

OOP

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อะไรคือ OOP

OOP ย่อมาจาก object-oriented programming

OOP เป็นเทคนิคการเขียนโปรแกรมแบบหนึ่ง ที่มองทุกอย่างเป็น Object หรือวัตถุ

การเขียน Code แบบ OOP ทำให้ง่าย และ เป็นระเบียบ ในการพัฒนา ปรับปรุง

OOP

1. Attribute
2. Method

1. Attribute

```
In [1]: ▶ 1 class Warrior:
          2     def __init__(self, HP, ATK, DEF):
          3         self.HP = HP
          4         self.ATK = ATK
          5         self.DEF = DEF
```

```
In [2]: ▶ 1 warrior1 = Warrior(100, 45, 25)
```

```
In [3]: ▶ 1 print("warrior1's HP =", warrior1.HP)
          2 print("warrior1's ATK =", warrior1.ATK)
          3 print("warrior1's DEF =", warrior1.DEF)
```

```
warrior1's HP = 100
warrior1's ATK = 45
warrior1's DEF = 25
```

1. Attribute

```
In [4]: 1 warrior2 = Warrior(100, 35, 30)
```

```
In [5]: 1 print("warrior2's HP =", warrior2.HP)
        2 print("warrior2's HP =", warrior2.ATK)
        3 print("warrior2's HP =", warrior2.DEF)
```

```
warrior2's HP = 100
```

```
warrior2's HP = 35
```

```
warrior2's HP = 30
```

1. Attribute

```
In [9]: ▶ 1 car2 = Car('Honda', 'Civic', 'White')
```

```
In [10]: ▶ 1 print("car2's brand =", car2.brand)
          2 print("car2's model =", car2.model)
          3 print("car2's color =", car2.color)
```

```
car2's brand = Honda
car2's model = Civic
car2's color = White
```

OOP

- ~~1. Attribute~~ เชื้อด
2. Method

2. Method

In [11]: ▶

```
1 class Warrior:
2     def __init__(self, HP, ATK, DEF):
3         self.HP = HP
4         self.ATK = ATK
5         self.DEF = DEF
6
7     def training(self):
8         self.HP = self.HP + 5
9         self.ATK = self.ATK + 10
10        self.DEF = self.DEF + 5
```

In [12]: ▶

```
1 warrior1 = Warrior(100, 45, 25)
2 print('HP = %d, ATK = %d, DEF = %d' %(warrior1.HP, warrior1.ATK, warrior1.DEF))
3 warrior1.training()
4 print('HP = %d, ATK = %d, DEF = %d' %(warrior1.HP, warrior1.ATK, warrior1.DEF))
```

HP = 100, ATK = 45, DEF = 25

HP = 105, ATK = 55, DEF = 30

2. Method

```
In [13]: ▶ 1 class Car:
           2     def __init__(self, brand, model, color):
           3         self.brand = brand
           4         self.model = model
           5         self.color = color
           6
           7     def set_color(self, color):
           8         self.color = color
```

```
In [14]: ▶ 1 car1 = Car('Toyota', 'Camry', 'Black')
           2 print('old color = %s' %car1.color)
           3 car1.set_color('Red')
           4 print('new color = %s' %car1.color)
```

```
old color = Black
new color = Red
```

OOP

- ~~1. Attribute~~ เชื้อด
- ~~2. Method~~ เชื้อด