CENG 242
Homework # 1

(Due: March 5th, 2006 Sunday 23:59)

You are given a binary tree and asked to find the path between two given nodes. Assume that the tree is defined as:

data Tree = Empty | Leaf Integer | Branch Integer Tree Tree

You will write a function **findpath** in the form:

findpath <the-tree> <first-element> <second-element>

where *the-tree* is a tree, *first-element* and *second-element* are given nodes' values. The function should return a list containing the values of nodes on the asked path.

Example:

findpath (Branch 17 (Branch 5 (Leaf 4) Empty) (Branch 6 (Branch 7 Empty (Leaf 9)) (Leaf 8))) 8 5
[8,6,17,5]

findpath (Branch 17 (Branch 5 (Leaf 4) Empty) (Branch 6 (Branch 7 Empty (Leaf 9)) (Leaf 8))) 5 8
[5,17,6,8]

findpath (Branch 17 (Branch 5 (Leaf 4) Empty) (Branch 6 (Branch 7 Empty (Leaf 9)) (Leaf 8))) 9 6
[9,7,6]

```
   17
  /  \
 5    6
/    / \
4   7  8
     \
      9
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