## Trees

 Trees show a relationship among a collection of objects (nodes), where relationships are one way and only one object field is at the head of every arrow from 5 of 28 preview rage 5 of 28 Mother of Contains в С D Owns et cetera Е F G

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## **Types of Trees**

General tree 

» Every node can have an enumber of sub-trees, there is no maximum Notes bossible of each node N'ary tree

- » Every node has at most N sub-trees
  - > Special case N= 2 is a binary tree
  - > Sub-trees may be empty pointer is void

## Array Representation – 3



- The binary case is an exception where the root can be index 1 because 2\*1 = 2, the index adjacent to the root
  - » This gives the pair 2 \* parent & 2 \* parent + 1, which is less arithmetic than the above, and the inverse to find the parent is easier to compute.



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