**Exer. 8-1:**a) If a packet is sent from by A to D through the flooding routing algorithm with a maximum hop count of 3, there are 8 possible routes. We can represent each of the possible routes through a 3-layer binary search tree, assuming a packet never travels backwards.

A drawing of a triangle

Description automatically generated

Therefore, the possible paths are:

A-->B-->C-->D

A-->B-->C-->F

A-->B-->E-->F

A-->B-->E-->G

A-->G-->E-->B

A-->G-->E-->F

A-->G-->H-->F

A-->G-->H-->D

b) Assuming that each hop consumes 1 bandwidth unit, and since we know that each possible path of the flooding routing algorithm has 3 hops, we multiply the number of paths by 3 to get the total bandwidth consumed. 8 \* 3 = 24 bandwidth units consumed

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