Central university of Haryana

Department of computer science & engineering under SOET

ADA lab
(BT CS 505A)
Lab-2.

Submitted by :-   **submitted to :-**

Ponnaganti pavan kumar   anant rajee bara

ROLL NO: 202102

Lab-1: Implement merge sort
Code:

40 lines (34 sloc) | 731 Bytes

```python
array=[12,11,13,5,6,7]
def mergesort(arr):
    if(len(arr)>1):
        m=len(arr)//2
        L=arr[:m]
        R=arr[m:]
        print(L,R,len(arr))
        L= mergesort(L)
        R = mergesort(R)

        i=0
        j=0
        k=0

        while(i<len(L)and j<len(R)):
            if(L[i]<R[j]):
                arr[k]=L[i]
                k+=1
                i+=1
            else:
                arr[k]=R[j]
                k+=1
                j+=1
        while i<len(L):
            arr[k]=L[i]
            i+=1
            k+=1
        while j<len(R):
            arr[k]=R[j]
            j+=1
            k+=1
        return arr

    else:
        return arr
mergesort(array)
print(array)
```

Output:

```
PROBLEMS    OUTPUT    TERMINAL    JUPYTER    DEBUG CONSOLE

PS E:\sem 5\lab program> python -u "e:\sem 5\lab program\merge_sort.py"
[5, 6, 7, 11, 12, 13]
PS E:\sem 5\lab program>
```

Github link:
https://github.com/pavan-kumar-202102/python_lab/blob/ada/merge_sort.py