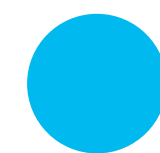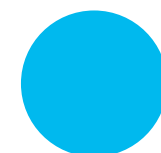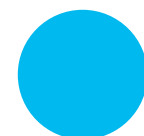# PureCoder 02

Exercise Sheet

Exercise 1.1:

Write these four facts about Queues and Stacks.
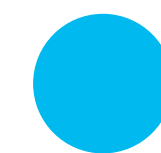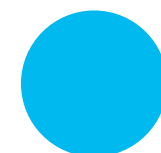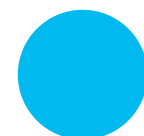
Queues

Order Added:

Order Removed:

Stacks

Order Added:

Order Removed:

Exercise 1.2:

Write the order these five words will be popped for a Queue and a Stack:

Front: **Apples, Oranges, Strawberries, Pears, Bananas** :Back
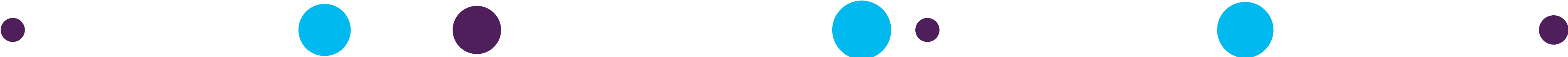
Queues

1st

2nd

3rd

4th

5th

Stacks

1st

2nd

3rd

4th

5th

Exercise 2.1:

What does a node represent in a Graph/Tree?

A piece of data
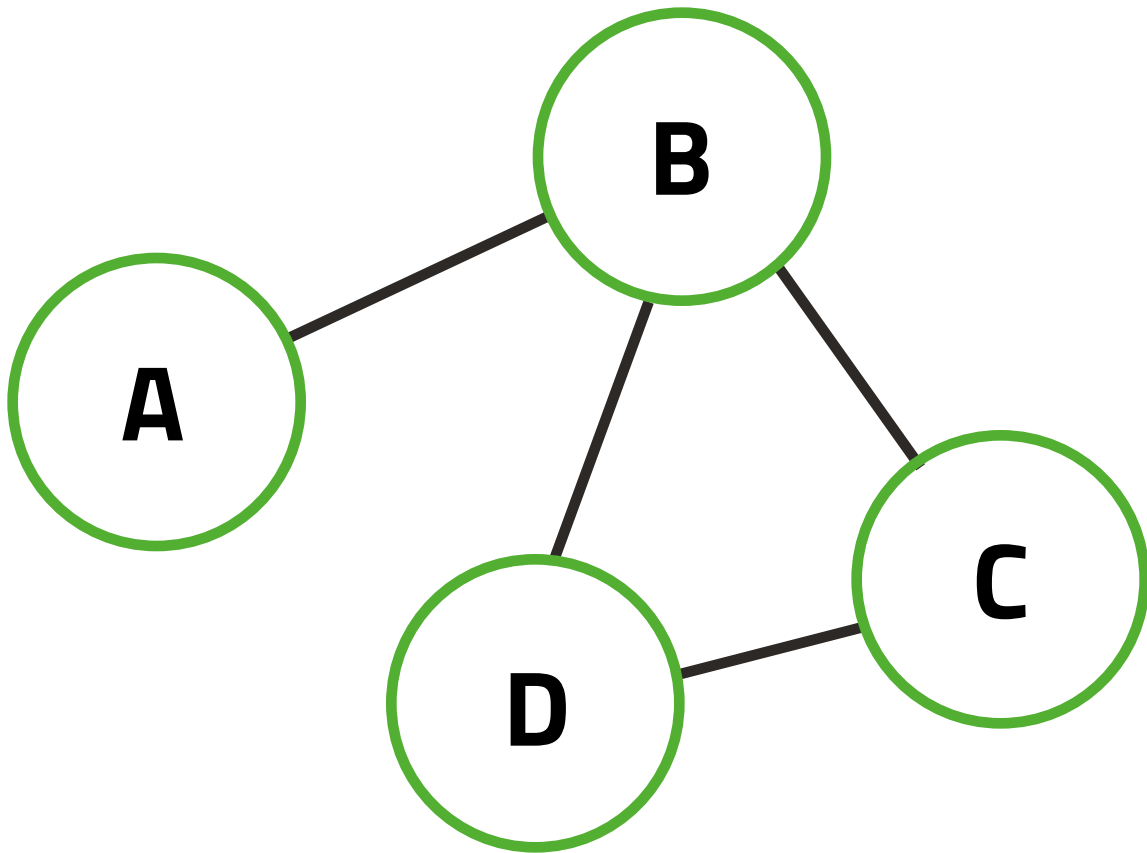
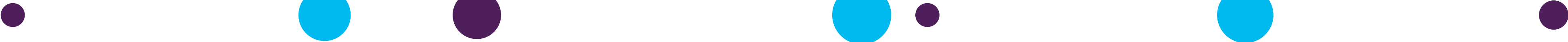**A connection between data**

The order in which data is found

Exercise 2.2:

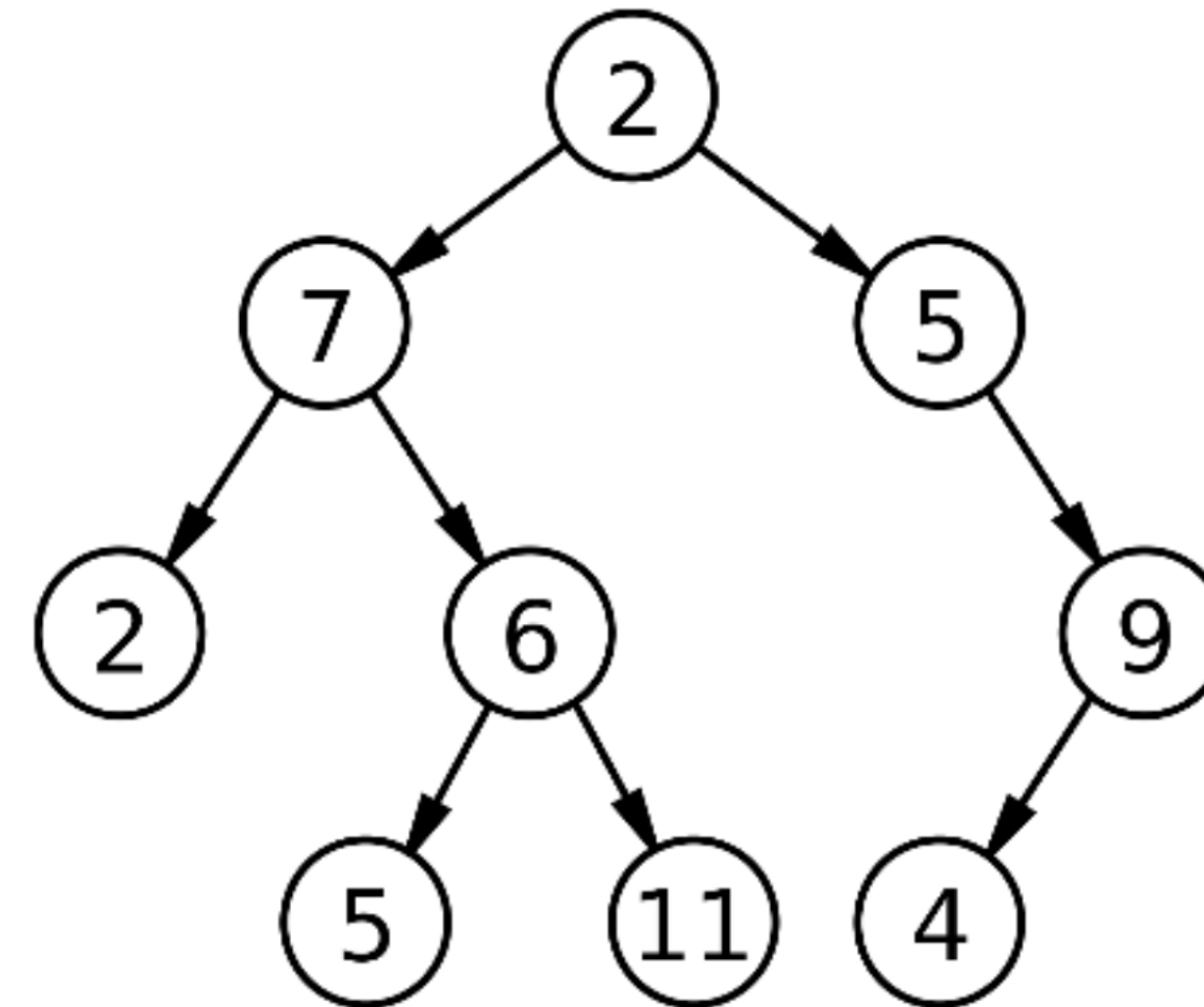# Fill in the adjacency matrix for this Graph.

	A	B	C	D
A				
B				
C				
D				

Exercise 2.3:
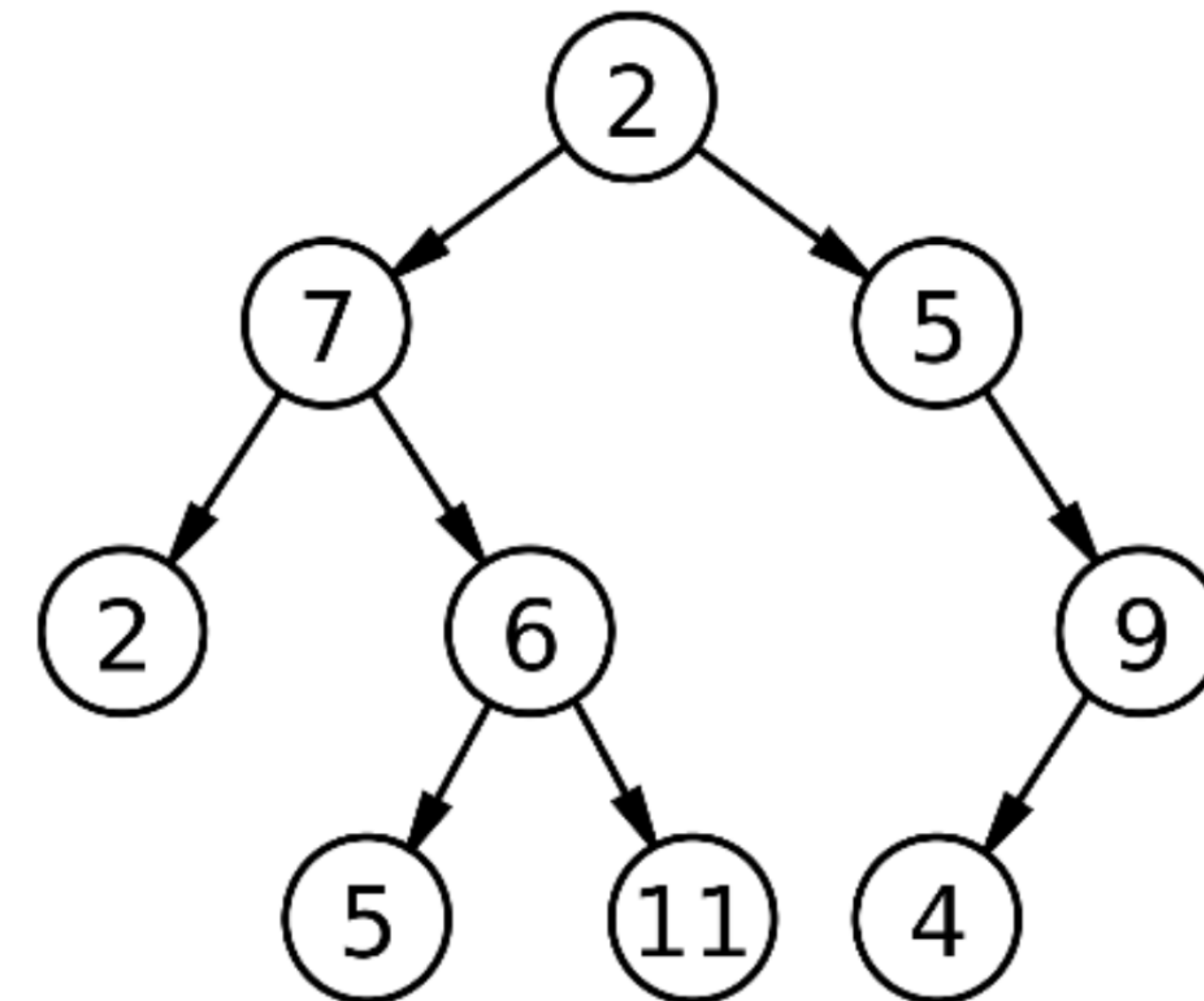
Is this Binary Tree weighted correctly?

Yes

No

Exercise 2.4:

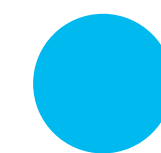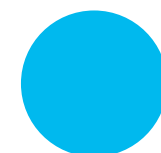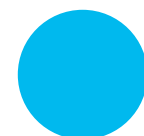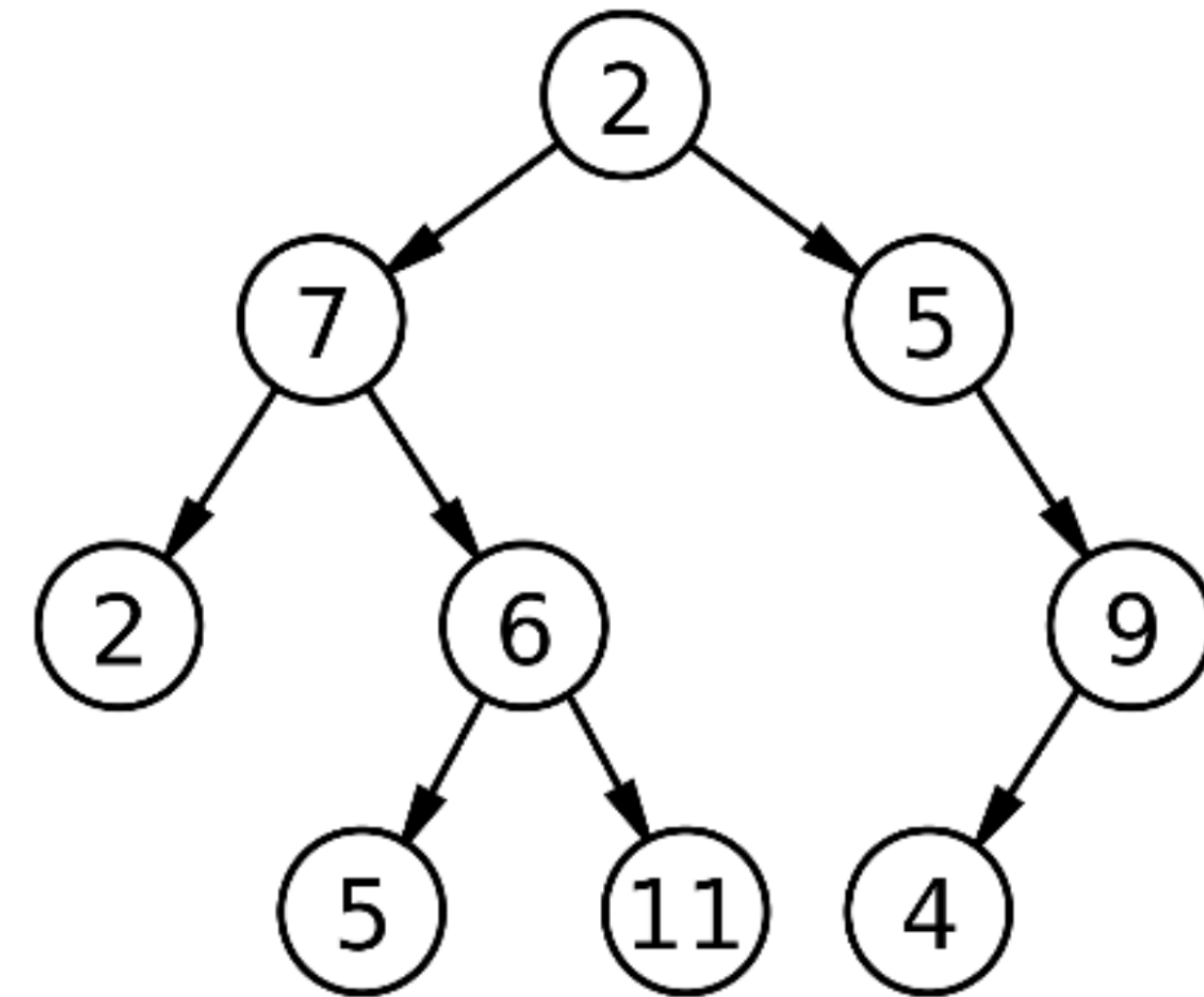# Identify one parent node and one leaf node in this Tree

Parent:

Leaf:

Exercise 2.5:

For this Tree, which traversal algorithm would result in this order of nodes being visited: 2, 7, 2, 6, 5, 11, 5, 9, 4
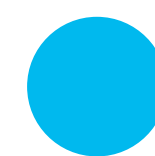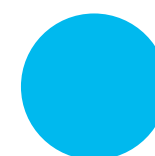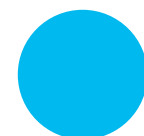
Depth First Search:

Breadth First Search:

Exercise 3.1:

Compare Graphs and Trees.

Mention any properties/components they both share, and what they have different.

Exercise 3.2:

Compare Queues and Stacks.

Mention any properties/components they both share, and what they have different.