TUGAS HASHING

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MATA KULIAH STRUKTUR DATA DAN ALGORITMA
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A. PERMASALAHAN

1. Using the Linear Probing method, insert keys 32, 53, 22, 92, 17, 34, 24, 37, and 56 into a hash table of Tsize = 10
2. Using the Quadratic Probing method, insert keys 0, 15, 16, 20, 30, 25, 26, and 36 into a hash table of Tsize = 10

B. PENYELESAIAN

1. Linear Probing Method

Tsize = 10

Keys(k) = 32, 53, 22, 92, 17, 34, 24, 37, and 56

- h(32) = 2
- h(53) = 3
- h(22) = 2, collision with 32
  - h_1 (22) = 3, collision with 53
  - h_2 (22) = 4
- h(92) = 2, collision with 32
  - h_1 (92) = 3, collision with 53
  - h_2 (92) = 4, collision with 22
  - h_3 (92) = 5
- h(17) = 7
- h(34) = 4, collision with 22
  - h_1 (34) = 5, collision with 92
  - h_2 (34) = 6
- h(24) = 4, collision with 22
  - h_1 (24) = 5, collision with 92
  - h_2 (24) = 6, collision with 34
  - h_3 (24) = 7, collision with 17
  - h_4 (24) = 8
- h(37) = 7, collision with 17
  - h_1 (37) = 8, collision with 24
  - h_2 (37) = 9
- h(56) = 6, collision with 34
  - h_1 (56) = 7, collision with 17
  - h_2 (56) = 8, collision with 24
  - h_3 (56) = 9, collision with 37
  - h_4 (56) = 0

Hash Index	Key
0	10
1	
2	32
3	53
4	22
5	92
6	34
7	17
8	24
9	37

Longest Hops : 5

2. Quadratic Probing Method

Tsize = 10

Keys(k) = 0, 15, 16, 20, 30, 25, 26, and 36

- h(0) = 0
- h(15) = 5
- h(16) = 6
- h(20) = 0, collision with 0
  - h_1 (20) = 1
- h(30) = 0, collision with 0
  - h_1 (30) = 1, collision with 20
  - h_2 (30) = 4
- h(25) = 5, collision with 15
  - h_1 (25) = 6, collision with 16
  - h_2 (25) = 9
- h(26) = 6, collision with 16
  - h_1 (26) = 7
- h(36) = 6, collision with 16
  - h_1 (36) = 7, collision with 26
  - h_2 (36) = 0, collision with 0
  - h_1 (36) = 5, collision with 15
  - h_1 (36) = 2

Hash Index	Key
0	0
1	20
2	36
3	
4	30
5	15
6	16
7	26
8	
9	25

Longest Hops : 5