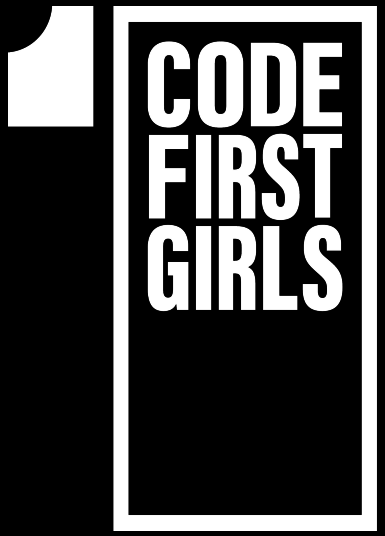
OOP & PYTHON CLASS PART 2

LESSON 2



NANODEGREE → ENGINEERING MODULE

AGENDA

01 SOLID Principles in OOP

02 Python Class application

03 Python class advantages

04 Practice

DESIGN PRINCIPLES

DEFINITION

When implemented properly it makes your code more
extendable, logical and easier to read.

DESIGN PRINCIPLES

DEFINITION

SINGLE RESPONSIBILITY

A class should have only one job and therefore it should have only a single reason to change.

DESIGN PRINCIPLES

DEFINITION

O **PEN - CLOSED**

Software entities(Classes, modules, functions) should be open for extension, not modification.

DESIGN PRINCIPLES

DEFINITION

L ISKOV SUBSTITUTION

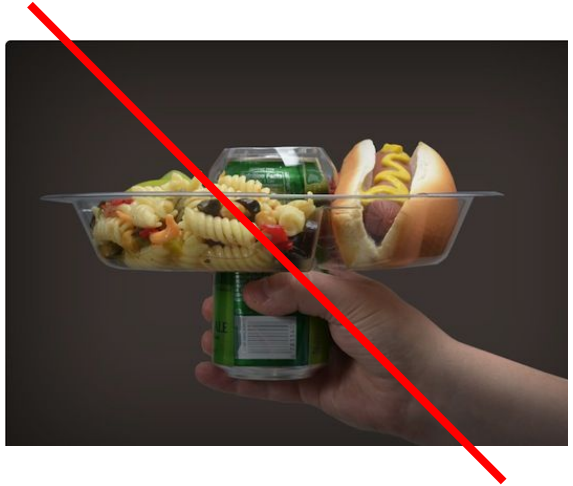
If class A is a subtype of class B, then we should be able to replace B with A without disrupting the behavior of our program.

DESIGN PRINCIPLES

DEFINITION

I NTERFACE SEGREGATION

Larger interfaces should be split into smaller ones. By doing so, we can ensure that implementing classes only need to be concerned about the methods that are of interest to them

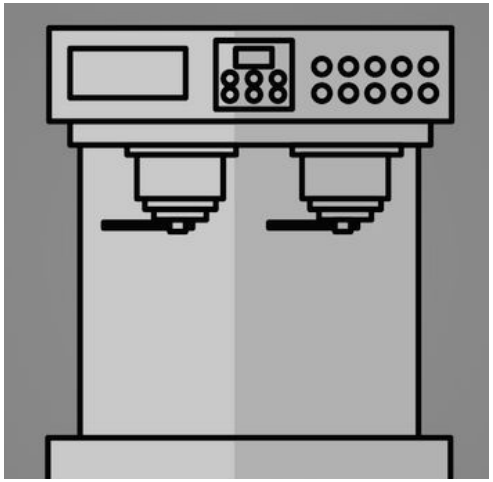


DESIGN PRINCIPLES

DEFINITION

D EPENDENCY INJECTION

Dependency Inversion (injection) refers to the decoupling of software modules. This way, instead of high-level modules depending on low-level modules, both will depend on abstractions.



DISCUSSION

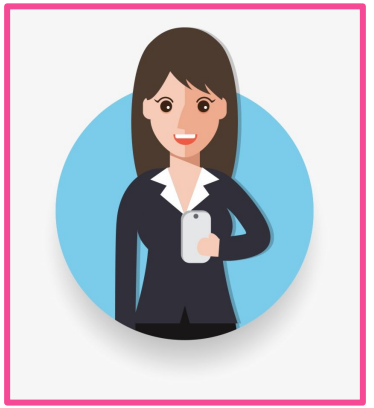
Advantages of Using Classes in Python?

PYTHON CLASS

ADVANTAGES

STATE

Classes can keep a state of an object



THANK YOU!