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**Kelas : D4 MI 2019A**

**NIM   : 19051397005**

Latihan (1)

• Data :

7, 19, 4, 8, 20, 1

Urutkan secara ascending dengan menggunakan algoritma insertion sort!

| Proses | A[1] | A[2] | A[3] | A[4] | A[5] | A[6] |
|--------|------|------|------|------|------|------|
| K = 1 | 7 | 19 | 4 | 8 | 20 | 1 |
| K = 2 | 7 | 19 | 4 | 8 | 20 | 1 |
| K = 3 | 7 | 4 | 19 | 8 | 20 | 1 |
| K = 4 | 4 | 7 | 19 | 8 | 20 | 1 |
| K = 5 | 4 | 7 | 8 | 19 | 20 | 1 |
| K = 6 | 4 | 7 | 8 | 19 | 1 | 20 |
| K = 7 | 4 | 7 | 8 | 1 | 19 | 20 |
| K = 8 | 4 | 7 | 1 | 8 | 19 | 20 |
| K = 9 | 4 | 1 | 7 | 8 | 19 | 20 |
| K = 10 | 1 | 4 | 7 | 8 | 19 | 20 |
| Urutan | 1 | 4 | 7 | 8 | 19 | 20 |

## Latihan (2)

- Data :

7, 19, 4, 8, 20, 1

Urutkan secara ascending dengan menggunakan algoritma selection sort!

| Proses | A[1] | A[2] | A[3] | A[4] | A[5] | A[6] |
|---|---|---|---|---|---|---|
| K = 1 ; LOC = 3 | 7 | 19 | 4 | 8 | 20 | 1 |
| K = 1 ; LOC = 6 | 4 | 19 | 7 | 8 | 20 | 1 |
| K = 2 ; LOC = 3 | 1 | 19 | 7 | 8 | 20 | 4 |
| K = 2 ; LOC = 6 | 1 | 7 | 19 | 8 | 20 | 4 |
| K = 3 ; LOC = 4 | 1 | 4 | 19 | 8 | 20 | 7 |
| K = 3 ; LOC = 6 | 1 | 4 | 8 | 19 | 20 | 7 |
| K = 4 ; LOC = 6 | 1 | 4 | 7 | 19 | 20 | 8 |
| K = 5 ; LOC = 6 | 1 | 4 | 7 | 8 | 20 | 19 |
| Urutan | 1 | 4 | 7 | 8 | 19 | 20 |

# Latihan (3)

- Data :

  **7, 19, 4, 8, 20, 1**

  Urutkan secara ascending dengan menggunakan algoritma bubble sort!

| Pass Pertama | | |
|---|:---:|---|
| 7, 19, 4, 8, 20, 1 | => | 7, 19, 4, 8, 20, 1 |
| 7, 19, 4, 8, 20, 1 | => | 7, 4, 19, 8, 20, 1 |
| 7, 4, 19, 8, 20, 1 | => | 7, 4, 8, 19, 20, 1 |
| 7, 4, 8, 19, 20, 1 | => | 7, 4, 8, 19, 20, 1 |
| 7, 4, 8, 19, 20, 1 | => | 7, 4, 8, 19, 1, 20 |
| **Pass Kedua** | | |
| 7, 4, 8, 19, 1, 20 | => | 4, 7, 8, 19, 1, 20 |
| 4, 7, 8, 19, 1, 20 | => | 4, 7, 8, 19, 1, 20 |
| 4, 7, 8, 19, 1, 20 | => | 4, 7, 8, 19, 1, 20 |
| 4, 7, 8, 19, 1, 20 | => | 4, 7, 8, 1, 19, 20 |
| 4, 7, 8, 1, 19, 20 | => | 4, 7, 8, 1, 19, 20 |
| **Pass Ketiga** | | |
| 4, 7, 8, 1, 19, 20 | => | 4, 7, 8, 1, 19, 20 |
| 4, 7, 8, 1, 19, 20 | => | 4, 7, 8, 1, 19, 20 |
| 4, 7, 8, 1, 19, 20 | => | 4, 7, 1, 8, 19, 20 |
| 4, 7, 1, 8, 19, 20 | => | 4, 7, 1, 8, 19, 20 |
| 4, 7, 1, 8, 19, 20 | => | 4, 7, 1, 8, 19, 20 |
| **Pass Keempat** | | |
| 4, 7, 1, 8, 19, 20 | => | 4, 7, 1, 8, 19, 20 |
| 4, 7, 1, 8, 19, 20 | => | 4, 7, 1, 8, 19, 20 |
| 4, 1, 7, 8, 19, 20 | => | 4, 1, 7, 8, 19, 20 |
| 4, 1, 7, 8, 19, 20 | => | 4, 1, 7, 8, 19, 20 |

| | | |
|---|---|---|
| 4, 1, 7, 8, 19, 20 | => | 4, 1, 7, 8, 19, 20 |
| Pass Kelima | | |
| 4, 1, 7, 8, 19, 20 | => | 1, 4, 7, 8, 19, 20 |
| 4, 1, 7, 8, 19, 20 | => | 4, 1, 7, 8, 19, 20 |
| 4, 1, 7, 8, 19, 20 | => | 4, 1, 7, 8, 19, 20 |
| 4, 1, 7, 8, 19, 20 | => | 4, 1, 7, 8, 19, 20 |
| 4, 1, 7, 8, 19, 20 | => | 4, 1, 7, 8, 19, 20 |