In [1]:
```python
#Comparing Custom Objects by Attributes: Extend the Rectangle class to allow
#comparison of rectangles based on a specific attribute, such as width or height
#overloaded comparison operators

class Rectangle:
    compare_by = "area"

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

    def area(self):
        return self.width * self.height

    def _compare_value(self):
        if Rectangle.compare_by == "width":
            return self.width
        elif Rectangle.compare_by == "height":
            return self.height
        else:
            return self.area()

    def __lt__(self, other):
        return self._compare_value() < other._compare_value()

    def __le__(self, other):
        return self._compare_value() <= other._compare_value()

    def __gt__(self, other):
        return self._compare_value() > other._compare_value()

    def __ge__(self, other):
        return self._compare_value() >= other._compare_value()

    def __eq__(self, other):
        return self._compare_value() == other._compare_value()

    def __ne__(self, other):
        return self._compare_value() != other._compare_value()

    def __str__(self):
        return f"Rectangle(width={self.width}, height={self.height})"

rect1 = Rectangle(4, 5)
rect2 = Rectangle(2, 10)
rect3 = Rectangle(3, 3)

print(rect1 == rect2)
print(rect3 < rect1)

Rectangle.compare_by = "width"
print(rect1 > rect2)

Rectangle.compare_by = "height"
print(rect1 < rect2)
```

```
True
True
True
True
```

In [ ]: