```
#include<stdio.h>
int front=-1,rear=-1,size=0;
int q[2][50];
void dequeue(){
  if(front==-1)
    printf("queue is empty");
  else{
  printf("deleted data:%d\n",q[0][front]);
  front=front==rear?-1:front+1;
  if(front==-1)
      rear=-1;}
}
void enqueue(int data,int prio){
  if(rear==size-1)
    printf("queue is full\n");
  else{
    if(front==-1){
      q[0][0]=data;
      q[1][0]=prio;
      front=rear=0;}
    else{
      int i,loc;
      for(i=rear;i>=front;i--)
        if(q[1][i]<=prio)
          break;
        loc =i+1;
        for(i=rear;i>=loc;i--){
          q[0][i+1]=q[0][i];
          q[1][i+1]=q[1][i];
        }rear++;
        q[0][loc]=data;
        q[1][loc]=prio;
    }
    }
}
void display(){
  if(front==-1)
    printf("queue is empty");
  else
  printf("queue : ");
   for(int i=front;i<=rear;i++)
       printf("%d ",q[0][i]);
}
int main(){
  printf("Enter size of the queue:");
  scanf("%d",&size);
  int choice ,data,prio;
  do{
  printf("\nEnter\n1 For Enqueue"
  "\n2 For Dequeue\n3 for Exit\n");
  scanf("%d",&choice);
  switch(choice){
  case 1 :
    printf("Enter the data : ");
    scanf("%d",&data);
    printf("Enter the priority :");
    scanf("%d",&prio);
    enqueue(data,prio); display();
    break;
  case 2 :
    dequeue();display();break;
  }
  }while(choice<3);
}
```

```
Enter size of the queue:4

Enter
1 For Enqueue
2 For Dequeue
3 for Exit
1
Enter the data : 10
Enter the priority :4
queue : 10
Enter
1 For Enqueue
2 For Dequeue
3 for Exit
1
Enter the data : 5
Enter the priority :1
queue : 5 10
Enter
1 For Enqueue
2 For Dequeue
3 for Exit
1
Enter the data : 20
Enter the priority :3
queue : 5 20 10
Enter
1 For Enqueue
2 For Dequeue
3 for Exit
1
Enter the data : 1
Enter the priority :2
queue : 5 1 20 10
Enter
1 For Enqueue
2 For Dequeue
3 for Exit
1
Enter the data : 3
Enter the priority :5
queue is full
queue : 5 1 20 10
Enter
1 For Enqueue
2 For Dequeue
3 for Exit
2
deleted data:5
queue : 1 20 10
Enter
1 For Enqueue
2 For Dequeue
3 for Exit
2
deleted data:1
queue : 20 10
Enter
1 For Enqueue
2 For Dequeue
3 for Exit
2
deleted data:20
queue : 10
Enter
1 For Enqueue
2 For Dequeue
3 for Exit
2
deleted data:10
queue is empty0
Enter
1 For Enqueue
2 For Dequeue
3 for Exit
3
```