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Tugas : Sistem Berkas - Pertemuan 4

Diketahui rekaman-rekaman dengan kunci 34, 44, 50, 54, 55, 69, 106, 128, 135, 140, 150, dan 155. Berapa

probe diperlukan untuk menemukan rekaman dengan kunci 55 dan 106 bila digunakan pencarian biner

dan interpolasi?

- Metode Pencarian Biner

Kunci: 55

34, 44, 50, 54, 55, 69, 106, 128, 135, 140, 150, 155 -> 12 digit

iterasi 1: TENGAH1 = [(1 + 12) / 2] = 6 -> Kcari:Ktengah1 -> 69 > 55

-> awal = tengah1 - 1 = 5

iterasi 2: TENGAH2 = [(1 + 5) / 2] = 3 -> Kcari:Ktengah2 -> 50 < 55

-> awal = tengah2 + 1 = 6

iterasi 3: TENGAH3 = [(1 + 6) / 2] = 3 -> Kcari:Ktengah3 -> 50 < 55

-> awal = tengah3 + 1 = 7

iterasi 4: TENGAH4 = [(1 + 7) / 2] = 4 -> Kcari:Ktengah4 -> 54 < 55

-> awal = tengah4 + 1 = 8

iterasi 5: TENGAH5 = [(1 + 8) / 2] = 4 -> Kcari:Ktengah5 -> 54 < 55

-> awal = tengah5 + 1 = 9

iterasi 6: TENGAH6 = [(1 + 9) / 2] = 5 -> Kcari:Ktengah6 -> 55 = 55

->ketemu, Probe = 6

Kunci: 106

34, 44, 50, 54, 55, 69, 106, 128, 135, 140, 150, 155 -> 12 digit

iterasi 1: TENGAH1 = [(1 + 12) / 2] = 6 -> Kcari:Ktengah1 -> 69 < 106

-> awal = tengah1 + 1 = 7

iterasi 2: TENGAH2 = [(7 + 12) / 2] = 9 -> Kcari:Ktengah2 -> 135 > 106

-> awal = tengah2 + 1 = 8

iterasi 3: TENGAH3 = [(1 + 8) / 2] = 4 -> Kcari:Ktengah3 -> 54 < 106

-> awal = tengah3 + 1 = 9

iterasi 4: TENGAH4 = [(1 + 9) / 2] = 5 -> Kcari:Ktengah4 -> 55 < 106

-> awal = tengah4 + 1 = 10

iterasi 5: TENGAH5 = [(1 + 10) / 2] = 5 -> Kcari:Ktengah5 -> 55 < 106

-> awal = tengah5 + 1 = 11

iterasi 6: TENGAH6 = [(1 + 11) / 2] = 6 -> Kcari:Ktengah6 -> 69 < 106

-> awal = tengah6 + 1 = 12

iterasi 7: TENGAH7 = [(1 + 12) / 2] = 6 -> Kcari:Ktengah7 -> 69 < 106

-> awal = tengah7 + 1 = 13

iterasi 8: TENGAH7 = [(1 + 14) / 2] = 7 -> Kcari:Ktengah8 -> 106 = 106

->ketemu, Probe = 8

- Metode Pencarian Interpolasi

Kunci: 55

34, 44, 50, 54, 55, 69, 106, 128, 135, 140, 150, 155 -> 12 digit

awal = 1

akhir = 12

iterasi 1: berikut = 1 + (55 - 34) / (155 - 34) x (12 - 1)

= 1 + 21 / 121 x 11

= 1 + 1.9

= 2

-> awal + 1 = 2

iterasi 2: berikut = 2 + (55 - 34) / (155 - 34) x (12 - 1)

= 2 + 21 / 121 x 11

= 2 + 1.9

= 3.9

= 3

-> awal + 1 = 3

iterasi 3: berikut = 3 + (55 - 34) / (155 - 34) x (12 - 1)

= 3 + 21 / 121 x 11

= 3 + 1.9

= 4.9

= 4

-> awal + 1 = 4

iterasi 4: berikut = 4 + (55 - 34) / (155 - 34) x (12 - 1)

= 4 + 21 / 121 x 11

= 4 + 1.9

= 5.9

= 5

-> ketemu, Probe = 4

Kunci: 106

34, 44, 50, 54, 55, 69, 106, 128, 135, 140, 150, 155 -> 12 digit

awal = 1

akhir = 12

iterasi 1: berikut = 1 + (106 - 34) / (155 - 34) x (12 - 1)

= 1 + 72 / 121 x 11

= 1 + 6.5

= 7.5

= 7

-> ketemu, Probe = 1