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C204

7OOP

Final Lab Task 1: Encapsulation

```
1 class Car:
2     def __init__(self, color: str, price: float, size: str):
3         self.color = color
4         self.price = price
5         self.size = size.upper()
6
7
8     def get_color(self) -> str:
9         return self.color
10
11     def get_price(self) -> float:
12         return self.price
13
14     def get_size(self) -> str:
15         return self.size
16
17
18     def set_color(self, color: str) -> None:
19         self.color = color
20
21     def set_price(self, price: float) -> None:
22         self.price = price
23
24     def set_size(self, size: str) -> None:
25         self.size = size.upper()
26
27
28     def __str__(self) -> str:
29         size_descriptor = {
30             'S': 'small',
31             'M': 'medium',
32             'L': 'large'
33         }.get(self.size, 'unknown')
34
35         return f"Car ({self.color}) - P{self.price:.2f} - {size_descriptor}"
```

```
print("\nAction: Invoking the Car class constructor using Car(\"red\", 19999.85, 'M').")
car1 = Car( color="Red", price=19999.85, size='M')
print("Output:")
print(car1)

print("\nAction: Invoking the Car class constructor using Car(\"blue\", 50000.00, 'L').")
car2 = Car( color="Blue", price=50000.00, size='L')
print("Output:")
print(car2)

print("\nAction: Invoking the Car class constructor using Car(\"green\", 12345.67, 'S').")
car3 = Car( color="Orange", price=12345.67, size='S')
print("Output:")
print(car3)
```

OUTPUT:

```
main x
C:\Users\COMLAB\AppData\Local\Programs\Python\Python311\python.exe C:\Users\COMLAB\PycharmProjects\pythonProject2\main.py
Action: Invoking the Car class constructor using Car("red", 19999.85, 'M').
Output:
Car (Red) - ₱19999.85 - medium

Action: Invoking the Car class constructor using Car("blue", 50000.00, 'L').
Output:
Car (Blue) - ₱50000.00 - large

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

Process finished with exit code 0
```