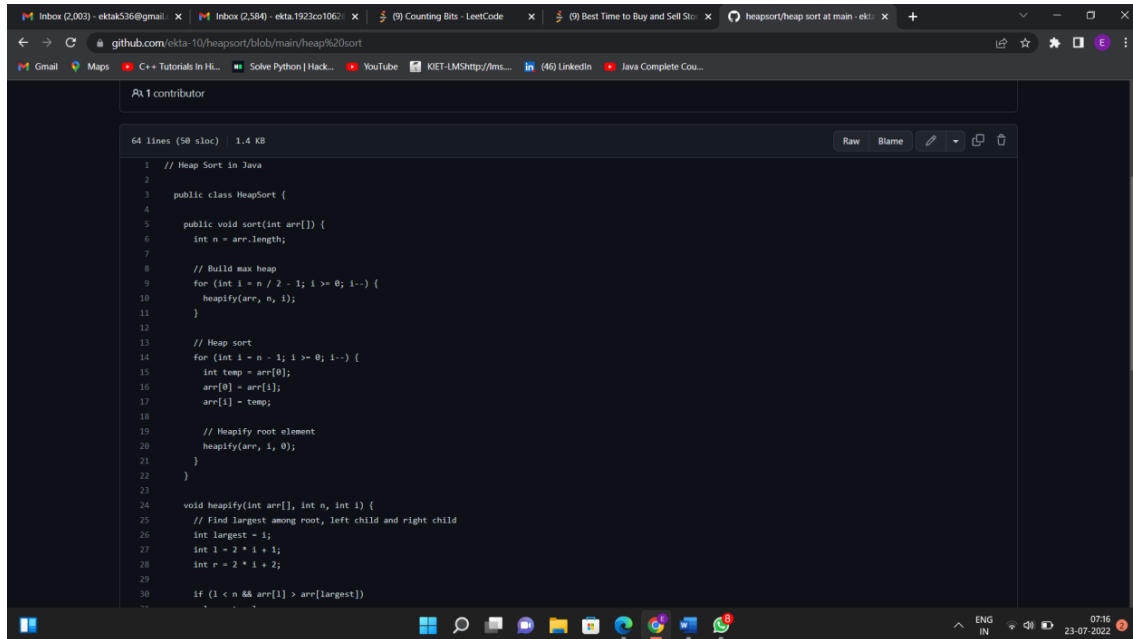


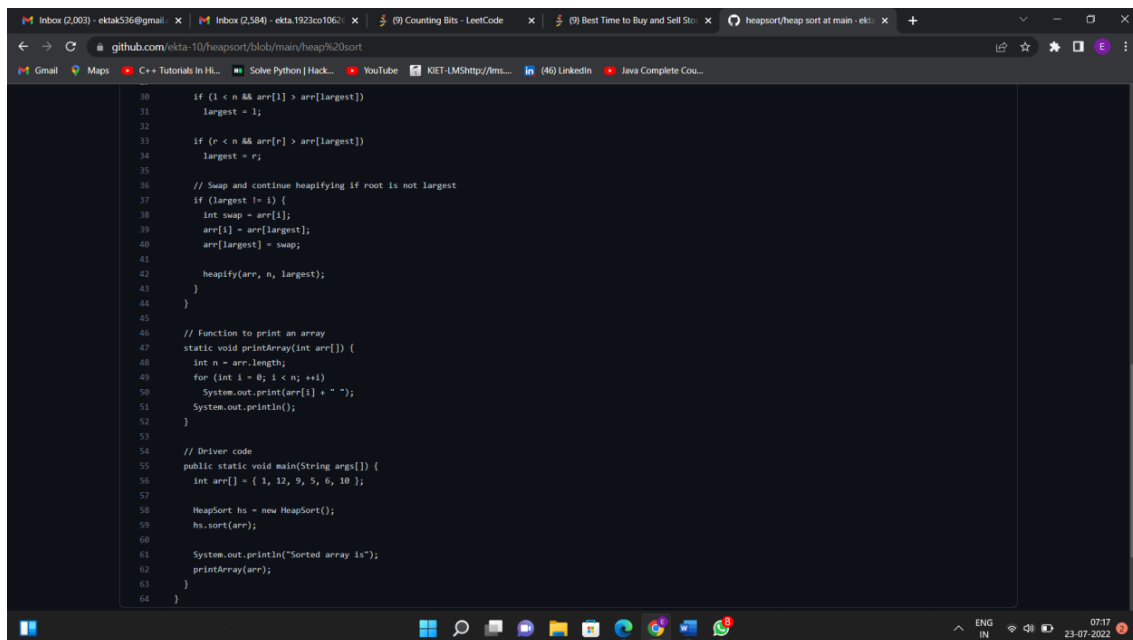
GITHUB PROBLEM

WEEK -3



A screenshot of a web browser displaying a GitHub repository page for a Java Heap Sort implementation. The browser's address bar shows the URL `github.com/ekta-10/heapsort/blob/main/heap%20sort`. The repository name is `heapsort/heap sort at main · ekta-10`. The file `heapSort.java` is selected, showing 64 lines of code (50 sloc) and a size of 1.4 KB. The code is as follows:

```
1 // Heap Sort in Java
2
3 public class HeapSort {
4
5     public void sort(int arr[]) {
6         int n = arr.length;
7
8         // Build max heap
9         for (int i = n / 2 - 1; i >= 0; i--) {
10             heapify(arr, n, i);
11         }
12
13         // Heap sort
14         for (int i = n - 1; i >= 0; i--) {
15             int temp = arr[0];
16             arr[0] = arr[i];
17             arr[i] = temp;
18
19             // Heapify root element
20             heapify(arr, i, 0);
21         }
22     }
23
24     void heapify(int arr[], int n, int i) {
25         // Find largest among root, left child and right child
26         int largest = i;
27         int l = 2 * i + 1;
28         int r = 2 * i + 2;
29
30         if (l < n && arr[l] > arr[largest])
```



A screenshot of a web browser displaying the same GitHub repository page, showing the continuation of the Java Heap Sort implementation. The code continues from the previous screenshot:

```
31         largest = l;
32
33         if (r < n && arr[r] > arr[largest])
34             largest = r;
35
36         // Swap and continue heapifying if root is not largest
37         if (largest != i) {
38             int swap = arr[i];
39             arr[i] = arr[largest];
40             arr[largest] = swap;
41
42             heapify(arr, n, largest);
43         }
44     }
45
46     // Function to print an array
47     static void printArray(int arr[]) {
48         int n = arr.length;
49         for (int i = 0; i < n; ++i)
50             System.out.print(arr[i] + " ");
51         System.out.println();
52     }
53
54     // Driver code
55     public static void main(String args[]) {
56         int arr[] = { 1, 12, 9, 5, 6, 10 };
57
58         HeapSort hs = new HeapSort();
59         hs.sort(arr);
60
61         System.out.println("Sorted array is");
62         printArray(arr);
63     }
64 }
```