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Finals Lab Task 1. Encapsulation

A Car That Works

car.py

```python
class Car(object):  4 usages
    def __init__(self, color: str, price: float, size: str):
        self.color = color
        self.price = price
        self.size = size.upper()

    def get_color(self) -> str:  3 usages
        return self.color
    def get_price(self) -> float:  3 usages
        return self.price
    def get_size(self) -> str:  3 usages
        return self.size


    def set_color(self, color: str) -> None:
        self.color = color
    def set_price(self, price: float) -> None:
        self.price = price
    def set_size(self, size: str) -> None:
        self.size = size.upper()

    def __str__(self):
        if self.size == 'S':
            size_out = "small"
        elif self.size == 'M':
            size_out = "medium"
        elif self.size == 'L':
            size_out = "large"
        else:
            size_out = "unknown"

        return f"Car ({self.color}) - P{self.price:.2f} - {size_out}"
```

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car.py test_car.py

```python
from car import Car

if __name__ == '__main__':
    c1 = Car( color: "red",  price: 19999.85,  size: 'M')
    c2 = Car( color: "blue",  price: 50000.00,  size: 'L')
    c3 = Car( color: "green",  price: 12345.67,  size: 'S')

    print(f"Action: Invoking the Car class constructor using Car(\"{c1.get_color()}\", {c1.get_price()}, '{c1.get_size()}').")
    print("Output:")
    print(c1.__str__())
    print()

    print(f"Action: Invoking the Car class constructor using Car(\"{c2.get_color()}\", {c2.get_price()}, '{c2.get_size()}').")
    print("Output:")
    print(c2.__str__())
    print()

    print(f"Action: Invoking the Car class constructor using Car(\"{c3.get_color()}\", {c3.get_price()}, '{c3.get_size()}').")
    print("Output:")
    print(c3.__str__())
    print()
```

SAMPLE OUTPUT

```
Action: Invoking the Car class constructor using Car("red", 19999.85, 'M').
Output:
Car (red) - P19999.85 - medium

Action: Invoking the Car class constructor using Car("blue", 50000.0, 'L').
Output:
Car (blue) - P50000.00 - large

Action: Invoking the Car class constructor using Car("green", 12345.67, 'S').
Output:
Car (green) - P12345.67 - small
```