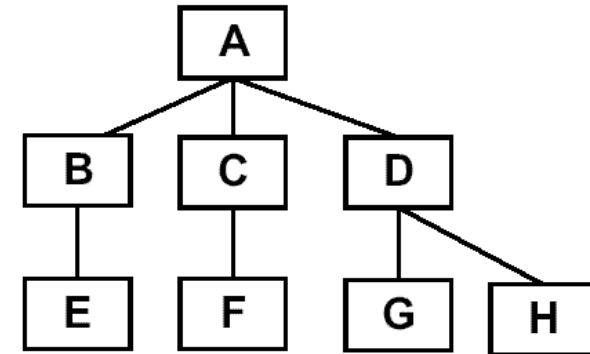


Tutorial 10

Peter Lo

Question 1

- Consider the following structure.



Question 1 (cont')

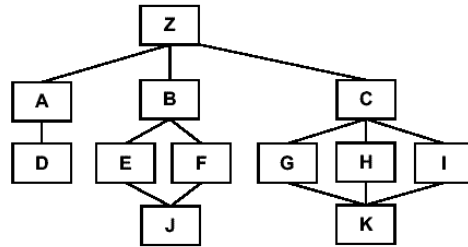
- In the context of the above structure, what do we mean by depth?
- In the context of the above structure, what do we mean by width?
- What is the width of this structure?
- What is the relationship between module C and module F?
- What is the fan out of module D?
- What is the size of this structure?

Answer

- The depth is the number of detail levels in the structure.
- The width is the overall span of control.
- The width is 4.
- Module C is superordinate to module F (or module F is subordinate to module C)).
- The fan out of module D is 2.
- Size = number of nodes + number of arcs = 15

Question 2

- Consider the following program structure below, and answer the following questions in relation to this structure, showing all working and formulas used where appropriate.



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Question 2 (cont')

- What is the depth of the structure?
- What is width of the structure?
- What is the fan-in of component H?
- What is the fan-out of component B?
- What is the size of the structure?
- What is the arc to node ration of the structure?

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Answer

- Depth = 4
- Width = 6
- Fan-in of component H = 1
- Fan-out of component B = 2
- Size = number of modules + number of arcs = 12 nodes + 14 arcs = 26
- Arc to node ration = number of modules/number of arcs = $12/14 = 0.86$

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