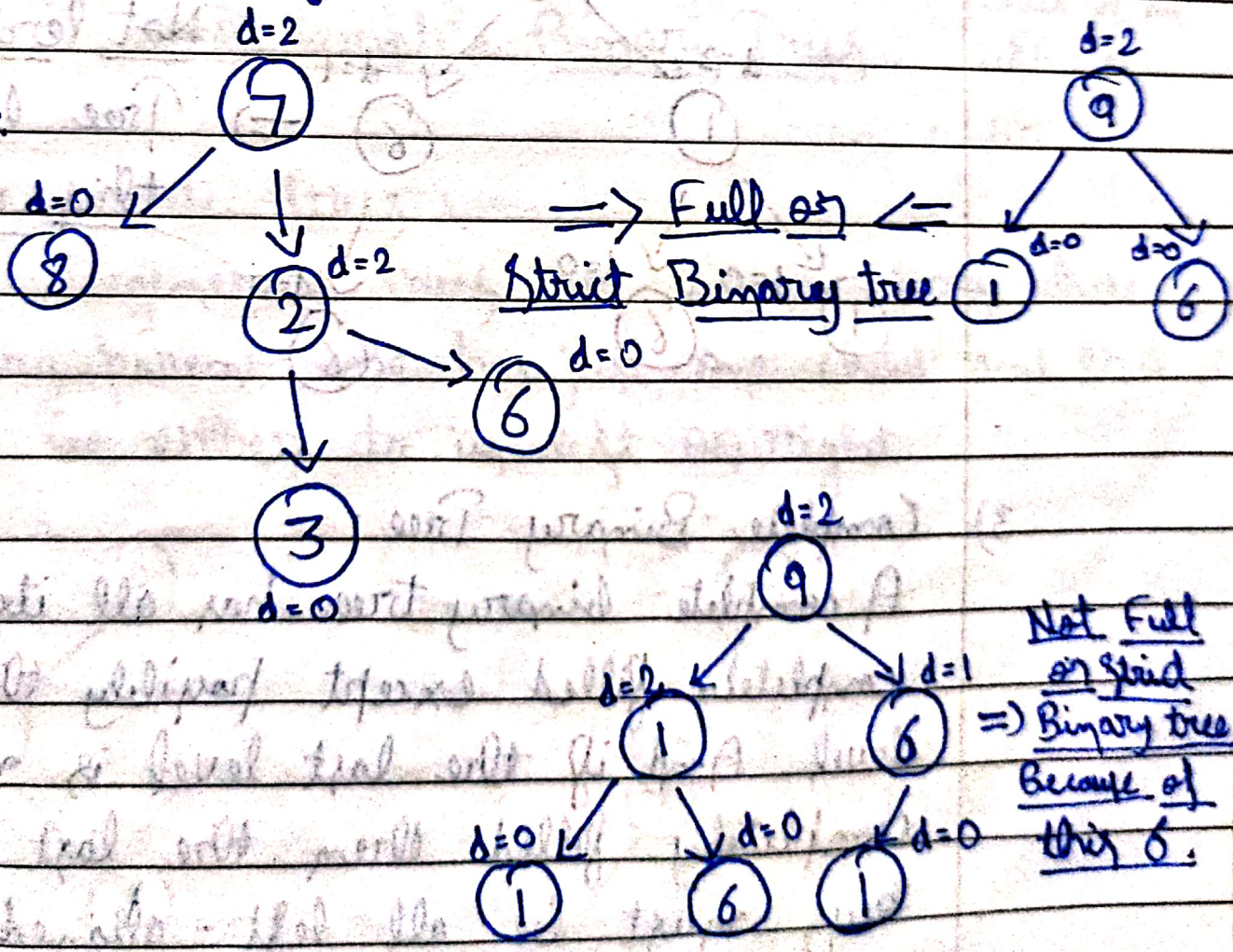
TYPES OF BINARY TREES:

1) Full or Strict Binary tree:

Binary trees as we said earlier have a degree of 2 or less than 2. But a strict binary tree is a binary tree having all of its nodes with a degree of 2 or 0. This is each of its nodes either have 2 children or is a leaf node.

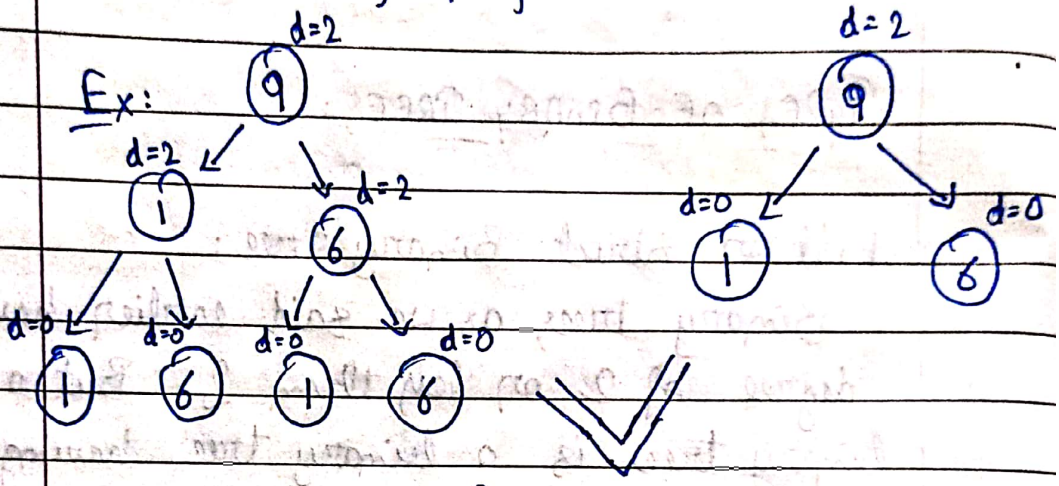
Ex:



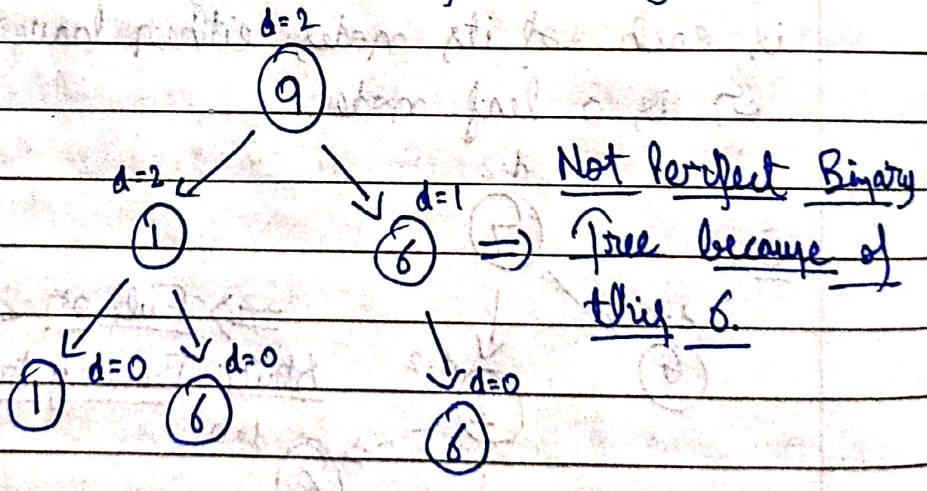
2) Perfect Binary Trees:

A perfect binary tree has all its internal nodes with degree strictly 2 and has all its leaf node on the same level. A perfect binary tree as the name suggests appears exactly perfect.

Ex:



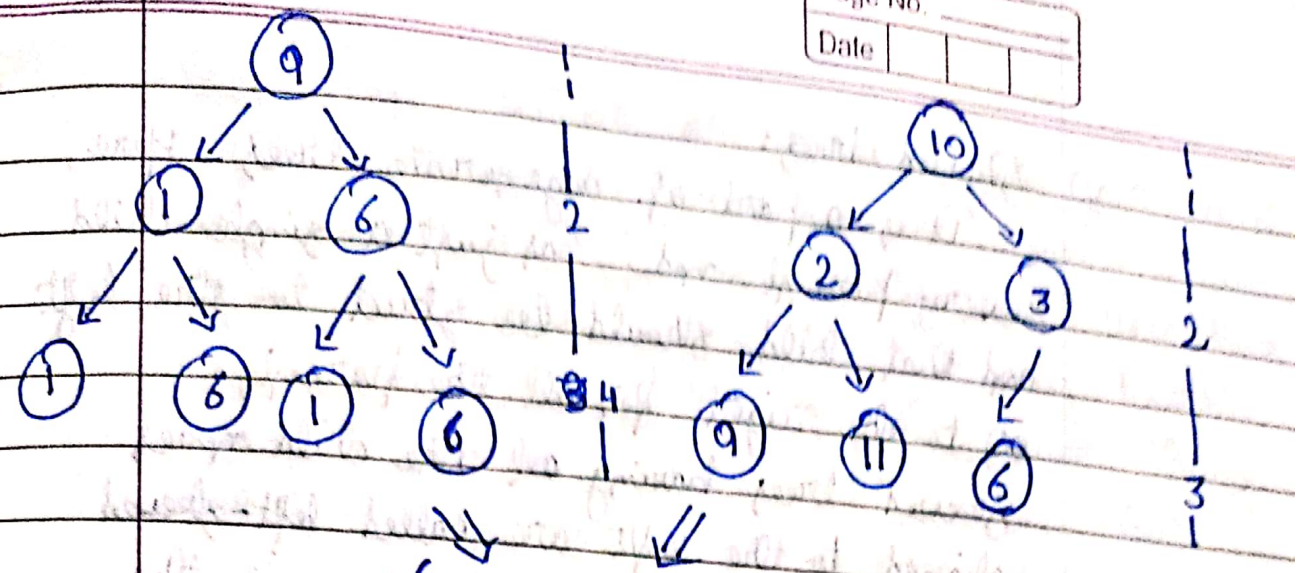
Perfect Binary Trees



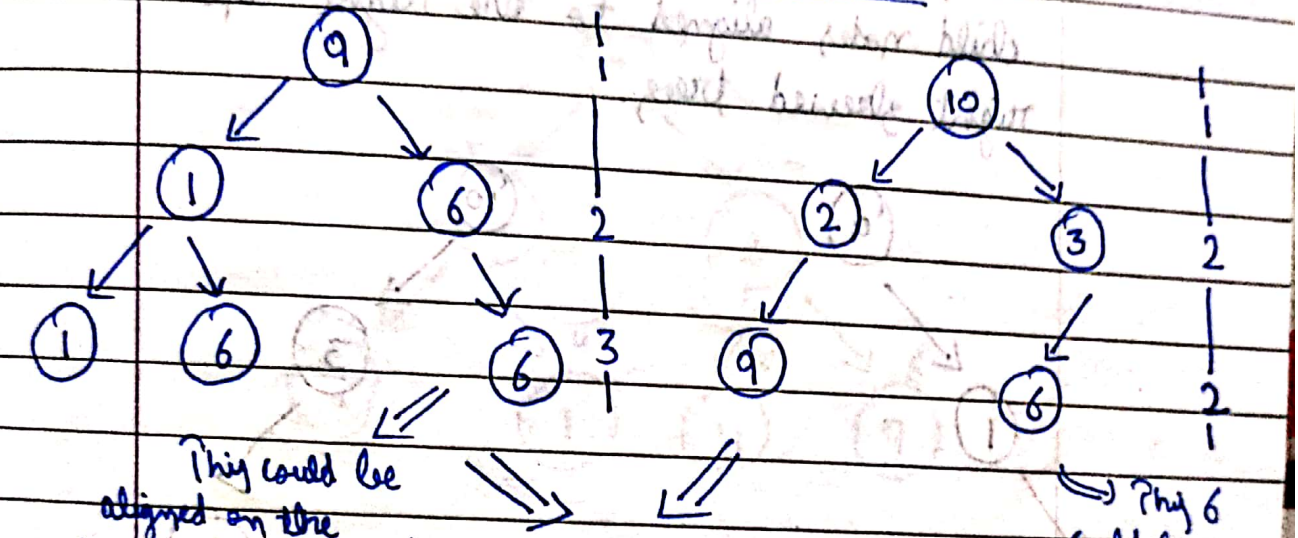
Not Perfect Binary Tree because of this 6.

3) Complete Binary Tree:

A complete binary tree has all its levels completely filled except possibly the last level. And if the last level is not completely filled then the last level's keys must be all left-aligned.



Complete Binary Trees.



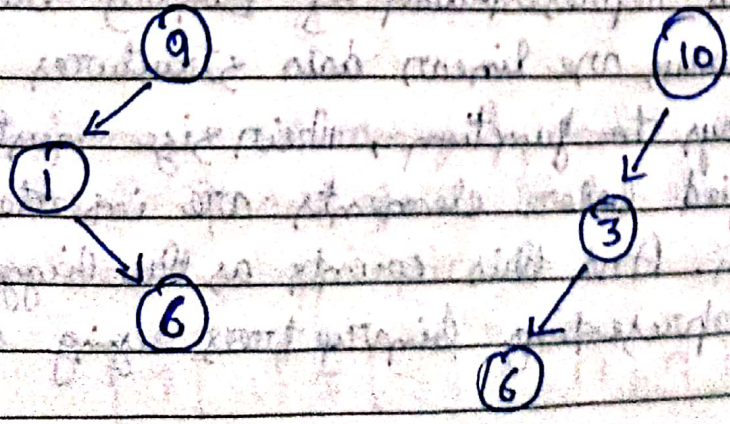
This could be aligned on the left side.

Not complete Binary Trees

This 6 could be on left side under 2.

4) Degenerate trees:

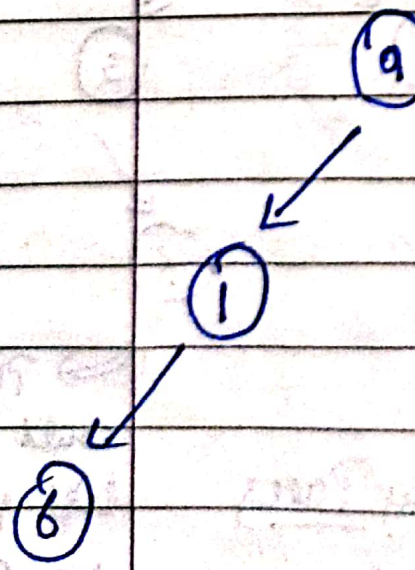
Degenerate trees are binary trees where every parent node has just one child and that can be either to its left or right.



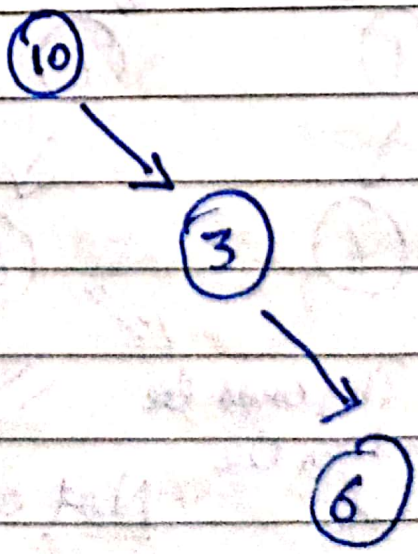
DEGENERATE TREES

5) Skewed trees:

It is a part of degenerate trees. Here, every parent node has just a single child and that child should be strict to the left or to the right for all the parents. Skewed trees having all the child nodes aligned to the left are called left-skewed trees, and skewed trees having all the child nodes aligned to the right are called right skewed trees.



LEFT SKEWED TREE



RIGHT SKEWED TREE