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CSS 342
Assignment 4

Output of improved Merge Sort for number of items = 30

```
mannatsharma@mannatsharma-VirtualBox: ~
initial:
items[0] = 13
items[1] = 16
items[2] = 27
items[3] = 25
items[4] = 23
items[5] = 12
items[6] = 9
items[7] = 1
items[8] = 2
items[9] = 7
items[10] = 20
items[11] = 19
items[12] = 0
items[13] = 6
items[14] = 22
items[15] = 11
items[16] = 8
items[17] = 29
items[18] = 18
items[19] = 3
items[20] = 21
items[21] = 14
items[22] = 5
items[23] = 26
items[24] = 15
items[25] = 17
items[26] = 24
items[27] = 10
items[28] = 28
items[29] = 4
elapsed time: 11
```

```
mannatsharma@mannatsharma-VirtualBox: ~
sorted:
items[0] = 0
items[1] = 1
items[2] = 2
items[3] = 3
items[4] = 4
items[5] = 5
items[6] = 6
items[7] = 7
items[8] = 8
items[9] = 9
items[10] = 10
items[11] = 11
items[12] = 12
items[13] = 13
items[14] = 14
items[15] = 15
items[16] = 16
items[17] = 17
items[18] = 18
items[19] = 19
items[20] = 20
items[21] = 21
items[22] = 22
items[23] = 23
items[24] = 24
items[25] = 25
items[26] = 26
items[27] = 27
items[28] = 28
items[29] = 29
mannatsharma@mannatsharma-VirtualBox:~$
```

Figure 1: Performance among the usual quicksort, the usual mergesort, and improvedmergesort

Quicksort, Mergesort and MergesortImproved