

**BIS 420 PROGRAMMING FOR DATA SCIENCE**  
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**CHAPTER 15 EXERCISE 15.3**  
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Write a version of `move_rectangle` that creates and returns a new `Rectangle` instead of modifying the old one.

```
class Point:
```

```
    def __init__(self, x, y):  
        self.x = x  
        self.y = y
```

```
class Rectangle:
```

```
    def __init__(self, width, height, corner):  
        self.width = width  
        self.height = height  
        self.corner = corner
```

```
def move_rectangle(rect, dx, dy):
```

```
    new_corner = Point(rect.corner.x + dx, rect.corner.y + dy)  
    return Rectangle(rect.width, rect.height, new_corner)
```

```
original_corner = Point(0, 0)
```

```
original_rectangle = Rectangle(100, 50, original_corner)
```

```
moved_rectangle = move_rectangle(original_rectangle, 10, 20)
```

```
print(f"Original corner: ({original_rectangle.corner.x}, {original_rectangle.corner.y})")
```

```
print(f'Moved corner: ({moved_rectangle.corner.x}, {moved_rectangle.corner.y})')
```

```
class Point:
    def __init__(self, x, y):
        self.x = x
        self.y = y

class Rectangle:
    def __init__(self, width, height, corner):
        self.width = width
        self.height = height
        self.corner = corner

def move_rectangle(rect, dx, dy):
    new_corner = Point(rect.corner.x + dx, rect.corner.y + dy)
    return Rectangle(rect.width, rect.height, new_corner)

original_corner = Point(0, 0)
original_rectangle = Rectangle(100, 50, original_corner)

moved_rectangle = move_rectangle(original_rectangle, 10, 20)

print(f'Original corner: ({original_rectangle.corner.x}, {original_rectangle.corner.y})')
print(f'Moved corner: ({moved_rectangle.corner.x}, {moved_rectangle.corner.y})')
```