

```

#include <stdio.h>
#include <string.h>
#include <stdlib.h>
#define MAX 4.

```

```

int pq [MAX];
int count = 0;
int d = 0;

```

```

void insert(int data)
{

```

```

    int i = 0;
    if (count == MAX)
    {

```

```

        printf ("Queue overflow");
        return;
    }

```

-if queue is empty.

```

    if (count == 0)
    {

```

```

        pq [count++] = data;
    }

```

```

    else
    {

```

→ start from right/bottom end of queue.

```

        for (int i = count - 1; i >= 0; i--)
        {

```

```

            if (data < pq [i])
            {

```

- if data is small shift up/right

```

                pq [i + 1] = pq [i];
            }

```

```

        }

```

```

        break;
    }

```

```

}

```

```
    pq[i+1] = data;  
    count++;  
}
```

```
}
```

```
}
```

```
int removeData()  
{
```

```
    return pq[d++];
```

```
}
```

```
void display()  
{
```

```
    int i;
```

```
    if (count == 0)  
    {
```

```
        pf("Queue is empty");  
        return;
```

```
    }
```

```
    pf("Contents of queue");  
    for (i = d; i < count; i++)
```

```
    {
```

```
        pf("%d", pq[i]);
```

```
    }
```

```
    pf("\n");
```

```
}
```

```
int main()  
{
```

```
int choice, item;
```

```
for(;;)
```

```
{
```

```
printf(" 1. Insert 2. delete 3. display 4. exit\n");
```

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

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

```
switch (choice)
```

```
{
```

```
case 1: printf("Enter item");
```

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

```
insertData(item);
```

```
break;
```

```
case 2:
```

```
item = removed();
```

```
if (item == -1)
```

```
printf("Queue is empty\n");
```

```
else
```

```
printf("Item deleted from queue %d", item);
```

```
break;
```

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

```
break;
```

```
default: exit(0);
```

```
}
```

```
}
```

```
}
```



```
C:\Users\91966\Desktop\DSLAB>gcc descendpq.c -o descendpq
```

```
C:\Users\91966\Desktop\DSLAB>descendpq.exe
```

```
1:INSERT_ELEMENT
```

```
2:DELETE_ELEMENT
```

```
3:DISPLAY
```

```
4:EXIT
```

```
Enter the choice :1
```

```
Enter the item to be inserted :2
```

```
1:INSERT_ELEMENT
```

```
2:DELETE_ELEMENT
```

```
3:DISPLAY
```

```
4:EXIT
```

```
Enter the choice :1
```

```
Enter the item to be inserted :4
```

```
1:INSERT_ELEMENT
```

```
2:DELETE_ELEMENT
```

```
3:DISPLAY
```

```
4:EXIT
```

```
Enter the choice :1
```

```
Enter the item to be inserted :10
```

```
1:INSERT_ELEMENT
```

```
2:DELETE_ELEMENT
```

```
3:DISPLAY
```

```
4:EXIT
```

```
Enter the choice :1
```

```
Enter the item to be inserted :1
```

```
Queue overflow
```

```
1:INSERT_ELEMENT
```

```
2:DELETE_ELEMENT
```

```
3:DISPLAY
```

```
4:EXIT
```

```
Enter the choice :3
```

```
Contents of queue: 10 4 2
```

```
1:INSERT_ELEMENT
```

```
2:DELETE_ELEMENT
```

```
3:DISPLAY
```

```
4:EXIT
```

```
Enter the choice :
```



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