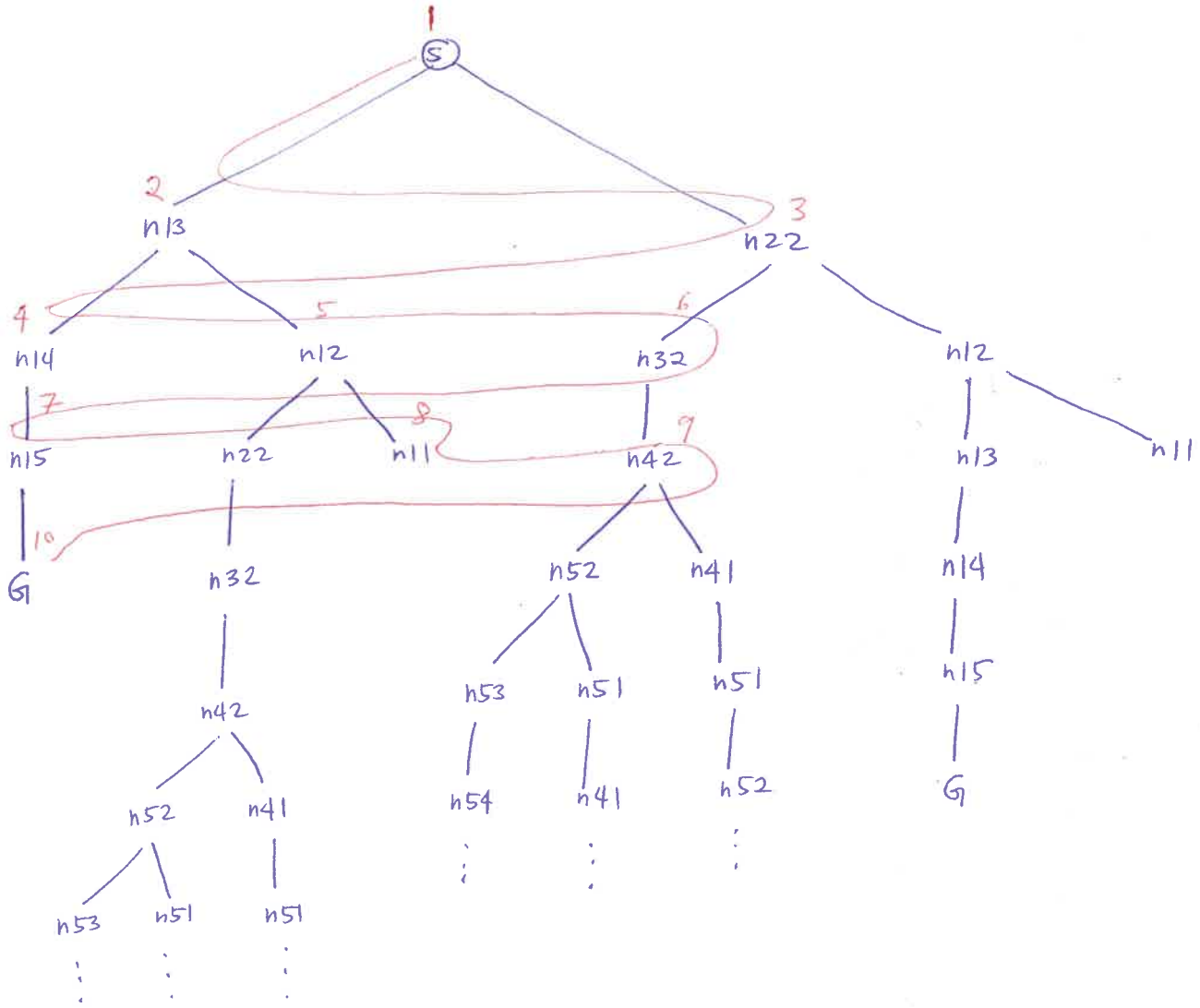
MAZE PROBLEM

Successor Generator : N, E, S, W or (UP, RIGHT, DOWN, LEFT)

Note: Diagonal moves are not permitted.



Since we know that Breadth-First Search will find the shallowest goal, our search will span only a small portion of the tree.

MAZE PROBLEM

TUTORIAL #2

Breadth-First Search (with a Visited List)

Step	Dequeued	Enqueued	Visited List
0		(S)	S
1	(S)	(n13, S) (n22, S)	S, n13, n22
2	(n13, S)	(n22, S) (n14, n13, S) (n12, n13, S)	" n14, n12
3	(n22, S)	(n14, n13, S) (n12, n13, S) (n32, n22, S)	" n32
4	(n14, n13, S)	(n12, n13, S) (n32, n22, S) (n15, n14, n13, S)	" n15
5	(n12, n13, S)	(n32, n22, S) (n15, n14, n13, S) (n11, n12, n13, S)	" n11
6	(n32, n22, S)	(n15, n14, n13, S) (n11, n12, n13, S) (n42, n32, n22, S)	" n42
7	(n15, n14, n13, S)	(n11, n12, n13, S) (n42, n32, n22, S) (G, n15, n14, n13, S)	" G
8	(n11, n12, n13, S)	(n42, n32, n22, S) (G, n15, n14, n13, S)	"
9	(n42, n32, n22, S)	(G, n15, n14, n13, S) (n52, n42, n32, n22, S) (n41, n42, n32, n22, S)	" n52, n41
10	(G, n15, n14, n13, S)		

PATH: S - n13 - n14 - n15 - G

Sequence of State Expansions:

S - n13 - n22 - n14 - n12 - n32 - n15 - n11 - n42 - G