

# 02

## Mocking

### WHAT WILL YOU LEARN?

- What is Mocking
- Mock framework
- Mockito Annotations

### What is mocking

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- mocking is a process used in unit testing when the unit being tested has external dependencies.
- There are three types of mocking framework available
  - Fakes
  - Stubs
  - Mock

### Mock Framework

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There are 2 types of mocking framework are available

- Stub based mock framework (Ex: Easy Mock)
- Byte Manipulation Based mock framework (ex: Power Mock)

What is Mockito?

Mockito is a java based mocking framework used for unit testing of java application

Methods of Mockito –

- mock() –
  - It is used to create mock objects of a given class or interface.
- verify() –
  - It enables stubbing methods. It should be used when we want to mock to return specific values when particular methods are called.
- when() –
  - The **verify()** method is used to check whether some specified methods are called or not.
- spy() -
  - It creates a spy of the real object.
- doThrow() –
  - It is used when to stub a void method to throw an exception. It creates a new exception instance for each method invocation.

## Mockito Annotations

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- @Mock:
  - It is used to mock the objects that helps in minimizing the repetitive mock objects.
- @RunWith:
  - It is a class-level annotation.
- @InjectMocks:
  - It marks a field or parameter on which the injection should be performed.
  - It allows shorthand mock and spy injections and minimizes the repetitive mocks and spy injection.
- @Captor:
  - It allows the creation of a field-level argument captor.
  - It is used with the Mockito's verify() method to get the values passed when a method is called.
- @Spy
  - It allows the creation of partially mock objects.