Mockito

Topics

- What is & Why Mockito?
- How to use mocking?
- Mockito APIs

What is & Why Mockito?

What is & Why Mockito?

- Mockito is a mocking framework
  - It lets you write tests with clean & simple API
  - Mockito tests are very readable and they produce clean verification errors
- Use Mockito to get ”smart” fake implementations of classes or interfaces out of your reach
- “We decided during the main conference that we should use JUnit 4 and Mockito because we think they are the future of TDD and mocking in Java"
  - - Dan North, the originator of BDD

How to use Mocking?

Classical 3A Test

```
@Test
public void test() throws Exception {
  // Arrange

  // Act

  // Assert

}
```

Classical 3A Test without Dependency

```
@Test
public void test() throws Exception {
    // Arrange
    Testee testee = new Testee();

    // Act
    actualResult = testee.doSomething();

    // Assert
    assertTrue(expectedResult, actualResult);
}
```

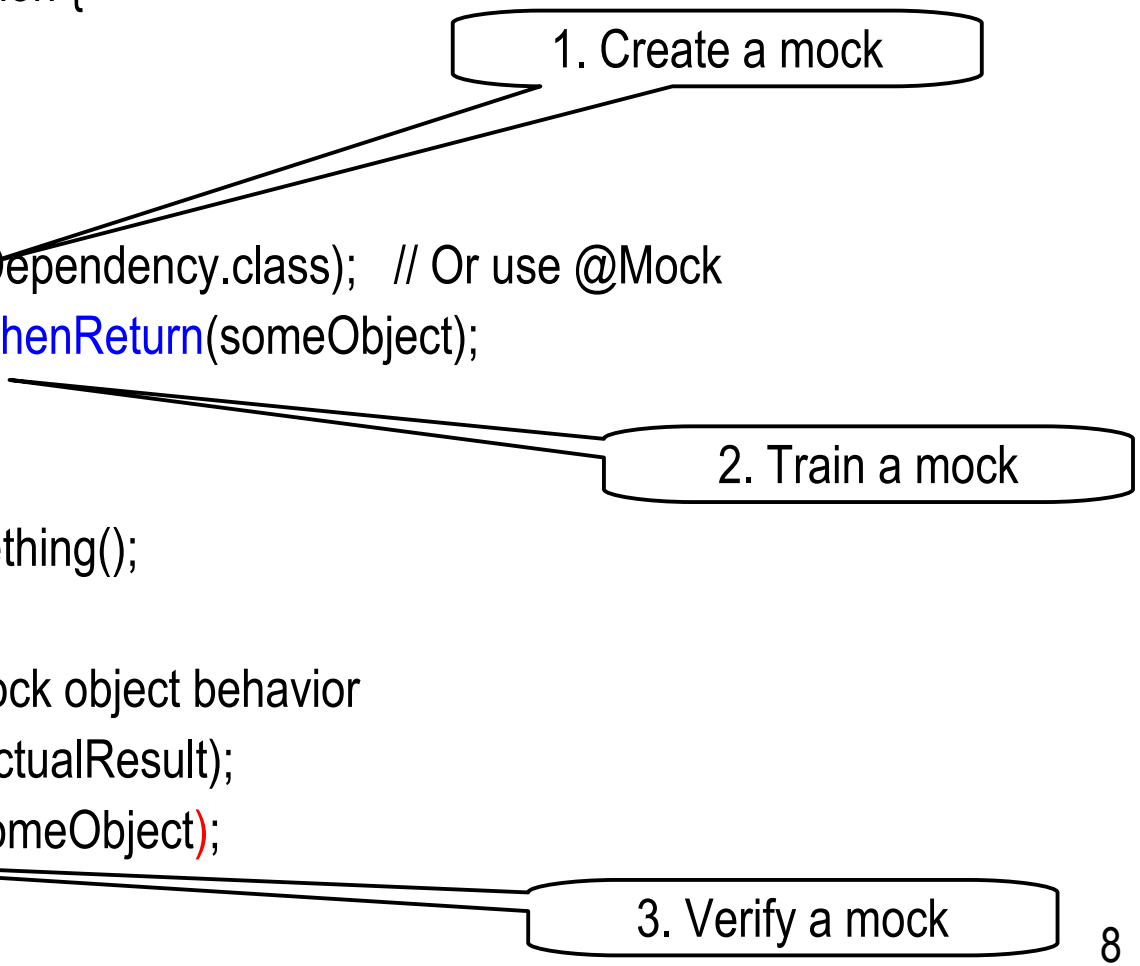
3A Test with a Dependency (using Mockito)

```
@Test
public void test() throws Exception {

  // Arrange, prepare behaviour
  Testee testee = new Testee();
  Dependency aMock = mock(Dependency.class);   // Or use @Mock
  when(aMock.someMethod()).thenReturn(someObject);

  // Act
  actualResult = testee.doSomething();

  // Assert – verify result and mock object behavior
  assertTrue(expectedResult, actualResult);
  verify(aMock).someMethod(someObject);
}
```



How to Use Mockito?

Mocking API

- For creating Mock object
  - @Mock or mock(Depedency.class)
  - @Spy
- For injecting Mock object to the target class
  - @InjectMocks
- For initializing Mock objects
  - @RunWith(MockitoJUnitRunner.class) or
  - MockitoAnnotations.initMocks(this);
- For training Mocks
  - when(methodCall).thenReturn(returnValue);
  - when(methodCall).thenThrow(Throwable)

Example

```
@RunWith(MockitoJUnitRunner.class)  // Not needed because ockitoAnnotations.initMocks(this) below
public class PersonTest {

        @Mock
        private Address address;

        @InjectMocks
        private Person person;

        @Before
        public void setup() throws Exception {
                person = new Person();
                MockitoAnnotations.initMocks(this);
        }

        @Test public void
        should_return_complete_info_including_address() throws Exception {
                when(address.retrieveAddressInfo()).thenReturn("USA Cambridge");
                assertThat(person.retrievePersonInfo(), is("Sang Shin USA Cambridge"));
                verify(address, times(1)).retrieveAddressInfo();
        }
}
```

Thank You!