Depth First Search Pseudo-Code

**function** depth\_first\_search(*graph* G, *node* start, *int* end\_trait)

// return if empty list

**if** (start == nil)

**return** nil

**var** *stack* S

**for** vertex **in** G

vertex.visited = **flase**

S.push(v)

**var** *node* u

**while(**!S.empty **AND** u.trait != end\_trait**)**

u = S.pop()

**if** (!u.visited)

u.visited = **true**

**for** vertex **in** u.neighbors

**if(**!vertex.visited**)**

S.push(vertex)