NIM: 10200055

Nama: Yoga Adi Saputra

Logika & Algoritma > Pertemuan ke-11

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Data A{ 29, 27, 10, 8, 76, 21, 29, 27, 10, 8}
$x = 8$

•> Sequential Search

Iterasi	i	Condition $x = i$?	$i = i + 1$
1	i1	8 = 29 ? false	$i = 1 + 1 = 2$
2	i2	8 = 27 ? false	$i = 2 + 1 = 3$
3	i3	8 = 10 ? false	$i = 3 + 1 = 4$
4	i4	8 = 8 ? true	

Stop, Pencarian Sukses

•> Binary Search ~~data~~
data = { 8, 8, 10, 10, 21, 27, 27, 29, 29, 76 } , $u = 8$
         1 2   3   4   5   6   7   8   9   10

• Iterasi 1 :

8, 8, 10, 10, 21, 27, 27, 29, 29, 76   → mid = $(10 + 1)/2 = 5$
↓   ↓   ↓
low   mid   high

mid = u ?
21 = 8 ? false
high = mid - 1 → 5 - 1 = 4

• Iterasi 2
8, 8, 10, 10   → mid = $(4 + 1)/2 = 2$
↓   ↓   ↓
low Mid high

mid = u ?
8 = 8 ? true

Min & Max

-> Straitmaxmin (best case)

data $u = \{8, 8, 10, 10, 21, 27, 27, 29, 29, 76\}$

min . max , $u = 8$, proses pencarian $n-1 = 10-1 = 9$

$i = 2$

$u_2 > max$? $8 > 8$? false → operasi 1

. $i = 3$

$u_3 > max$? $10 > 8$? true , maka $max = u_3 = 10$ → Operasi 2

$i = 4$

$u_4 > max$? $10 > 10$? false → Operasi 3

$i = 5$

$u_5 > max$? $21 > 10$? true , maka $max = u_5 = 21$ → Operasi 4

$i = 6$

$u_6 > max$? $27 > 21$? true , maka $max = u_6 = 27$ → Operasi 5

$i = 7$

$u_7 > max$? $27 > 27$? false → operasi 6

$i = 8$

$u_8 > max$? $29 > 27$? true → maka $max = u_8 = 29$ → Operasi 6

$i = 9$

$u_9 > max$? $29 > 29$? false → operasi 8

$i = 10$

$u_{10} > max$? $76 > 29$? true → ~~operasi~~ maka $max = u_{10} = 76$ ↘ operasi 9

Jadi min $= 8$ & max $= 76$

•> Teknik D & C

data = { 8, 8, 10, 10, 21, 27, 27, 29, 29, 76 }

     1 2 3   4 5   6   7 8   9 10

~~1,10~~

```
                        | 1,10 | 76,8 |
                       /                \
           | 1,5 | 21,8 |            | 6,10 | 76,27 |
            /          \              /            \
   | 1,3 | 10,8 |  | 4,5 | 10,21 |  | 6,7 | 27,27 |  | 8,10 | 76,29 |
     /        \                                        /          \
| 1,2 | 8,8 | | 3,3 | 10,10 |              · | 8,9 | 29,29 |   | 10,10 | 76,76 |
```