

```

class MinHeap {
  constructor () {
    /* Initialing the array heap and adding a dummy element at index 0 */
    this.heap = [null]
  }

  getMin () {
    /* Accessing the min element at index 1 in the heap array */
    return this.heap[1]
  }

  insert (node) {

    /* Inserting the new node at the end of the heap array */
    this.heap.push(node)

    /* Finding the correct position for the new node */

    if (this.heap.length > 1) {
      let current = this.heap.length - 1

      /* Traversing up the parent node until the current node (current) is greater than the parent (current/2)*/
      while (current > 1 && this.heap[Math.floor(current/2)] > this.heap[current]) {

        /* Swapping the two nodes by using the ES6 destructuring syntax*/
        [this.heap[Math.floor(current/2)], this.heap[current]] = [this.heap[current], this.heap[Math.floor(current/2)]]
        current = Math.floor(current/2)
      }
    }
  }

  remove() {
    /* Smallest element is at the index 1 in the heap array */
    let smallest = this.heap[1]

    /* When there are more than two elements in the array, we put the right most element at the first position
    and start comparing nodes with the child nodes
    */
    if (this.heap.length > 2) {
      this.heap[1] = this.heap[this.heap.length-1]
      this.heap.splice(this.heap.length - 1)

      if (this.heap.length === 3) {
        if (this.heap[1] > this.heap[2]) {
          [this.heap[1], this.heap[2]] = [this.heap[2], this.heap[1]]
        }
        return smallest
      }

      let current = 1
      let leftChildIndex = current * 2
      let rightChildIndex = current * 2 + 1

      while (this.heap[leftChildIndex] &&
        this.heap[rightChildIndex] &&
        (this.heap[current] > this.heap[leftChildIndex] ||
          this.heap[current] > this.heap[rightChildIndex])) {
        if (this.heap[leftChildIndex] < this.heap[rightChildIndex]) {
          [this.heap[current], this.heap[leftChildIndex]] = [this.heap[leftChildIndex], this.heap[current]]
          current = leftChildIndex
        } else {
          [this.heap[current], this.heap[rightChildIndex]] = [this.heap[rightChildIndex], this.heap[current]]
          current = rightChildIndex
        }

        leftChildIndex = current * 2
        rightChildIndex = current * 2 + 1
      }
    }

    /* If there are only two elements in the array, we directly splice out the first element */

    else if (this.heap.length === 2) {
      this.heap.splice(1, 1)
    } else {
      return null
    }

    return smallest
  }
}

let heapOne = new MinHeap();

heapOne.insert(5);
heapOne.insert(7);
heapOne.insert(2);

console.log(heapOne.getMin());
console.log(heapOne.heap.indexOf(7));
console.log(heapOne.heap.indexOf(5));
console.log(heapOne.heap);

console.log(heapOne.heap[0]);
console.log(heapOne.heap[1]);
console.log(heapOne.heap[2]);
console.log(heapOne.heap[3]);

console.log("length before: "+heapOne.heap.length);

heapOne.remove(2);

console.log("length after: "+ heapOne.heap.length);

```