Graph Exercises

1. Does the following graph have an Euler circuit? Why or why not?

Give your answer in terms of graph theory, not “Yes because I can trace it” or “No because I can’t trace it”

A

B

C

D

E

2. List the node in order when traversing the graph breadth first

3. Trace a minimum spanning tree with the graph below:

A

B

C

D

E

3

4

2

5

7

6

4. Give an example of what the graph could represent and what could the minimum spanning tree be used for?

5. Given a graph G that is implemented with linked lists, write pseudocode for an internal graph ADT algorithm that will print all nodes that are connected to a target node

algorithm PrintConnectedNodes ( val graph <ptr to head node> , val target <key> )

Pre: graph G exists and has data

Post: connected nodes to target are printed

Return: nothing