

Mockito Practice Assignment: 22nd January 2024

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Mockito Example Test

Mocktio-example [JFSD_Projects master]

- src/main/java
 - com.mockito
 - TodoBusinessImpl.java
 - TodoService1.java
 - src/main/resources

src/test/java

 - com.mockito
 - TodoBusinessImplStubTest.java
 - TodoService.java
 - TodoServiceStub.java
 - src/test/resources

JRE System Library [JavaSE-1.8]

Maven Dependencies

src

target

pom.xml

<https://maven.apache.org/xsd/maven-4.0.0.xsd> (xsi:schemaLocation)

```
<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://maven.apache.org/xsd/maven-4.0.0.xsd https://maven.apache.org/xsd/maven-4.0.0.xsd">
  <modelVersion>4.0.0</modelVersion>
  <groupId>com.mockito</groupId>
  <artifactId>Mocktio-example</artifactId>
  <version>0.0.1-SNAPSHOT</version>
  <name>Mocktio-example</name>
  <properties>
    <maven.compiler.target>21</maven.compiler.target>
    <maven.compiler.source>21</maven.compiler.source>
    <junit.jupiter.version>5.10.0</junit.jupiter.version>
  </properties>
  <dependencies>
    <dependency>
      <groupId>org.junit.jupiter</groupId>
      <artifactId>junit-jupiter-engine</artifactId>
      <version>${junit.jupiter.version}</version>
      <scope>test</scope>
    </dependency>
    <dependency>
      <groupId>org.junit.jupiter</groupId>
      <artifactId>junit-jupiter-api</artifactId>
      <version>${junit.jupiter.version}</version>
      <scope>test</scope>
    </dependency>
    <dependency>
      <groupId>org.mockito</groupId>
      <artifactId>mockito-junit-jupiter</artifactId>
      <version>4.6.1</version>
      <scope>test</scope>
    </dependency>
  </dependencies>
</project>
```

TodoBusinessImpl.java

```
1 package com.mockito;
2
3 import java.util.ArrayList;
4
5
6
7
8 public class TodoBusinessImpl {
9
10     private TodoService1 todoService;
11
12     TodoBusinessImpl(TodoService1 todoService) {
13         this.todoService = todoService;
14     }
15
16     public List<String> retrieveTodosRelatedToSpring(String user) {
17         List<String> filteredTodos = new ArrayList<String>();
18         List<String> allTodos = todoService.retrieveTodos(user);
19         for (String todo:allTodos) {
20             if (todo.contains("Spring")) {
21                 filteredTodos.add(todo);
22             }
23         }
24         return filteredTodos;
25     }
26
27     public void deleteTodosNotRelatedToSpring(String user) {
28         List<String> allTodos = todoService.retrieveTodos(user);
29         for (String todo:allTodos) {
30             if (!todo.contains("Spring")) {
31                 todoService.deleteTodo(todo);
32             }
33         }
34     }
35 }
36
```

TodoService1.java

```
1 package com.mockito;
2
3 import java.util.List;
4
5 public interface TodoService1 {
6
7     List<String> retrieveTodos(String user);
8
9     void deleteTodo(String todo);
10
11 }
12
```

TodoServiceStub.java

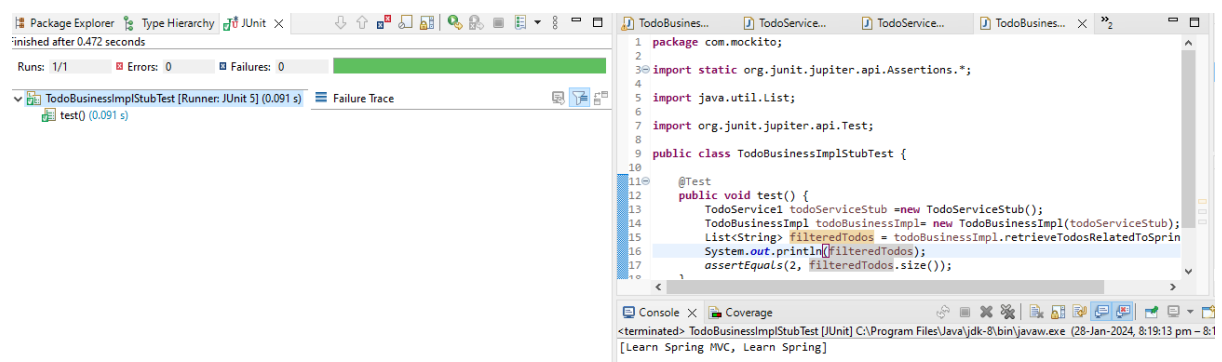
```
1 package com.mockito;
2
3 import java.util.Arrays;
4
5
6 public class TodoServiceStub implements TodoService1{
7
8     @Override
9     public List<String> retrieveTodos(String user) {
10
11         return Arrays.asList("Learn Spring MVC", "Learn Spring", "Learn to Dance");
12     }
13
14     @Override
15     public void deleteTodo(String todo) {
16         // TODO Auto-generated method stub
17     }
18 }
19
```

TodoBusinessImpl.java

```
1 package com.mockito;
2
3 import static org.junit.jupiter.api.Assertions.*;
4
5 import java.util.List;
6
7 import org.junit.jupiter.api.Test;
8
9 public class TodoBusinessImplStubTest {
10
11     @Test
12     public void test() {
13         TodoService1 todoServiceStub = new TodoServiceStub();
14         TodoBusinessImpl todoBusinessImpl = new TodoBusinessImpl(todoServiceStub);
15         List<String> filteredTodos = todoBusinessImpl.retrieveTodosRelatedToSpring("Dummy");
16         System.out.println(filteredTodos);
17         assertEquals(2, filteredTodos.size());
18     }
19 }
20
21
```

Result

Failure :0



Failure:1 when assertsEquals 3

The screenshot displays an IDE with a JUnit test failure. The console output shows an `AssertionError` with the message "expected: <3> but was: <2>". The failure trace indicates the error occurred in `test()` at line 17. The code snippet shows a test method that calls `retrieveTodosRe` and asserts the size of `filteredTodos` is 3. A red circle highlights the assertion line.

```
package com.mockito;
import static org.junit.jupiter.api.Assertions.*;
import java.util.List;
import org.junit.jupiter.api.Test;

public class TodoBusinessImplStubTest {

    @Test
    public void test() {
        TodoService1 todoServiceStub = new TodoServiceStub();
        TodoBusinessImpl todoBusinessImpl = new TodoBusinessImpl(todoS
        List<String> filteredTodos = todoBusinessImpl.retrieveTodosRe
        System.out.println(filteredTodos);
        assertEquals(3, filteredTodos.size());
    }
}
```

Failure Trace:

- org.opentest4j.AssertionFailedError: expected: <3> but was: <2>
- at org.junit.jupiter.api.AssertionFailureBuilder.build(Asser
- at com.mockito.TodoBusinessImplStubTest.test(TodoBus
- at java.util.ArrayList.forEach(ArrayList.java:1259)
- at java.util.ArrayList.forEach(ArrayList.java:1259)

Console:

```
<terminated> TodoBusinessImplStubTest [JUnit] C:\Program Files\Java\jdk-8\bin\javaw.exe (28-Jar
[Learn Spring MVC, Learn Spring]
```