Definition 5.1 (Circuit-free Graph) *A graph is said to be circuit-free iff it has no circuits.*

Definition 5.2 (Tree) *A graph is called a tree iff it is circuit-free and connected.*

Definition 5.3 (Trivial Tree) *A trivial tree is a graph that consists of a single vertex.*

Definition 5.4 (Forest) *A graph is called a forest if, and only if, it is circuit-free and not connected.*

Definition 5.5 (Taxonomy Tree) *Taxonomy tree is a father set of decision tree.*
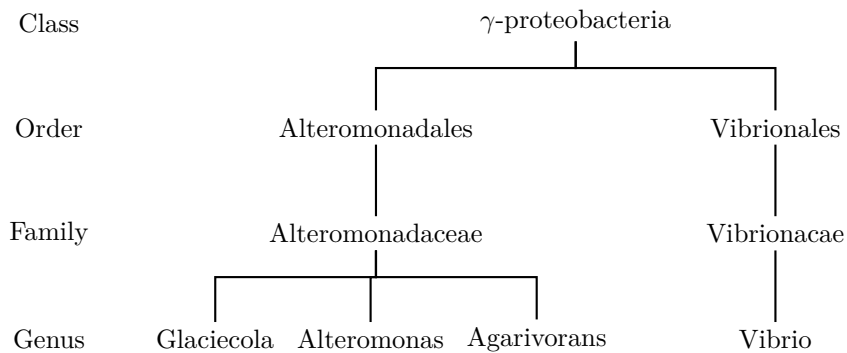

Figura 5.1: A taxonomy tree

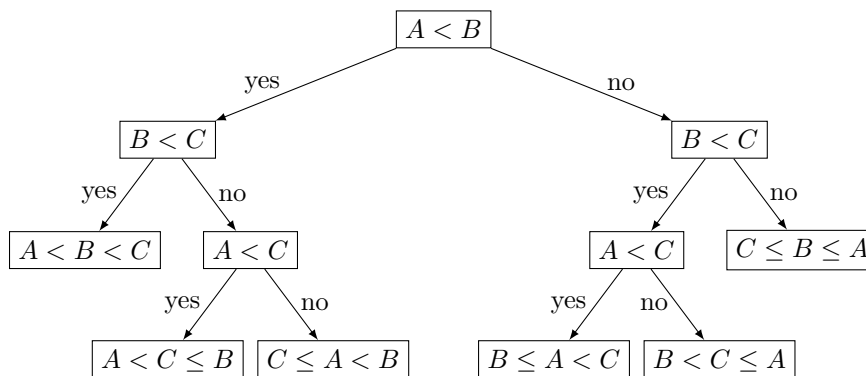**Example 5.6 (Decision Tree)** *Nodes represent different decision point. Edges represent different decision results.*

Figura 5.2: A decision tree for sorting three values.