Nama : Deanissa Sherly Sabilla

Kelas / Absen : SIB 1B / 06

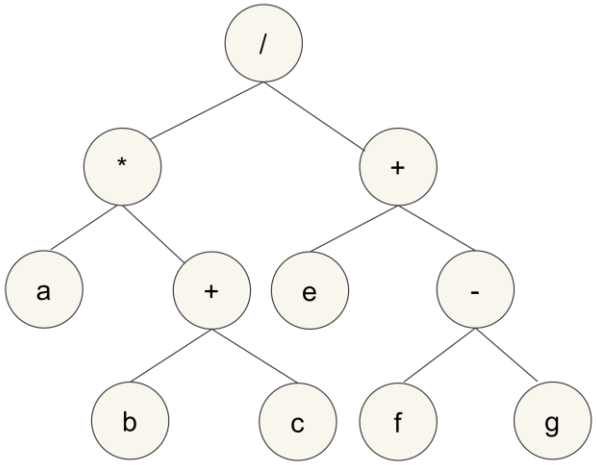
Mata Kuliah : Algoritma Struktur Data

Pertemuan : 14

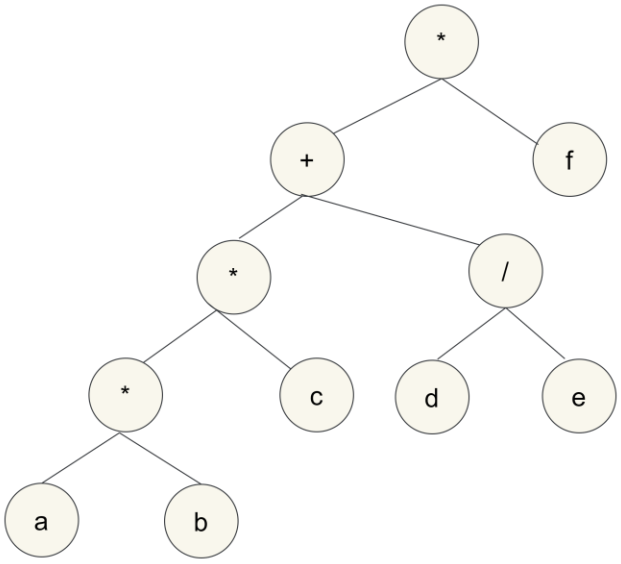
TREE

Latihan 1

1. a * (b + c) / (e + (f – g))

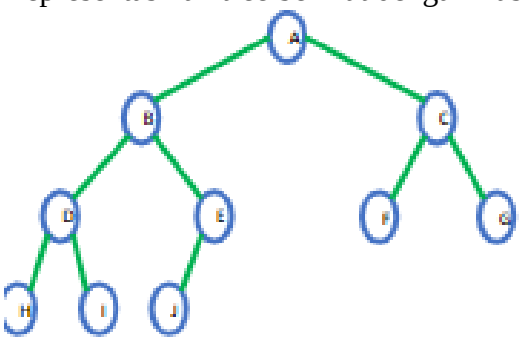


2. ((a * b) * c) + (d / e) * f



Latihan 2

1. Representasikan tree berikut dengan ilustrasi array dan linked list.

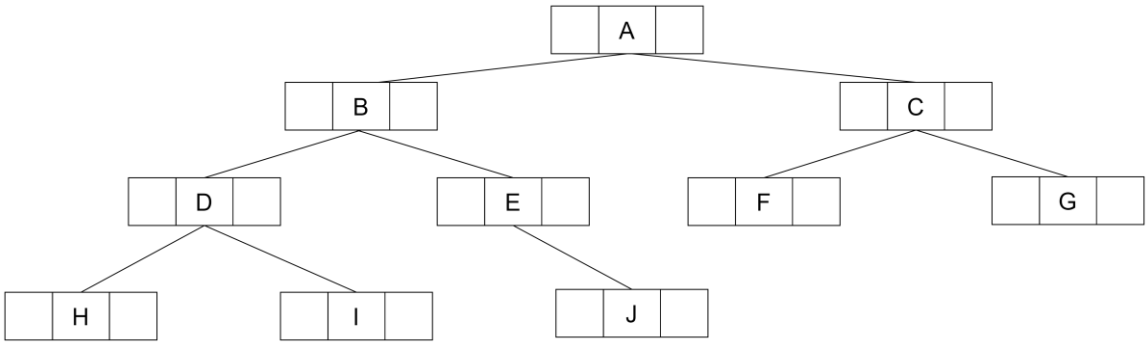


- Asumsi root dimulai dari indeks-0 :

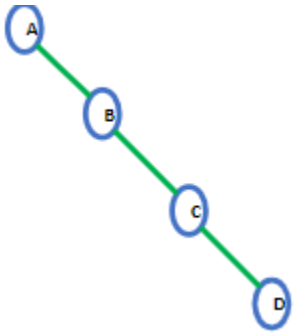
A	B	C	D	E	F	G	H	I	J
0	1	2	3	4	5	6	7	8	9

- Asumsi root dimulai dari indeks-1 :

	A	B	C	D	E	F	G	H	I	J
0	1	2	3	4	5	6	7	8	9	10



2. Representasikan tree berikut dengan ilustrasi array dan linked list.

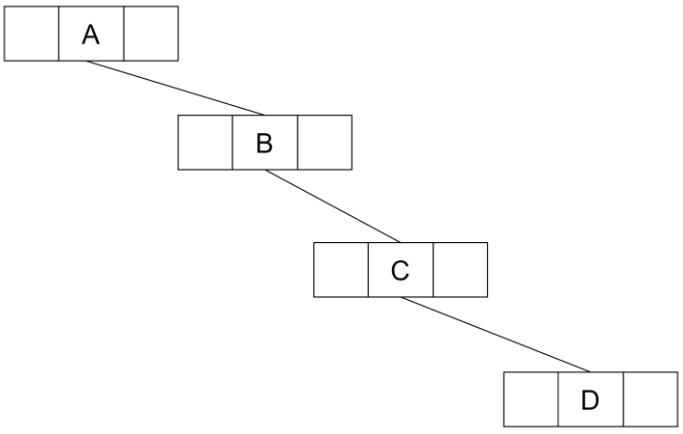


- Asumsi root dimulai dari indeks-0 :

A		B				C							D
0	1	2	3	4	5	6	7	8	9	10	11	12	13

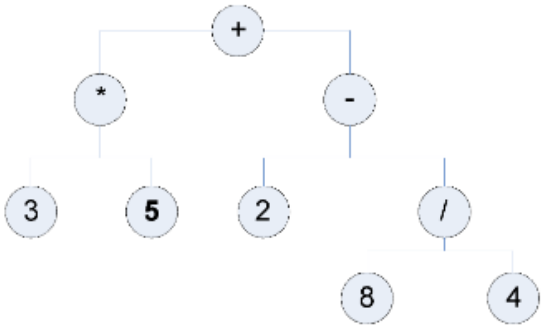
- Asumsi root dimulai dari indeks-1 :

	A		B				C							D
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



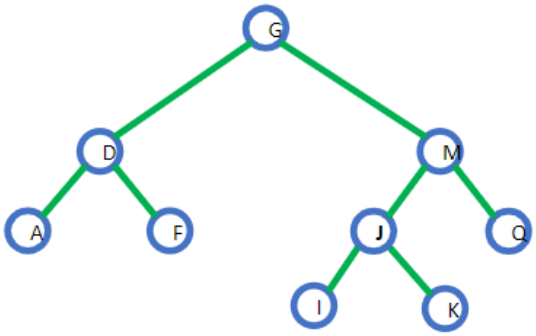
Latihan 3

1. Telusuri pohon biner berikut dengan menggunakan metode preorder, inorder, postorder, dan level order traversal.



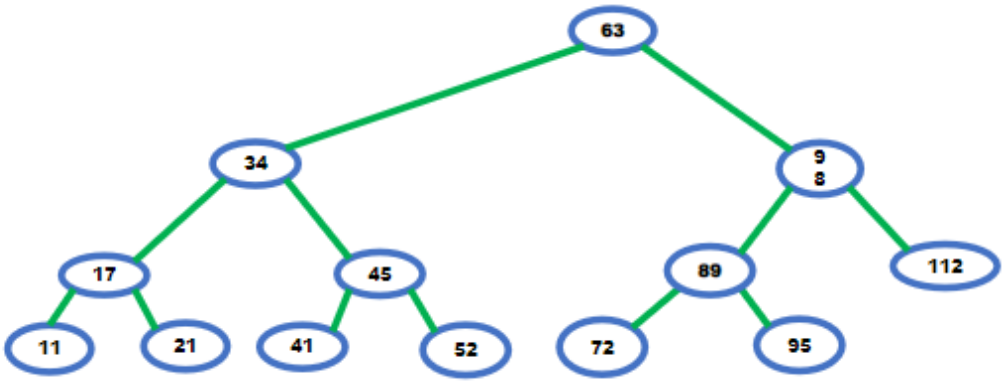
- Preorder : +, *, 3, 5, -, 2, /,8, 4
- Inorder : 3, *, 5, +, 2, -, 8, /, 4
- Postorder : 3, 5, *, 2, 8, 4, /, -, +
- Level Order : +, *, -, 3, 5, 2, /, 8, 4

2. Telusuri pohon biner berikut dengan menggunakan metode preorder, inorder, postorder, dan level order traversal.



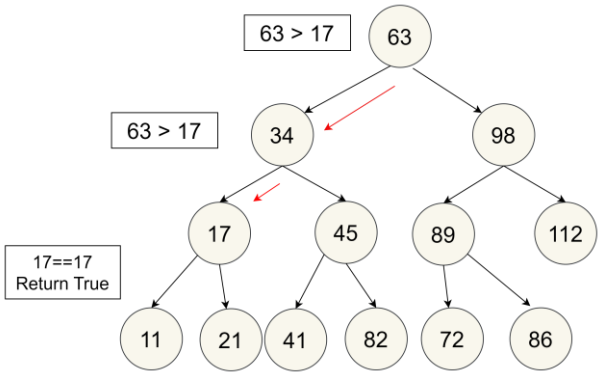
- Preorder : G, D, A, F, M, J, I, K, Q
- Inorder : A, D, F, G, I, J, K, M, Q
- Postorder : A, F, D, I, K, J, Q, M, G
- Level Order : G, D, M, A, F, J, Q, I, K

Latihan 4

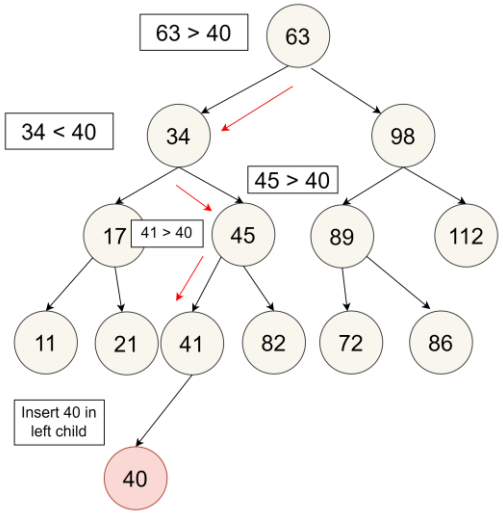


Terdapat data baru (40) yang akan ditambahkan dan data lama (98) yang akan dihapus. Ilustrasikan operasi (find, insert, delete, display) yang akan dilakukan untuk mengatasi penambahan dan penghapusan data tersebut.

- Find 17

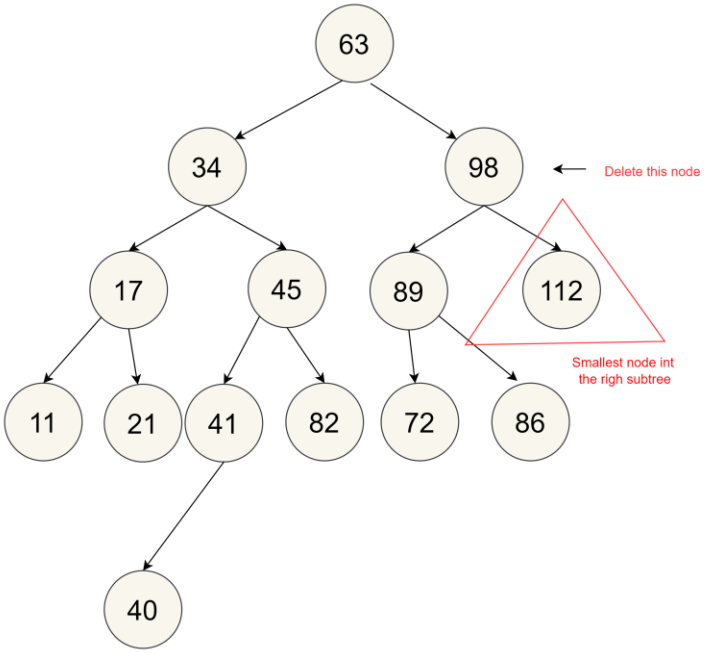


- Insert 40

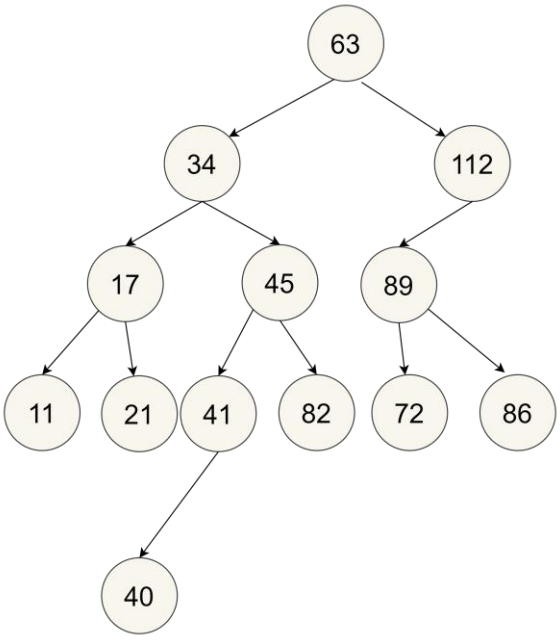


- Delete 98

BEFORE :



AFTER :



- Display :
  - *BEFORE :*

Preorder : 63, 34, 17, 11, 21, 48, 41, 52, 98, 89, 72, 98, 112

Inorder : 11, 17, 21, 34, 41, 48, 52, 63, 72, 89, 95, 98, 112

Postorder : 11, 21, 17, 41, 52, 48, 34, 72, 95, 89, 112, 98, 63

BFS : 63, 34, 98, 17, 45, 89, 112, 11, 21, 41, 52, 72, 95

  - *AFTER :*

Preorder : 63, 34, 17, 11, 21, 45, 41, 40, 52, 112, 89, 72, 95

Inorder : 11, 17, 21, 34, 40, 41, 45, 52, 63, 72, 89, 95, 112

Postorder : 11, 21, 17, 40, 41, 52, 45, 34, 72, 95, 89, 112, 63

BFS : 63, 34, 112, 17, 45, 89, 11, 21, 41, 52, 72, 95, 40