority;

pqinsert(int priority)
{
    if(rear[priority] == q_size-1)
        printf("Queue overflow.\n");
    else
    {
        printf("Enter the item : ");
        scanf("%d",&item);
        rear[priority]++;
        queue[priority][rear[priority]]=item;
    }
    return;
}

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

```

{
    if(rear[i] == front[i]-1)
        printf("Queue is empty.\n");
    else
    {
        printf("Deleted item is %d of queue %d.\n",queue[i][front[i]],i+1);
        front[i]++;
        return;
    }
}
}

```

```

pqdisplay()
{
    int i,j;
    for(i=0;i<3;i++)
    {
        if(rear[i] == front[i]-1)
            printf("Queue %d is empty.",i+1);
        else
        {
            printf("\nContents of Queue %d:",i+1);
            for(j=front[i];j<=rear[i];j++)
                printf("%d\t",queue[i][j]);
        }
    }
    return;
}

```

```

void main()
{
int choice;
printf("MULTIPLE PRIORITY QUEUE\n");
while(1)
{
printf("\n1:PQ Insert \n2:PQ Delete \n3:PQ Display \n4:Exit\n");
printf("Enter the choice : ");
scanf("%d",&choice);
switch(choice)
{
case 1: printf("Enter the priority number : ");
scanf("%d",&priority);
if(priority>0 && priority<4)
pqinsert(priority-1);
else
printf("Only 3 priority exists - 1 2 3\n");
break;
case 2: pqdelete();
break;
case 3: pqdisplay();
break;
default: exit(0);
}
}
}

```

C:\Users\SAKSHI\MultiplePQ.exe

# MULTIPLE 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 : 300

1:PQ Insert

2:PQ Delete

3:PQ Display

4:Exit

Enter the choice : 1

Enter the priority number : 3

Enter the item : 450

1:PQ Insert

2:PQ Delete

3:PQ Display

4:Exit

Enter the choice : 1

Enter the priority number : 1

Enter the item : 690

1:PQ Insert

2:PQ Delete

3:PQ Display

4:Exit

Enter the choice : 1

Enter the priority number : 2

Enter the item : 720

1:PQ Insert

2:PQ Delete

3:PQ Display

4:Exit

Enter the choice : 3

Contents of Queue 1:690

Contents of Queue 2:300 720

Contents of Queue 3:450

1:PQ Insert

2:PQ Delete

3:PQ Display

4:Exit

Enter the choice : 2

Deleted item is 690 of queue 1.

C:\Users\SAKSHI\MultiplePQ.exe

Deleted item is 690 of queue 1.

1:PQ Insert

2:PQ Delete

3:PQ Display

4:Exit

Enter the choice : 2

Queue is empty.

Deleted item is 300 of queue 2.

1:PQ Insert

2:PQ Delete

3:PQ Display

4:Exit

Enter the choice : 1

Enter the priority number : 2

Enter the item : 100

1:PQ Insert

2:PQ Delete

3:PQ Display

4:Exit

Enter the choice : 1

Enter the priority number : 1

Enter the item : 250

1:PQ Insert

2:PQ Delete

3:PQ Display

4:Exit

Enter the choice : 1

Enter the priority number : 5

Only 3 priority exists - 1 2 3

1:PQ Insert

2:PQ Delete

3:PQ Display

4:Exit

Enter the choice : 3

Contents of Queue 1:250

Contents of Queue 2:720 100

Contents of Queue 3:450

1:PQ Insert

2:PQ Delete

3:PQ Display

4:Exit

Enter the choice : \_