Introduction

Wednesday, June 1, 2022 9:44 AM

1. `int arr[] = new int[5];`
2. `ArrayList<Integer> = new ArrayList();`
3. Stack & Queue
4. Linked List

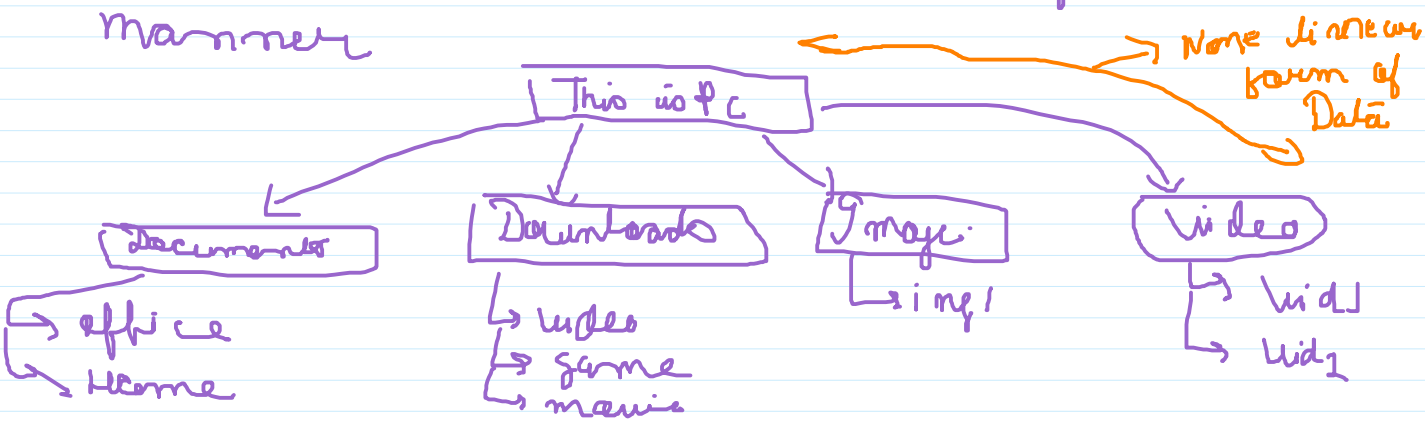
→ Continuous memory Allocation

→ advantage over 1, 2, 3

Linear form of DS (one by one)

1 → 2 → 3 .....

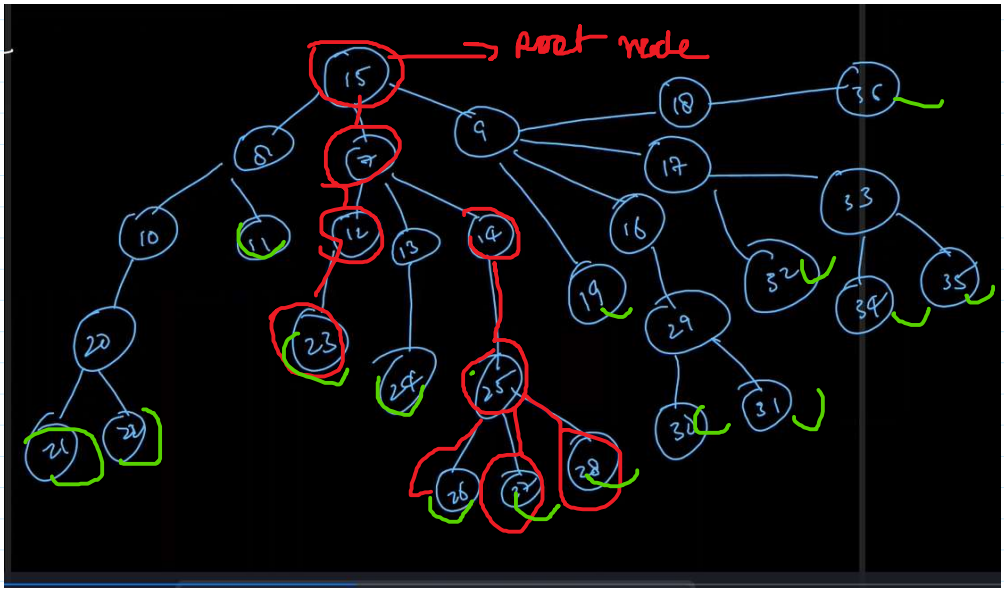
→ Suppose we have to store files in this manner



→ But how we will store the datas with current DS.? we cannot

∴ new DS was made called Generic Tree (Basically all non linear DS can be used to store non linear Data)

GT



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→ Root - first node

→ Ancestor of 23 — 12, 7, 15

→ Descendents of 14:- 25, 26, 27, 28

→ Leaf Node 21, 22, 11, 23, 24, 26, 27, 28, 14, 30, 31, 32, 34, 35, 36

→ parent & child :-

23 Parent 12
25 Parent 14

Note : Root does not have parent

→ Children - 12, 13, 14

16 " — 29

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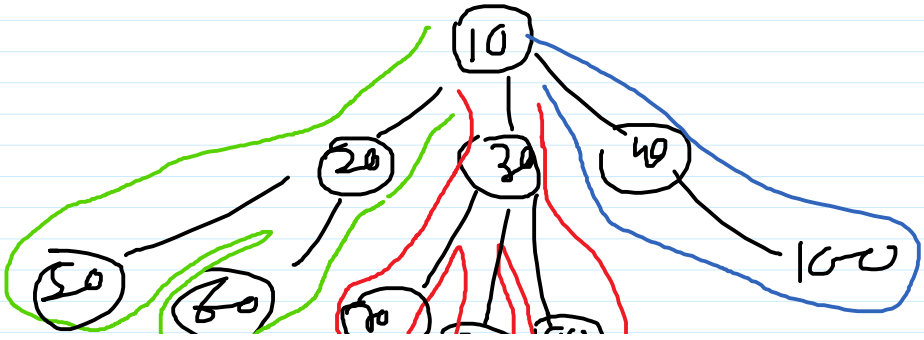
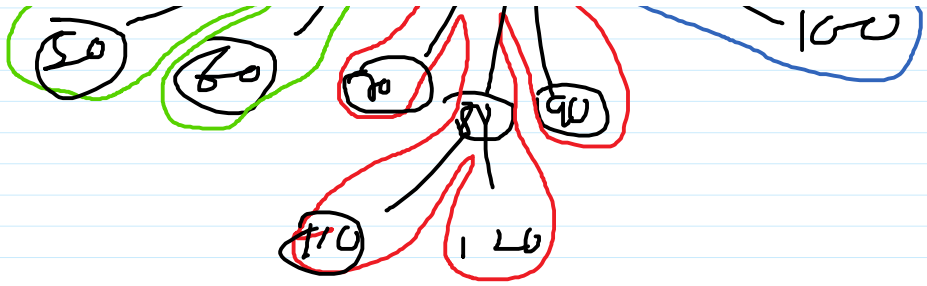
public static class Node {

int data;

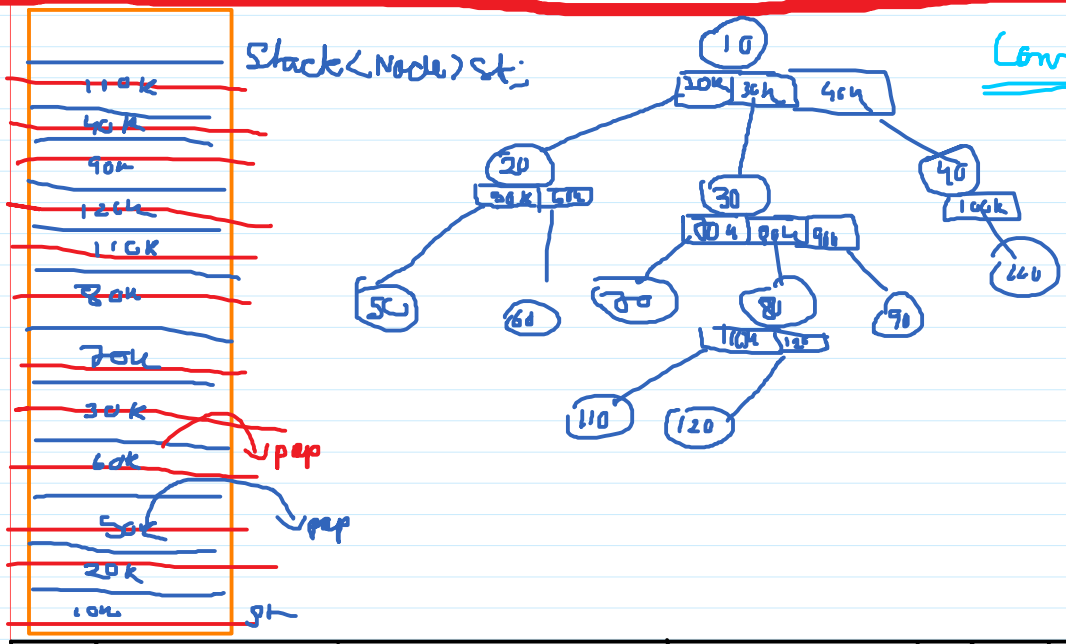
ArrayList<Node> children;

}





10	20	50	-1	60	-1	-1	30	70	-1	90	110	-1	120	-1	-1	80	-1	-1	40	100	-1	-1	-1



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