Thinh Nguyen CSC130

| | O | \ | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|--------------------|-----|--|----------------|---|---|--|---|---|---|
| Input | 3 | 4 | 5 | 6 | | 9 | 2 | 5 | 6 |
| 1=0 | 3 | | | | | | | | |
| 1=1 | | 4 | | | | | | | |
| i=2 | *** | | 5 | | | | | | |
| 7=3 | | | | 6 | : | | | | |
| 17-4 | | | kandinanananan | | 1 | | | | |
| Insert | 4 | 3 | 4 | 5 | 6 | | | | |
| 1=5 | | | | | | 9 | | | |
| ī=6 | | AND THE PROPERTY OF THE PROPER | | | | | 2 | | |
| Insert | | 2 | 3 | 4 | 2 | 6 | 9 | | |
| 1=7 | | | | | | of the contract of the contrac | | 5 | |
| T=8 | | | | | | | | | 6 |
| output (insert) | | 2 | 3 | 4 | 5 | 5 | 6 | 6 | 9 |

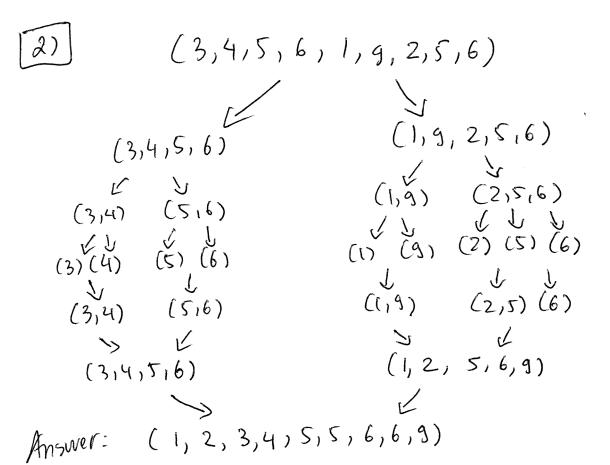
Answer: > 1,2,3,4,5,5,6,6,9

(3,4,5,6,1,9,2,5,6,5,3) original input: index0:3 index 5:9 indexio = 3 Sorting first, last, anidale elements: 3, 4,5,6,1,3,2,5,6,5,9 Pivot: 3 -> (3,4,5,6,5) (2,5,6,5,9) (2,5,6,5,9) (2,5,6,5,9)Sorting first past, middle élements:

& Pivot: 6 1 4,5,6

Using visertion sort: > (1,2,3,3,4,5,5,5,6,6,9) Answer:

| | Identical | Sorted | Reverse-Sorted |
|----------------|---------------------|------------|----------------|
| Insertion Sort | 0(n) | 0(n) | 0(n²) |
| Solection Surt | 0 (n ²) | 0 (n2) | 0(n²) |
| HeapSort | 0 (n) | O(nlogn) | O(nlugn) |
| MergeSort | O(nlign) | O(nlogn) | O(nlogn) |
| Quick Sort | $O(n^2)$ | O(nlogn) | O(nlugn) |
| Bucket Sort | 0 (n+K) | 0 (n+K) | O(n+k) |
| Radix Sort | 0 (P(B+n)) | 0 (P(B+n)) | 0(P(B+n)) |
| | | | |



[4] 0 1 2 3 4 5 6 7 8 9 Magar 1PASS 1 51 22 83 34 37

43

84

PASS 1: 57, 22, 83, 43, 834, 84, 37

| [PASS 2] | 22 | 34 | 43 | 51 | 83 | Man |
|----------|----|----|----|----|----|------|
| | | 37 | | | 84 | 9142 |

Answer: -> (22, 34, 37, 43, 51, 83, 84)