



# MOCKITO

Daniel Evaristo Escalera Bonilla

## Introduction

Mockito is a popular Java framework used for creating mock objects in unit tests. It is designed to help developers write clean, maintainable, and reliable tests by allowing them to simulate the behavior of complex objects and dependencies.

## Implementation

An automated resume maker is being implemented on a company, their cloud functions know how to handle the user inputs to create the necessary results so an interface was created to use those functions:

```
package com.curso.v0;

import java.util.Date;

public interface ResumeMakerCloud {

    String makeIdentifier(String name, String lastName, String birthDate);

    boolean addSkill(String identifier, String skill);
}
```

A resume maker uses this functions in a developing program and it needs to test if the implementation works:

```
package com.curso.v0;

public class ResumeMaker {

    ResumeMakerCloud rmc;

    public ResumeMaker(ResumeMakerCloud rmc) {
        this.rmc = rmc;
    }

    String makeIdentifier(String name, String lastName, String birthDate) {
        return rmc.makeIdentifier(name, lastName, birthDate);
    };

    boolean addSkill(String identifier, String skill) {
        return rmc.addSkill(identifier, skill);
    };

}
```

To test this class we use mockito to mock an instance of an implementation of the interface and define the test parameters and expected results, we use this simulation to test the methods of the class and verify that the expected result can be achieved with these methods.

```

class ResumeMakerTest {

    @Mock
    ResumeMakerCloud rmc;

    ResumeMaker rm;

    @BeforeEach
    public void setUp() {
        rmc = mock(ResumeMakerCloud.class);
        rm = new ResumeMaker(rmc);
    }

    @Test
    void makeIdentifierTest() {
        when(rmc.makeIdentifier("Daniel Evaristo", "Escalera Bonilla", "2004-02-08")).thenReturn("DEEB080203");

        String result = rm.makeIdentifier("Daniel Evaristo", "Escalera Bonilla", "2004-02-08");

        assertEquals("DEEB080203", result);

        verify(rmc).makeIdentifier("Daniel Evaristo", "Escalera Bonilla", "2004-02-08");
    }

    @Test
    void addSkill() {
        when(rmc.addSkill("FE001", "Angular")).thenReturn(true);

        boolean result = rm.addSkill("FE001", "Angular");

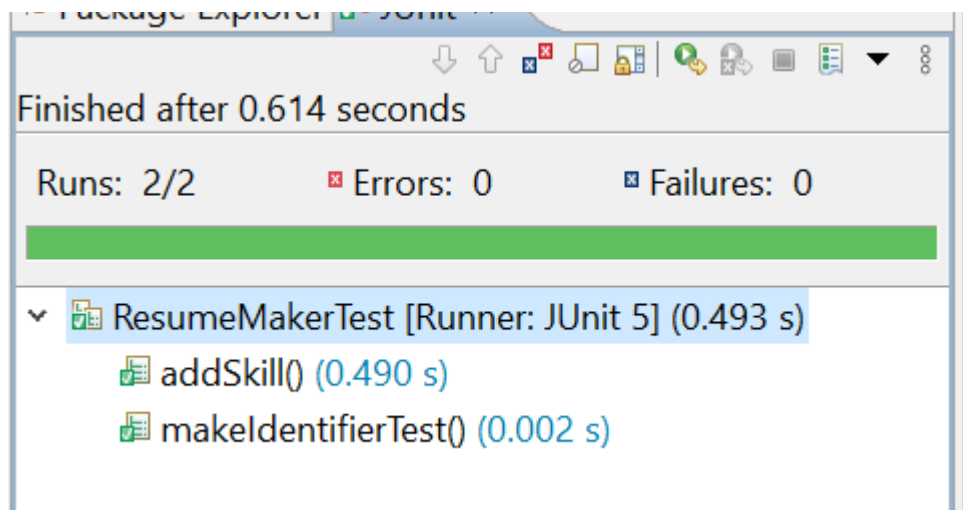
        assertEquals(true, result);

        verify(rmc).addSkill("FE001", "Angular");
    }
}

```

## Results

The object can be tested and it can be proven that it works as expected:



Codigos - EmployeeManagementMockito/src/test/java/com/curso/v0/ResumeMakerTest.java - Eclipse IDE

File Edit Source Refactor Source Navigate Search Project Run Window Help

Package Explorer JUnit x

Finished after 0.975 seconds

Runs: 2/2 Errors: 0 Failures: 0

> ResumeMakerTest [Runner: JUnit 5] (0.800 s)

Failure Trace

| Element                   | Covera... | Covered Ins... | Missed Instr... | Total Instruc... |
|---------------------------|-----------|----------------|-----------------|------------------|
| EmployeeManagementMockito | 100.0 %   | 96             | 0               | 96               |
| > src/main/java           | 100.0 %   | 19             | 0               | 19               |
| > src/test/java           | 100.0 %   | 77             | 0               | 77               |

```
32
33     assertEquals("DEEB080203", result);
34
35     verify(rmc).makeIdentifier("Daniel Evaristo", "Escalera Bonilla", "2004-02-08");
36
37 }
38
39 @Test
40 void addSkill() {
41     when(rmc.addSkill("FE001", "Angular")).thenReturn(true);
42
43     boolean result = rm.addSkill("FE001", "Angular");
44
45     assertEquals(true, result);
46
47     verify(rmc).addSkill("FE001", "Angular");
48
49 }
50
51 }
52
```