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#include<stdio.h>
#include<stdlib.h>
int size;
struct Queue{
    int rear;
    int front;
    int *queue;
}q;
int priority(int x)
{
    int i=0;
    while(q.queue[i]<x && i<=q.rear)
        i++;
    return i;
}
void insert(int x)
{
    int pos,i;
    if(q.rear==size-1)
        printf("queue is full");
    else if(q.rear==-1)
    {
        q.front=q.rear=0;
        q.queue[q.rear]=x;
    }
    else{
        pos=priority(x);
        for(i=q.rear;i>=pos;i--)
            *(q.queue+i+1)=*(q.queue+i);
        *(q.queue+i+1)=x;
        q.rear++;
    }
}
void deletefront()
{
    if(q.rear==-1)
        printf("queue is empty\n");
    printf("deleted element is:%d\n",q.queue[q.front]);
    if(q.rear==q.front)
        q.rear=q.front=-1;
    else
        q.front++;
}
void display()
{
    int i=q.front;
    if(q.front==-1)
        return;
    while(i!=q.rear)

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    {
        printf("%d ",q.queue[i]);
        i=(i+1)%size;
    }
    printf("%d",q.queue[q.rear]);
}
void main()
{
    int choice,val;
    q.front=q.rear=-1;
    printf("enter the queue size: ");
    scanf("%d",&size);
    q.queue=(int*)malloc(size*sizeof(int));
    printf("main menu\n1.insertbypriority\n2.deletront\n3.exit\n");
    for(;;)
    {
        printf("\nenter your choice: ");
        scanf("%d",&choice);
        switch(choice)
        {
            case 1:printf("enter the value to be inserted: ");
                    scanf("%d",&val);
                    insert(val);
                    display();
                    break;
            case 2:deletront();
                    display();
                    break;
            case 3:exit(0);
            default:printf("invalid choice\n");
        }
    }
}

```