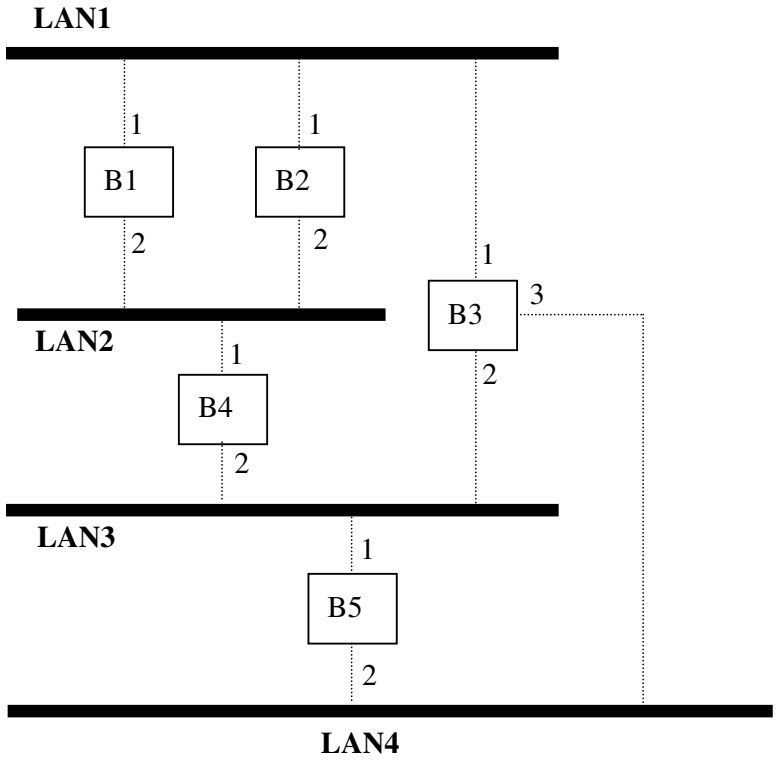
# EE3009 Tutorial 8

**(Switches and Spanning Tree)**

**Problems**

1. Consider a network in which there are four hosts, A, B, C and D, connected to a switch in a star topology. Host A is connected to interface 1 of the switch, host B to interface 2, host C to interface 3 and host D to interface 4. Suppose that (i) A sends a frame to D and (ii) D replies with a frame to A. The switch table is initially empty. Show the state of the switch table after each of these two events. For each of these events, identify the link(s) on which the transmitted frame will be forwarded.

2. Consider the topology of a bridged LAN shown in the following figure, in which costs assigned to each LAN are assumed to be equal. Now suppose the spanning tree algorithm is implemented. Construct the spanning tree for this network. Indicate the root bridge, root ports and designated ports.




**Computer Exercise**

3. In this exercise, you will login to a switch, examine its switch table, and observe the addition of new entries to the table. Open the file "`Examine_Switch_Table.pka`" and follow the instructions.
   a) What is the IP address of `PC-PT 11A`? Ping it.
   b) Examine the switch table of `S1-Central`. Which entry is added?