

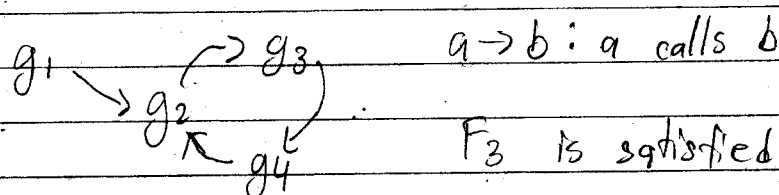
Q4

a) let g_1 be d g_1 calls g_2 g_2 calls g_3 g_3 calls g_4
 g_1 is beautiful g_4 calls g_2

F_1 : g_1 is beautiful, F_1 is satisfied

F_2 : No function calls g_1 so there won't be a $T \rightarrow F$
 Thus F_2 is satisfied

F_3 : All functions call a function that doesn't call them back

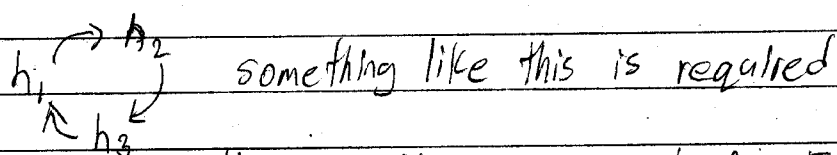


F_3 is satisfied

Thus this interpretation satisfies $F_1 \wedge F_2 \wedge F_3$

b) Unlike a set of 4, there will not be a function that isn't called.

This is bc of F_3 : all functions need another to call that doesn't call back



something like this is required

However this won't satisfy F_2 , as the beautiful function cannot be called to satisfy F_2
 By F_1 there must be a beautiful function

Thus $\{h_1, h_2, h_3\}$ can't satisfy $F_1 \wedge F_2 \wedge F_3$