

DAA Lab-3

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Merge Sort

When I tried with 5 elements-

```
Enter number of elements : 5
Enter the elements:
2
3
1
4
5
[2, 3, 1, 4, 5]
Given array is
2 3 1 4 5

Sorted array is
1 2 3 4 5 1000 Elements Sorted by MergeSort in 5.799999999989147e-05
```

When I tried with larger number of elements to find time complexity-

```
1 2 3 4 5 1000 Elements Sorted by MergeSort in 5.799999999989147e-05
2000 Elements Sorted by MergeSort in 1.699999999933735e-05
3000 Elements Sorted by MergeSort in 3.100000000011427e-05
4000 Elements Sorted by MergeSort in 1.699999999933735e-05
5000 Elements Sorted by MergeSort in 1.6000000000016e-05
6000 Elements Sorted by MergeSort in 1.6000000000016e-05
7000 Elements Sorted by MergeSort in 1.5000000000098268e-05
8000 Elements Sorted by MergeSort in 1.499999999876223e-05
9000 Elements Sorted by MergeSort in 3.700000000006476e-05
/usr/local/lib/python3.7/dist-packages/ipykernel_launcher.py:78: DeprecationWarning: time.clock has been de
/usr/local/lib/python3.7/dist-packages/ipykernel_launcher.py:80: DeprecationWarning: time.clock has been de
```



