SORTING

1. Linear sort

1 3 4 5 7 8 9

Time complexity =n2

Each element is checked by every other element

1. Bubble sort

5 7 4 3 8 6 1 9

Time complexity: best case =n, worst case =n2

1. Selection sort

1 2 3 4 5 6 7 9

Two types maximum and minimum

Time complexity best case=n2, worst case=n2

1. Insertion sort

1 3 4 5 6 7 8 9

1. Array merge program

Take two sorted array merge in third array

1. Merge sort

3 5 9 10 2 4 12 45 1 7 6

3 5 9 10 2 4 12 45 1 7 6

3 5 9 10 2 4 12 45 1 6 7

2 3 4 5 9 10 12 45 1 6 7

1 2 3 4 5 6 7 9 10 12 45

Time complexity = n.log n

1. Quick Sort

4 2 1 3 5 10 9 8 11 6 14

1. Postman Sort

231 224 456 567 789 890 123 234 345 321 543 654 765 876

0 890

1 231 321

2

3 123 543

4 224 234 654

5 345 765

6 456 876

7 567

8

9 789

890 231 321 123 543 224 234 654 345 765 456 876 567 789

0

1

2 321 123 224

3 231 234

4 543 345

5 654 456

6 765 567

7 876

8 789

9 890

321 123 223 231 234 543 345 654 456 765 567 876 789 890

0

1 123

2 223 231 234

3 321 345

4 456

5 543 567

6 654

7 765 789

8 876 890

9

123 223 231 234 321 345 456 543 567 654 765 789 876 890