

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, p, pr;
```

```
void main()
```

```
{ int ch;
```

```
while(1)
```

```
{ printf("Priority Queue\n");
```

```
printf("*****\n");
```

```
printf("1. PQ insert");
```

```
printf("2. PQ delete");
```

```
printf("3. PQ display");
```

```
printf("Enter choice");
```

```
scanf("%d", &ch);
```

```
switch(ch)
```

```
{ case 1: printf("enter 'P' no\n");
```

```
scanf("%d", &p);
```

```
if (p > 0 && p < 4)
```

```
pqinsert(p-1);
```



```
else  
    printf("error");  
    break;
```

```
case 2 : pqdelete();
```

```
    break;
```

```
case 3 : display();
```

```
    break;
```

```
case 4 : exit(0);
```

```
}
```

```
}
```

```
}
```

```
pqinsert(int po).
```

```
{ if (rear[po] == N-1)
```

```
    printf("Overflow");
```

```
else
```

```
{ printf("enter element\n");
```

```
    scanf("%d", &item);
```

```
    rear[po]++;
```

```
    queue[po][rear[po]] = item;
```

```
}
```

```
return;
```



```
pqdelete() {
```

```
    int i;
```

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

```
        if (rear[i] == front[i] - 1)
```

```
            printf("queue empty\n");
```

```
        else
```

```
            printf("deleted element is %d of queue\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\n");
```

```
      else
```



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```
{ printf ("Queue is %d" i+1);  
  for (j = front[i]; j <= rear[i]; j++)  
    printf ("%d\t", queue[i][j]);  
}
```

```
{  
  return j;  
}
```

```
}
```

0

QUEUE 3:232

*****PRIORITY QUEUE*****

1:PRIORITY QUEUE insert

2:PRIORITY QUEUE delete

3:PRIORITY QUEUE display

4:Exit

enter the choice

1

Enter the priority number

2

enter the item

544

*****PRIORITY QUEUE*****

1:PRIORITY QUEUE insert

2:PRIORITY QUEUE delete

3:PRIORITY QUEUE display

4:Exit

enter the choice

3

queue empty 1

QUEUE 2:544

QUEUE 3:232

*****PRIORITY QUEUE*****

1:PRIORITY QUEUE insert

2:PRIORITY QUEUE delete

3:PRIORITY QUEUE display

4:Exit

enter the choice

2

queue empty

deleted item is 544 of queue 2

*****PRIORITY QUEUE*****

1:PRIORITY QUEUE insert

2:PRIORITY QUEUE delete

3:PRIORITY QUEUE display

4:Exit

enter the choice

4

Press any key to continue . . .

*****PRIORITY QUEUE*****

- 1:PRIORITY QUEUE insert
- 2:PRIORITY QUEUE delete
- 3:PRIORITY QUEUE display
- 4:Exit

enter the choice

1

Enter the priority number

1

enter the item

23

*****PRIORITY QUEUE*****

- 1:PRIORITY QUEUE insert
- 2:PRIORITY QUEUE delete
- 3:PRIORITY QUEUE display
- 4:Exit

enter the choice

1

Enter the priority number

3

enter the item

232

*****PRIORITY QUEUE*****

- 1:PRIORITY QUEUE insert
- 2:PRIORITY QUEUE delete
- 3:PRIORITY QUEUE display
- 4:Exit

enter the choice

2

deleted item is 23 of queue 1

*****PRIORITY QUEUE*****

- 1:PRIORITY QUEUE insert
- 2:PRIORITY QUEUE delete
- 3:PRIORITY QUEUE display
- 4:Exit

enter the choice

3

queue empty 1

queue empty 2

QUEUE 3:232

*****PRIORITY QUEUE*****

- 1:PRIORITY QUEUE insert
- 2:PRIORITY QUEUE delete
- 3:PRIORITY QUEUE display
- 4:Exit

enter the choice

1

Enter the priority number