설계패턴 7주차 실습

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Lab 1 – Bridge Pattern

1. 만들어야 하는 클래스의 개수: 2 X 3 = 6개의 클래스

class TestUnit:

    def run(self):

        pass

class System:

    def \_\_init\_\_(self, testUnit:TestUnit):

        self.testUnit = testUnit

    def start\_test(self):

        pass

class Android(System):

    def start\_test(self):

        self.testUnit.run()

        print("Android")

class IOS(System):

    def start\_test(self):

        self.testUnit.run()

        print("IOS")

class Dijkstra(TestUnit):

    def run(self):

        print("Dijkstra Algorithm")

class MinimumSpanningTree(TestUnit):

    def run(self):

        print("MinimumSpanningTree Algorithm")

class A\_star(TestUnit):

    def run(self):

        print("A\_star Alorithm")

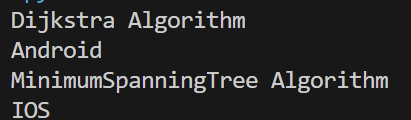
#Client Code

android\_system = Android(Dijkstra())

android\_system.start\_test()

ios\_system = IOS(MinimumSpanningTree())

ios\_system.start\_test()



Lab 2) – Flyweight Pattern

class CarColor:

    def \_\_init\_\_(self, color\_name, rgb\_value):

        self.color\_name = color\_name

        self.rgb = rgb\_value

    def \_\_str\_\_(self):

        return self.color\_name

class Car:

    \_Color\_Table = {}

    def addRGB(color, RGB):

        color\_RGB = CarColor(color, RGB)

        Car.\_Color\_Table[color] = color\_RGB

    def \_\_init\_\_(self, year, brand, name, fuel\_type, color):

        self.year = year

        self.brand = brand

        self.name = name

        self.fuel\_type = fuel\_type

        self.color = color

        if color not in Car.\_Color\_Table:

            raise RuntimeError(f"{color} is not in Color\_Table")

    def \_\_str\_\_(self):

        return f"{self.year} {self.brand} {self.name}, Fuel: {self.fuel\_type}, Color: {self.color}"

Car.addRGB("red", (255, 0, 0))

Car.addRGB("white", (255, 255, 255))

Car.addRGB("green", (0, 255, 0))

car1 = Car("Audi", "R8", 2017, "disel", "red")

car2 = Car("Lamborghini", "Aventador", 2011, "gasoline", "green")

car3 = Car("Hyundai", "IONIQ5", 2021, "electric", "white")

print(car1)

print(car2)

print(car3)

