What is ROS_DOMAIN_ID?

A ROS_DOMAIN_ID is the unique numerical identifier for an object that ROS communicates with.

What is a node?

ROS Nodes are executables which allow communication between different processes using messages over topics.

What is a topic?

Topics are named buses over which nodes exchange messages

What is a message?

A message is the object that is either published or received which contains some data.

What is a subscriber? Write the syntax to create a subscriber that subscribes to the topic amazing_int, which takes message of type UInt64, and uses the callback function magic_fun,
in C++ or Python.

A subscriber is a node which receives messages from a topic node.
Syntax:

```
class MinimalSubscriber(Node):

    def __init__(self):
        super().__init__('minimal_subscriber')
        self.subscription = self.create_subscription(
            Uint64,
            'amazing_int',
            self.magic_fun,
            10)
        self.subscription  # prevent unused variable warning

    def magic_fun(self, msg):
        self.get_logger().info('I heard: "%s"' % msg.data)
```

What is a publisher? Write the syntax to create a publisher that publishes to the topic amazing_bool, which takes a message of type Bool, in Python. (5pt)

A publisher is a node which sends messages over a specified topic.

Syntax:

```
class MinimalPublisher(Node):

    def __init__(self):
        super().__init__('minimal_publisher')
        self.publisher_ = self.create_publisher(Bool,'amazing_bool', 10)
        timer_period = 0.5  # seconds
        self.timer = self.create_timer(timer_period, self.timer_callback)
        self.i = 0

    def timer_callback(self):
        msg = Bool()
        msg.data = True
        self.publisher_.publish(msg)
        self.get_logger().info(f"Publishing: {msg.data}")
```

Can a node have multiple subscribers? Can a node have multiple publishers? (2pt)

A node can have multiple subscribers and multiple publishers.