CP Club 365 Days Challenge

Programming language – Any language

Problem Statement

https://practice.geeksforgeeks.org/problems/heap-sort/1?page=1&status[]=unsolved&curated[]=1&sortBy=submissions

https://github.com/Pushti18/CP-Club-100-onwards-

Your Code:

```
class Solution
{
  public:
  //Heapify function to maintain heap property.
  void heapify(int arr[], int n, int i)
  {
   // Your Code Here
   int a=i;
   int l=2*i+1;
   int r=2*i+2;
   if(l<n && arr[a]<arr[l]){
      a=l;
   }
   if(r<n && arr[a]<arr[r]){
      a=r;
   }
  }

  public:
```

```cpp
//Function to build a Heap from array.
void buildHeap(int arr[], int n)
{
// Your Code Here
for(int i=n/2-1;i>=0;i--)

  {

    heapify(arr,n,i);

  }
}


public:
//Function to sort an array using Heap Sort.
void heapSort(int arr[], int n)
{
  //code here
  for(int i=n-1;i>0;i--)

  {

    swap(arr[i],arr[0]);

    heapify(arr,i,0);

  }
}
};
```

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Output (Screen Shot):

Understanding about problem:

In this problem we first map each element in arr to its index, this way we know the order of elements in arr1 when we sort it. Then we remove all the elements off of the heap because as stated in problem those come first. Then we continue by removing all the remaining elements found in the heap.

Note: If you can't understand the problem, feel free to contact us and we'll help you. Please don't copy and paste from anywhere.

ALL THE BEST
Team CP Club