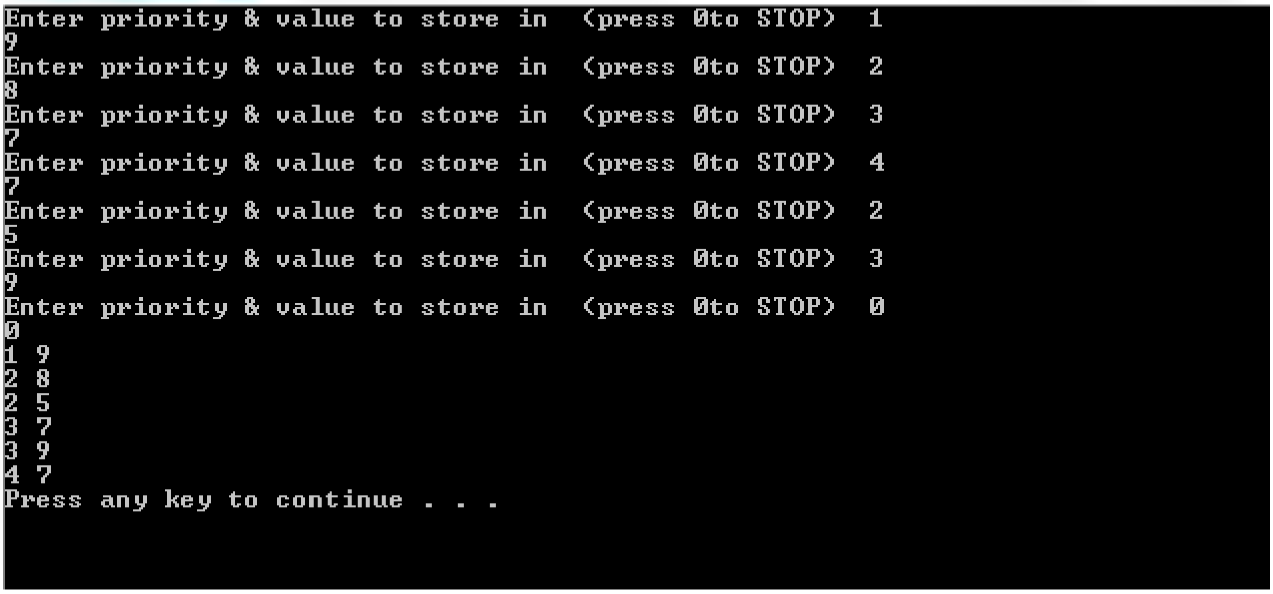
```cpp
#include <iostream>
using namespace std;

class PriorityQueue
{
public:
        struct Node
        {
        public:
                int priority;
                int value;
                Node *next;

                Node(int priority,int value):priority(priority),value(value),next(nullptr)
                {}

        };
        Node* head;
        int count;

        PriorityQueue():head(nullptr),count(0)
        {}

        void EnQueue(int pri,int val)
        {
                Node * newnode=new Node(pri,val);
                Node *back=nullptr;
                Node *current=head;
                for(;current!=nullptr; current=current->next)
                {
                        if(pri<current->priority)
                                break;
                        back=current;
                }

                //if head is null
                //newly created queue
                //

                if(head==nullptr)
                {
                        head=newnode;
                        count++;
                        return;
                }

                //when last priority is given
                //and u have to add last
                if(current==nullptr)
                {
                        back->next=newnode;
                        count++;
                        return;
                }

                newnode->next=current;
                back->next=newnode;
                count++;

        }

        void DeQueue()
        {
                Node *node=head;
                head=head->next;
        cout<<node->priority<<" "<<node->value<<endl;
        delete node;
    }

};

int main()
{
    PriorityQueue b1;

    int num,pri;
    while(cout<<"Enter priority & value to store in  (press 0to STOP)  ",
        cin>>pri>>num,
        pri)
    {
        b1.EnQueue(pri,num);
    }

    int count=b1.count;
    for(int i=0; i<count ; i++)
    {
        b1.DeQueue();
    }
}
```

OUTPUT:



```
Enter priority & value to store in  (press 0to STOP)  1
9
Enter priority & value to store in  (press 0to STOP)  2
8
Enter priority & value to store in  (press 0to STOP)  3
7
Enter priority & value to store in  (press 0to STOP)  4
7
Enter priority & value to store in  (press 0to STOP)  2
5
Enter priority & value to store in  (press 0to STOP)  3
9
Enter priority & value to store in  (press 0to STOP)  0
0
1 9
2 8
2 5
3 7
3 9
4 7
Press any key to continue . . .
```