

Heap Sort Procedure:

1. Build a max heap from the input data.
2. At this point, the largest item is stored at the root of the heap. Replace it with the last item of the heap followed by reducing the size of heap by 1. Finally, heapify the root of the tree.
3. Repeat step 2 while size of heap is greater than 1.

Task :

1. Write Program to Build a Max Heap from the Given Data

Sample Input	Sample Output
1,3,5,4,6,13,10,9,8,15,17	17 15 13 9 6 5 10 4 8 3 1

2. Write Program to the Given Data by Using Heapify

Sample Input	Sample Output
1,3,5,4,6,13,10,9,8,15,17	17 15 13 10 9 8 6 5 4 3 1

```
#include <iostream>
```

```
using namespace std;
```

```
int Left(int i)
```

```
{
```

```
}
```

```
int Right(int i)
```

```
{
```

```
}
```

```
void maxHeapify(int A[], int n, int i)
```

```
{
```

```
}
```

```
void buildMaxHeap(int A[], int n)
```

```
{
```

```
}
```

```
void heapSort(int A[], int n)
```

```
{
```

```
}
```

```
int main()
```

```
{
```

```
//take input for the
```

```
// buildMaxHeap(array, n)
```

```
// heapSort(array, n);
```

```
}
```