Rectangle Exercise Solution

Hyungmo Gu

April 4, 2020

Part 1

1. **Class Name:** Rectangle

   One Line Summary: A rectangle is defined by its top-left coordinates as well as its width and height.

2.
```
Rectangle(10,20,300,400)
```

3. **Headers:**

   - translate_left(self, num):
   - translate_right(self, num):
   - translate_up(self, num):
   - translate_down(self, num):
   - is_equal(self, rect):
   - is_within_another_rectangle(self, rect):
   - is_overlapping(self, rect):

```python
class Rectangle:
    """A rectangle is defined by its top-left coordinates as well
    as its width and height."""

    def translate_left(self, num):
        """
        @type num: int
        @rtype: None
        """
    def translate_right(self, num):
        """
        @type num: int
        @rtype: None
        """
```

```
14
15      def translate_up(self, num):
16          """
17          @type num: int
18          @rtype: None
19          """
20
21      def translate_down(self, num):
22          """
23          @type num: int
24          @rtype: None
25          """
26
27      def is_equal(self, rect):
28          """
29          @type rect: Rectangle
30          @rtype: bool
31          """
32
33      def is_within_another_rectangle(self, rect):
34          """
35          @type rect: Rectangle
36          @rtype: bool
37          """
38
39      def is_overlapping(self, rect):
40          """
41          @type rect: Rectangle
42          @rtype: bool
43          """
44
45
```

Part 2