String_representation

November 29, 2019

0.1 String representation

- By default, `str()` simply calls `repr()`
- But `repr()` does not call `str()`
- By default, `__format__()` calls `__str__()`

0.1.1 repr

- Exactness is more important than human-friendliness
- Suited for debugging
- Includes identifying information
- Generally best for logging

0.1.2 str

- Human-friendly representation of and object
- Suited to display information to the user
- Does not include identifying information

0.1.3 format

- Used in the string's format method
- Receives a parameter with the format specification

[1]:
```
class Point2D:
    def __init__(self, x, y):
        self._x = x
        self._y = y

    def __str__(self):
        return '({}, {})'.format(self._x, self._y)

    def __repr__(self):
        return 'Point2D(x={},y={})'.format(self._x, self._y)

    def __format__(self, f):
        return '[Formatted point: {}, {}, {}]'.format(self._x, self._y, f)
```

[2]:
```
p = Point2D(x=23, y=42)
str(p)
```

[2]:
```
'(23, 42)'
```

[3]:
```
repr(p)
```

[3]:
```
'Point2D(x=23,y=42)'
```

[4]:
```
print('{}'.format(p))
```

```
[Formatted point: 23, 42, ]
```

[5]:
```
print('{:r4e}'.format(p))
```

```
[Formatted point: 23, 42, r4e]
```