Software System
Analysis and Design

Lab 9

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Discussion(4)

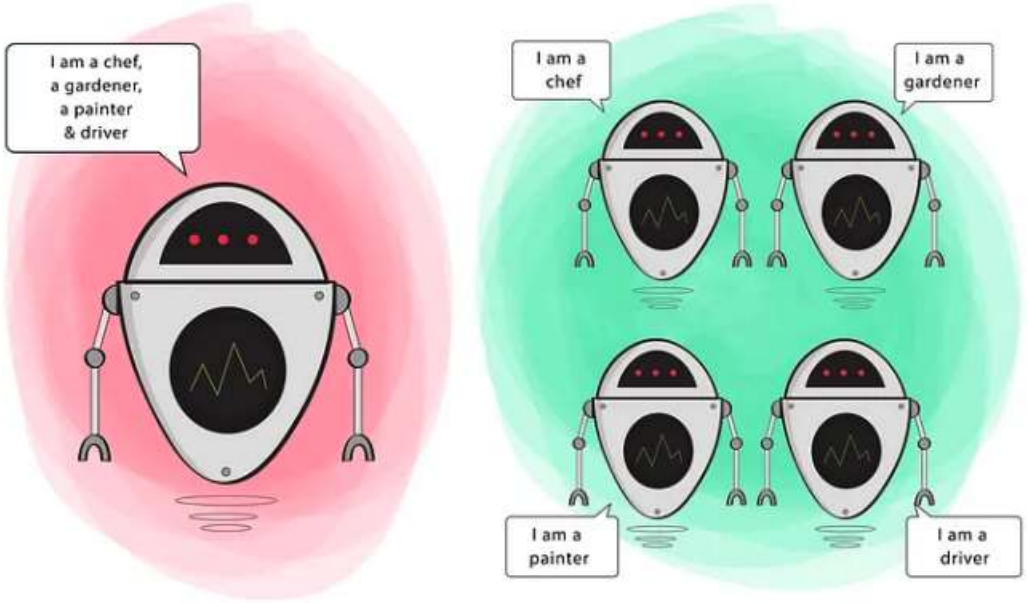
1. What is SOLID?

1. Why do we need SOLID?

1. Who Created them?

S - Single Responsibility (10)

A class should perform only one task

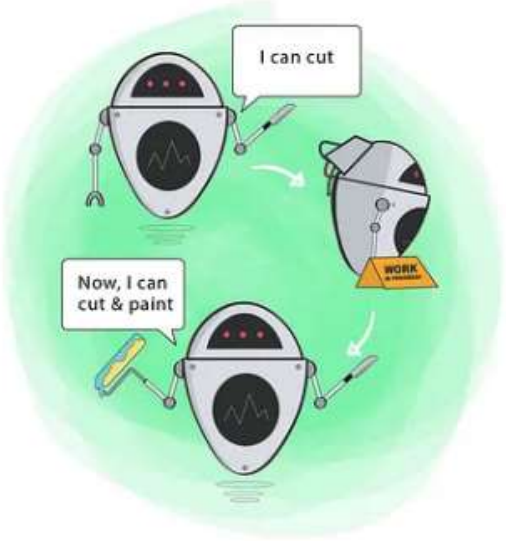


What are the benefits?

Apply SRP

O - Open-closed(15)

Components should be open for extension, but closed for modification



What are the benefits?

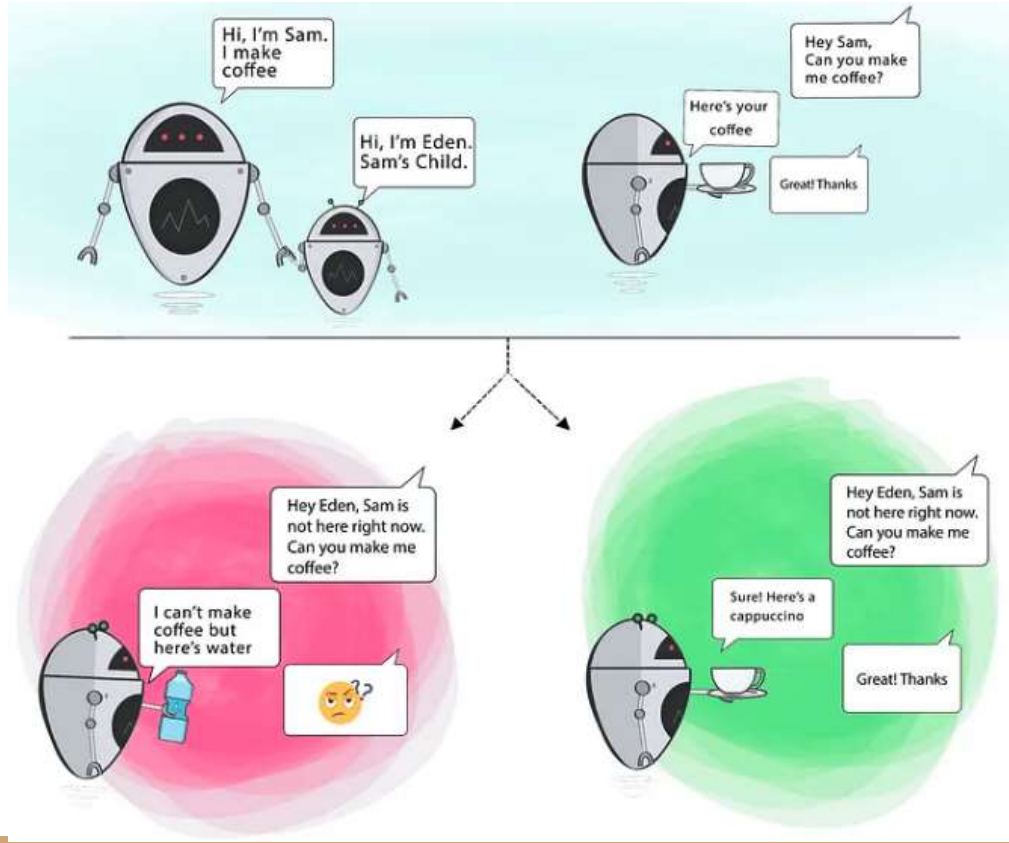
Apply OCP

L - Liskov Substitution(15)

A variable of a given type may be substituted for any subtype of that type

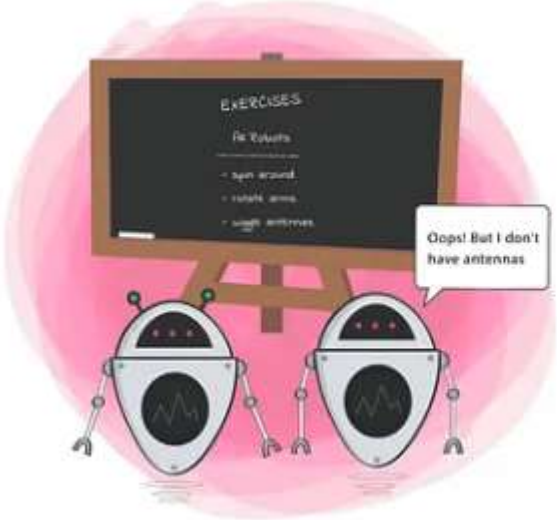
What are the benefits?

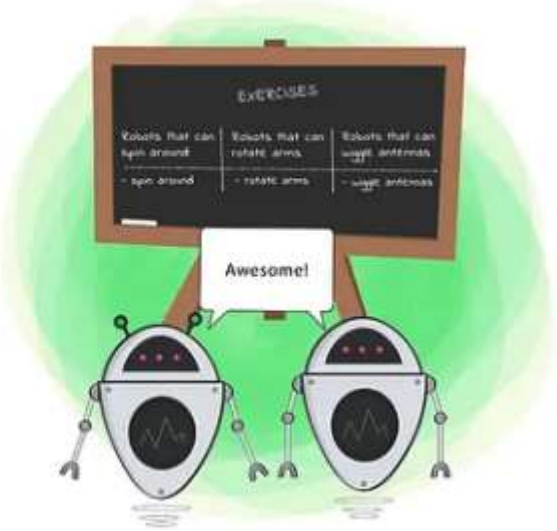
Apply LSP



I - Interface Segregation(15)

Clients should not be forced to depend on methods that they do not use.





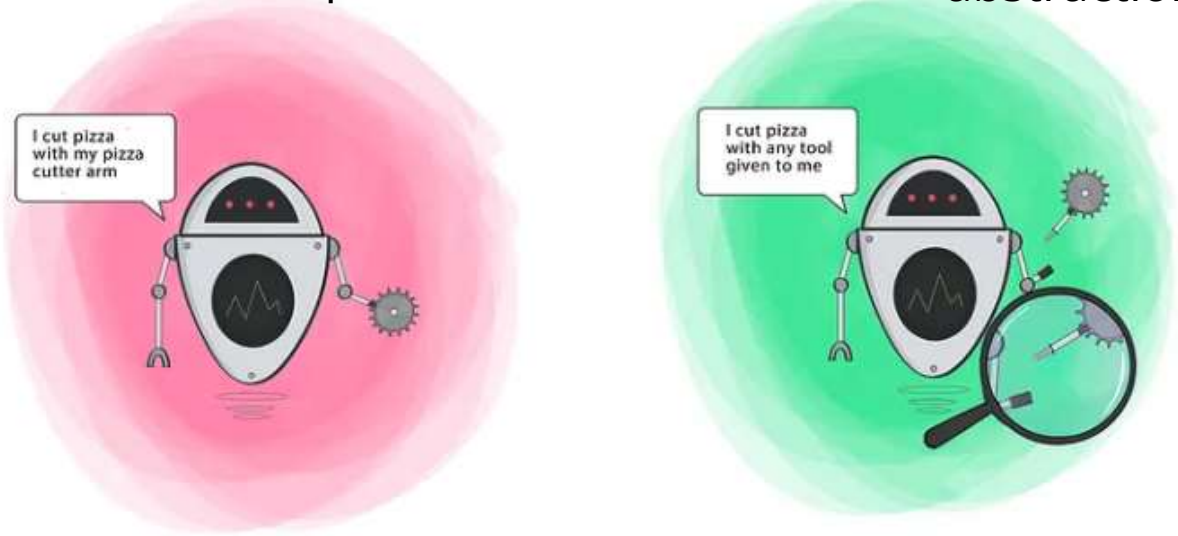
What are the benefits?

Apply ISP

D - Dependency Inversion(15)

Higher-level components shouldn't depend on lower-level components. Both should depend on abstractions

Abstractions shouldn't depend on details: details should depend on abstractions



What are the benefits?

Apply DIP

Identify the SOLID principle involved(10)

1. Base Components should always be replaceable with any Derived Components
2. Components should be rarely changed but easily expanded by other Components
3. Components should build upon abstractions rather than concretions
4. Components should not be in contracts they do/can not fulfil
5. Components should have only one reason for changing

Thank you!