



### 3 Task 3 - requests

- Take a look at [https://executer.python-course.de/demo/json\\_post](https://executer.python-course.de/demo/json_post)
- Build a function that follows the instructions. If the request is successfully received on the server, return the message property of the resulting JSON answer.
- Hints: `requests.Session()`, `resp.json()`

```
[7]: import requests
      sess = requests.Session()

      data = sess.get("https://executer.python-course.de/demo/json_post").json()
      sess.post("https://executer.python-course.de/demo/json_post", json=data).json()
```

```
[7]: {'message': 'Well done!'}
```

### 4 Task 4 - Classes

- Implement two child classes of `Shape`, namely `Circle` and `Square`, which each implement their own definitions of the area and their diameter

```
[9]: import math

class Shape:
    def __init__(self):
        pass

    def area(self):
        raise NotImplementedError("to overwrite")

    def diameter(self):
        raise NotImplementedError("to overwrite")

class Circle(Shape):
    def __init__(self, radius: int):
        self.radius = radius

    def area(self) -> float:
        return math.pi * self.radius ** 2

    def diameter(self) -> float:
        return 2 * math.pi * self.radius

class Square(Shape):
    def __init__(self, width: int):
```

```
        self.width = width

    def area(self) -> float:
        return self.width ** 2

    def diameter(self) -> float:
        return self.width * 4
# TODO IMPLEMENT

circle = Circle(radius=5)
assert round(circle.area(), 2) == 78.54
assert round(circle.diameter(), 2) == 31.42

square = Square(width=5)
assert round(square.area(), 2) == 25
assert round(square.diameter(), 2) == 20
```

[ ]: