

**Lecture**

# **“Rich Comparison” Methods**





## “Rich Comparison” Methods

`__lt__()`

`<`

Less than

`__le__()`

`<=`

Less Than or Equal to

`__eq__()`

`==`

Equal to

`__ne__()`

`!=`

Not equal to

`__gt__()`

`>`

Greater than

`__ge__()`

`>=`

Greater than or Equal to



## “Rich Comparison” Methods

```
class Point:

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



## “Rich Comparison” Methods

```
>>> point1 = Point(-53, 34)
>>> point2 = Point(56, 23)
>>> point1 < point2
Traceback (most recent call last):
  File "<pyshell#2>", line 1, in <module>
    point1 < point2
TypeError: '<' not supported between instances of 'Point' and 'Point'
>>> point1 == point2
False
>>> point1 >= point2
Traceback (most recent call last):
  File "<pyshell#4>", line 1, in <module>
    point1 >= point2
TypeError: '>=' not supported between instances of 'Point' and 'Point'
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>>> point1 == point2
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    def __lt__(self, other):
        return self.x < other.x

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

    def __eq__(self, other):
        return (self.x == other.x) and (self.y == other.y)

    def __ne__(self, other):
        return (self.x != other.x) or (self.y != other.y)

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

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