

Our Solution(s)

Run Code

Your Solutions

Run Code

Solution 1

```
1 // Copyright © 2020 AlgoExpert, LLC. All rights reserved.
2
3 #include <vector>
4 #include <functional>
5 using namespace std;
6
7 bool MAX_HEAP_FUNC(int a, int b);
8 bool MIN_HEAP_FUNC(int a, int b);
9
10 class Heap {
11 public:
12     vector<int> heap;
13     function<bool(int, int)> comparisonFunc;
14     int length;
15
16     Heap(function<bool(int, int)> func, vector<int> vector) {
17         heap = buildHeap(&vector);
18         comparisonFunc = func;
19         length = heap.size();
20     }
21
22     vector<int> buildHeap(vector<int> *vector) {
23         int firstParentIdx = (vector->size() - 2) / 2;
24         for (int currentIdx = firstParentIdx; currentIdx >= 0; currentIdx--)
25             siftDown(currentIdx, vector->size() - 1, vector);
26     }
27     return *vector;
28 }
29
30 void siftDown(int currentIdx, int endIdx, vector<int> *heap) {
31     int childOneIdx = currentIdx * 2 + 1;
32     while (childOneIdx <= endIdx) {
33         int childTwoIdx = currentIdx * 2 + 2 <= endIdx ? currentIdx * 2
```

Solution 1 Solution 2 Solution 3

```
1 using namespace std;
2
3 // Do not edit the class below except for
4 // the insert method. Feel free to add new
5 // properties and methods to the class.
6 class ContinuousMedianHandler {
7 public:
8     double median;
9
10    void insert(int number) {
11        // Write your code here.
12    }
13
14    double getMedian() { return median; }
15 };
16
```

Our Tests

Custom Output

Submit Code

```
1 ContinuousMedianHandler heap;
2
3 // Test 1: Insert 1, 2, 3, 4, 5
4 // Expected: 3
5
6 // Test 2: Insert 1, 2, 3, 4, 5, 6
7 // Expected: 3.5
8
9 // Test 3: Insert 1, 2, 3, 4, 5, 6, 7
10 // Expected: 4
```

```
1 // Test 4: Insert 1, 2, 3, 4, 5, 6, 7, 8
2 // Expected: 4.5
3
4 // Test 5: Insert 1, 2, 3, 4, 5, 6, 7, 8, 9
5 // Expected: 5
```

```
1 test_insert(0);
2 insert_test_getAddress() = 0;
3 test_insert(0);
4 insert_test_getAddress() = 0;
5 //
6
7 //Insert "New Year 2012"
8 test_insert(0);
9 insert_test_getAddress() = 0;
10 test_insert(0);
11 insert_test_getAddress() = 0;
12 //
13
14 //Insert "New Year 2012"
15 test_insert(0);
```

Run or submit code when you're ready.