

TED UNIVERSITY

Faculty of Engineering

Department of Computer Engineering

SENG453/SENG311

Software Quality Assurance

Assignment 1 Report

JUnit Test Programming

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1. **UML class diagram**

Below is the UML diagram representing the project structure:



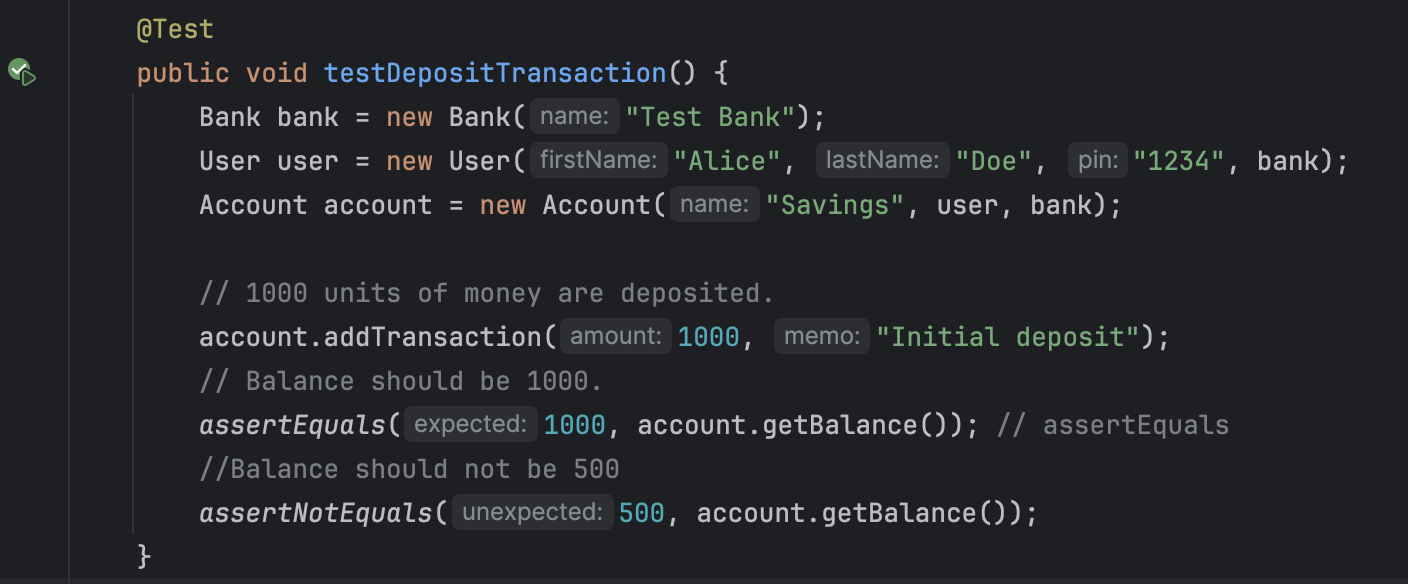
1. **Assertion statements and outputs**

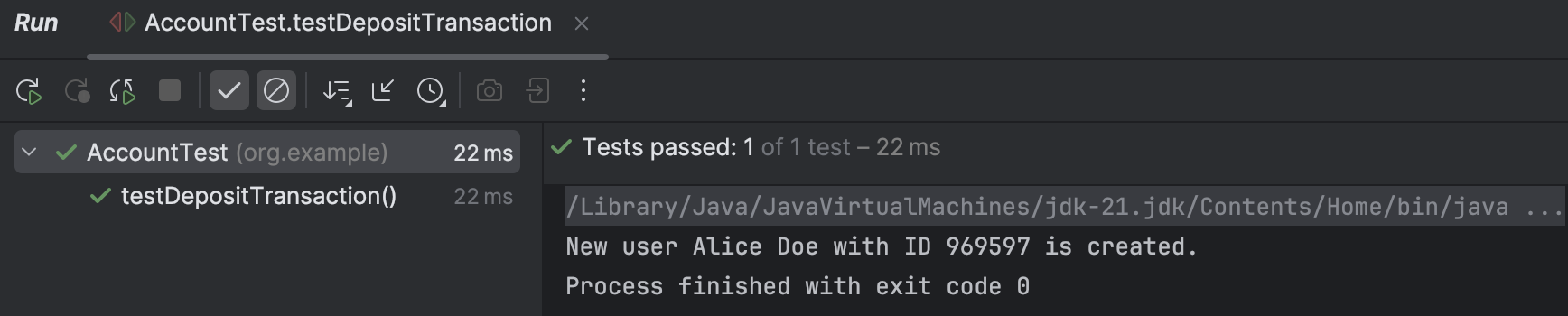
JUnit Assertions is used to compare the results obtained at the end of the test scenario we have written with the expected results. If the expected result from a test scenario is the same as the result obtained, the test is considered successful.

Below are some assertion test cases used in the project:

* assertEquals/assertNotEquals:

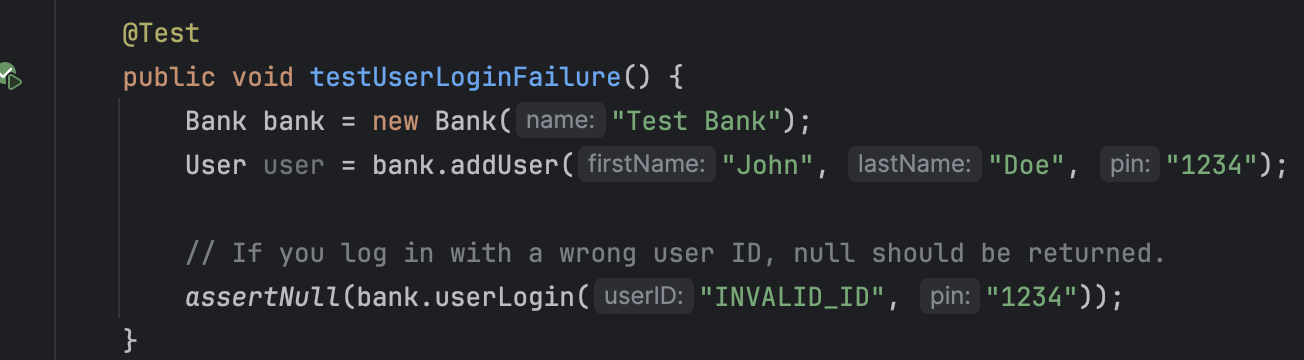
Checks if values are equal or not

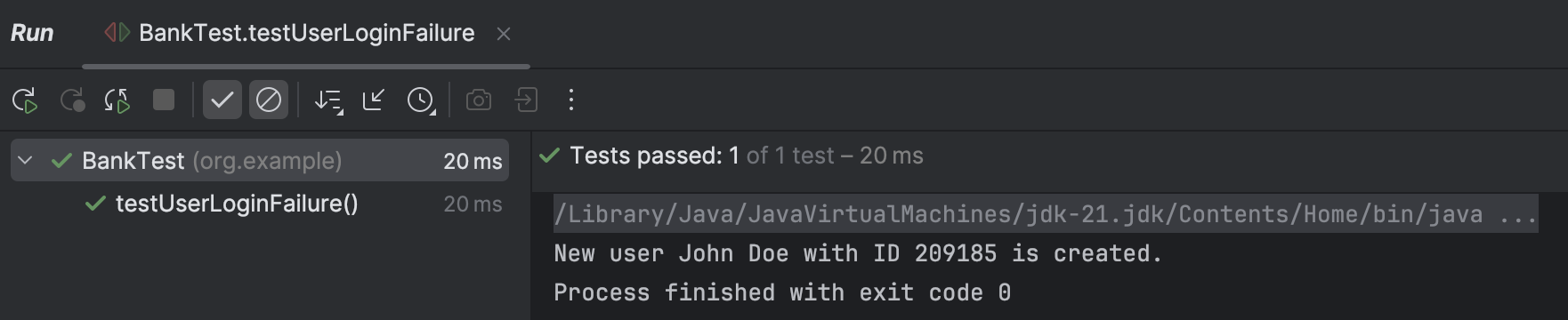




* assertNull:

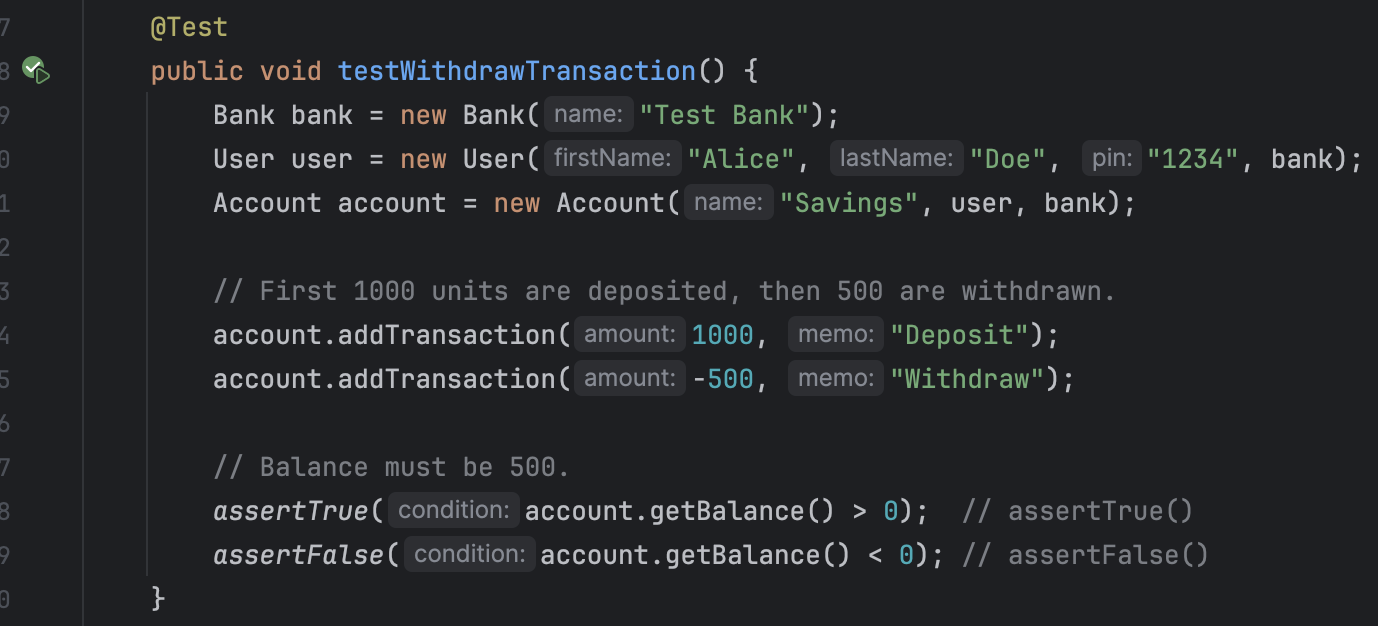
Confirms if a value is null.

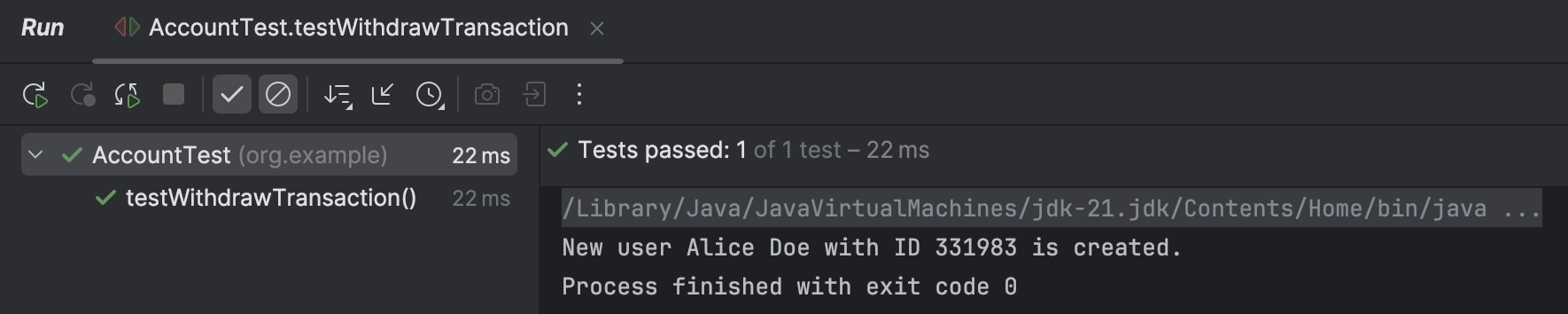




* assertTrue/assertFalse:

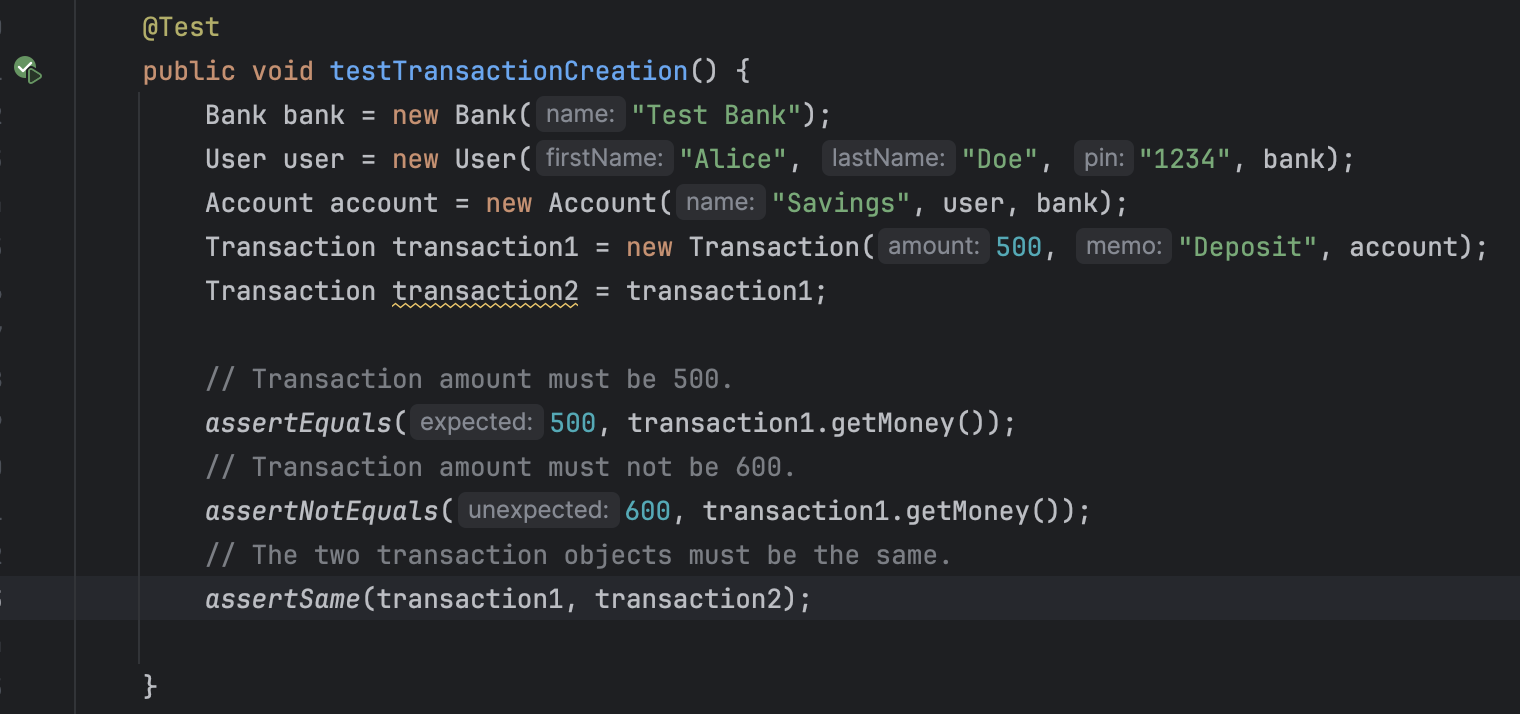
Ensures boolean expressions return expected results.

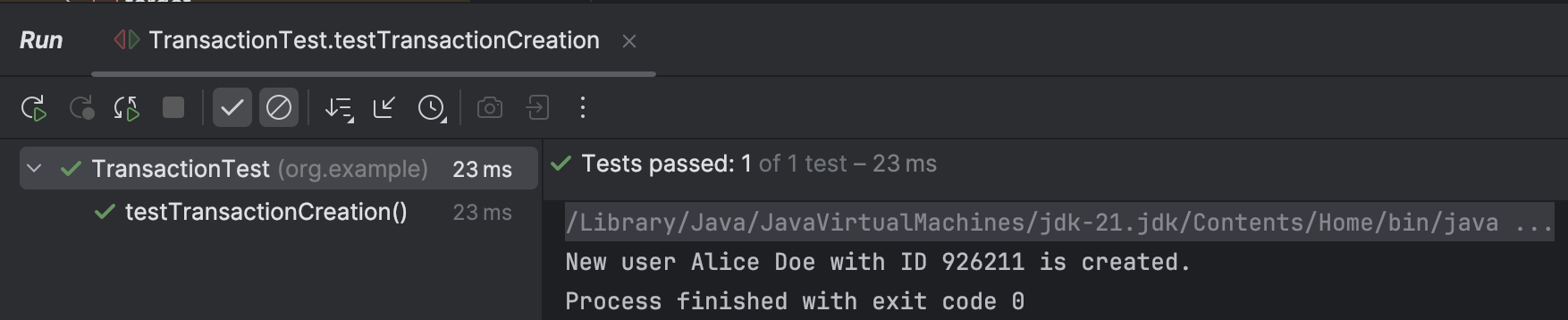


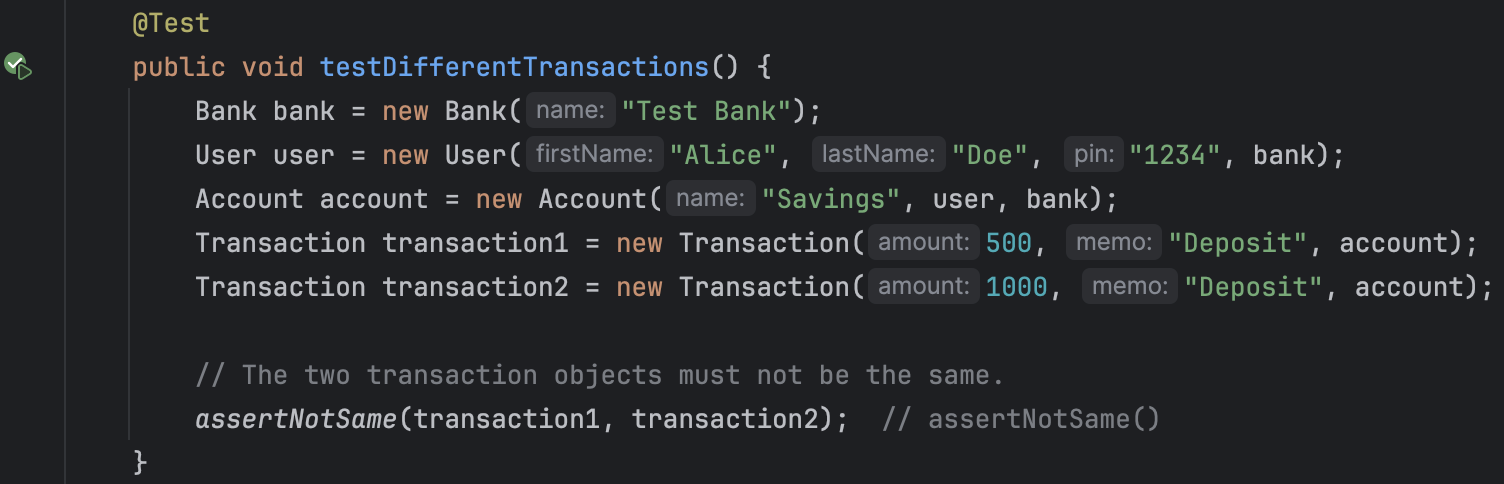


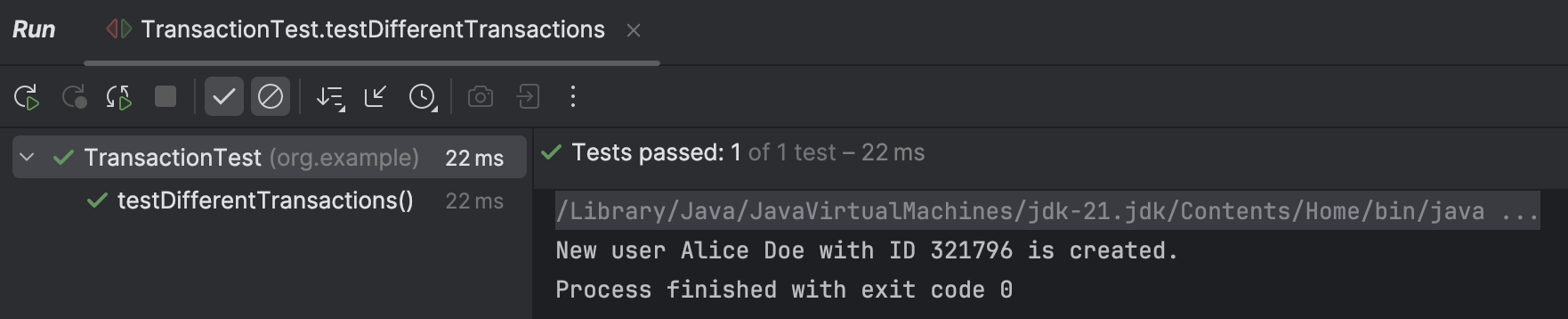
* assertSame/assertNotSame:

Verifies if two references point to the same object.





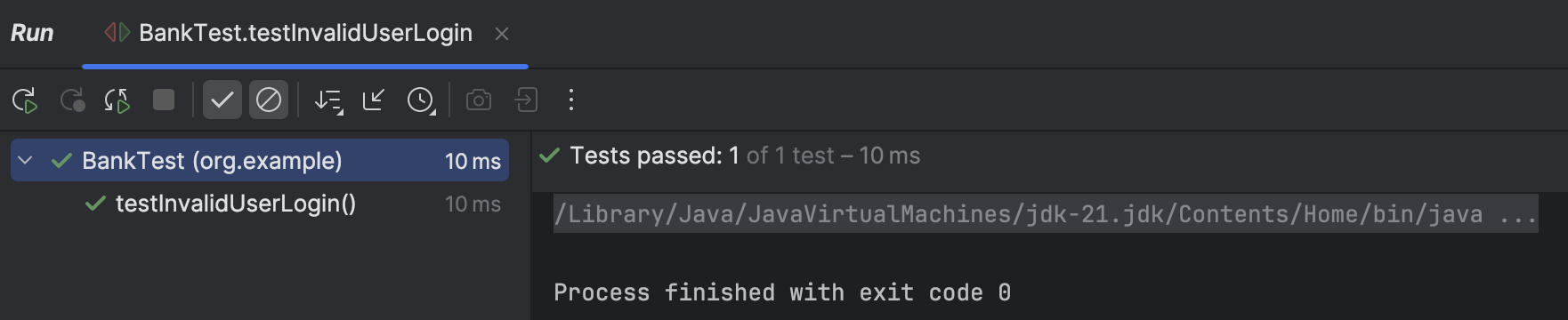




* assertThrows:

Confirms if a method throws an expected exception.



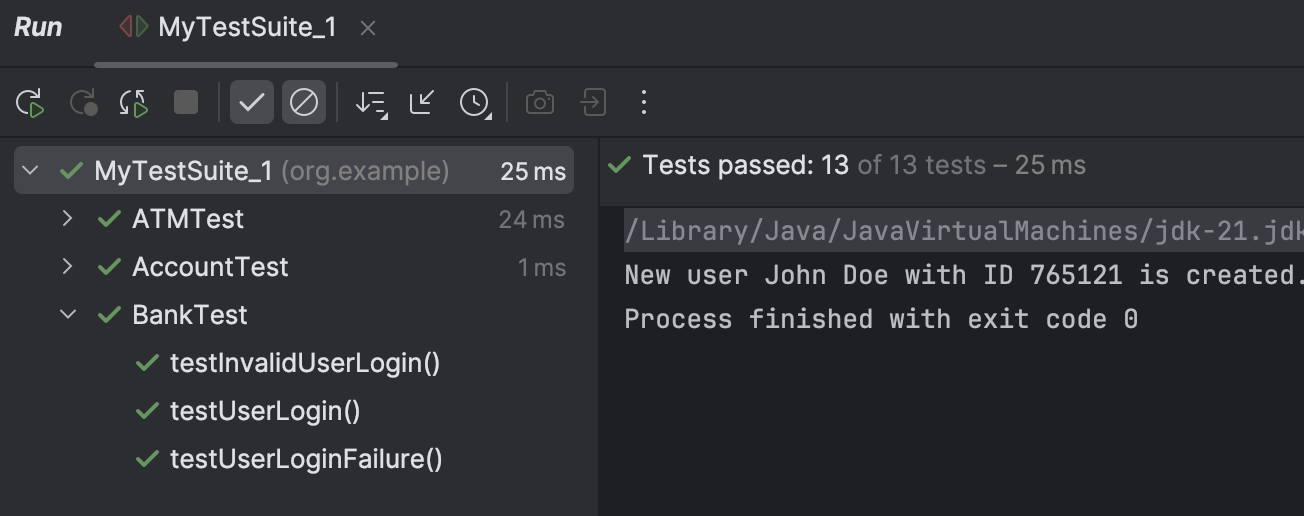


1. **Test suits and outputs**Group multiple related test cases into suites for organized testing.

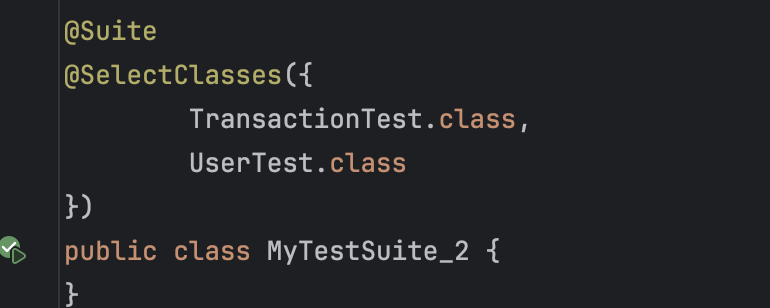
The project includes two test suites:

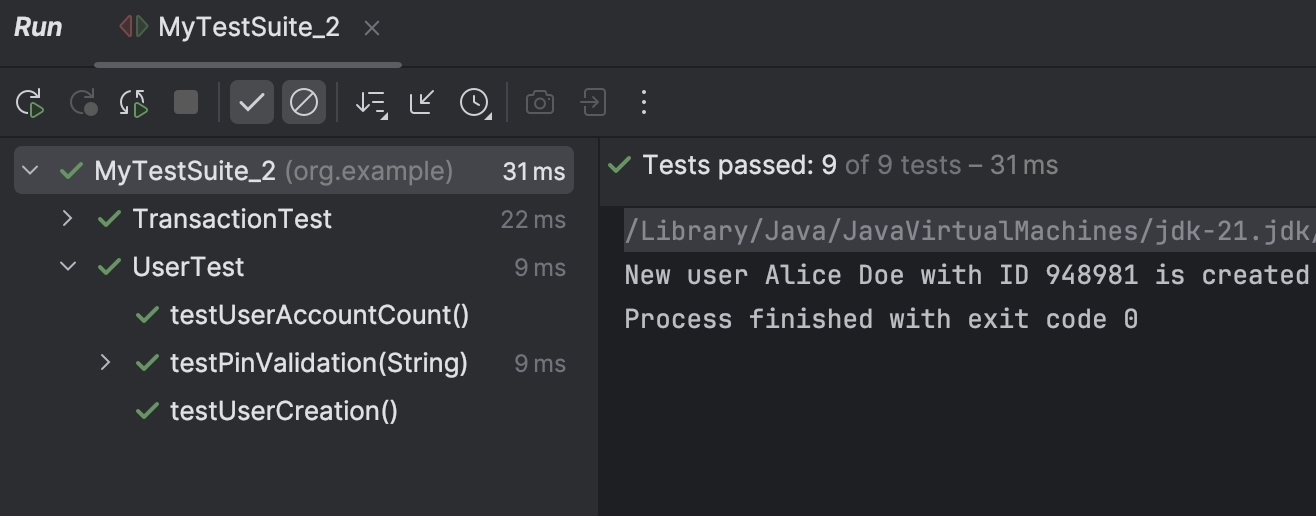
* MyTestSuite\_1:





* MyTestSuite\_2:

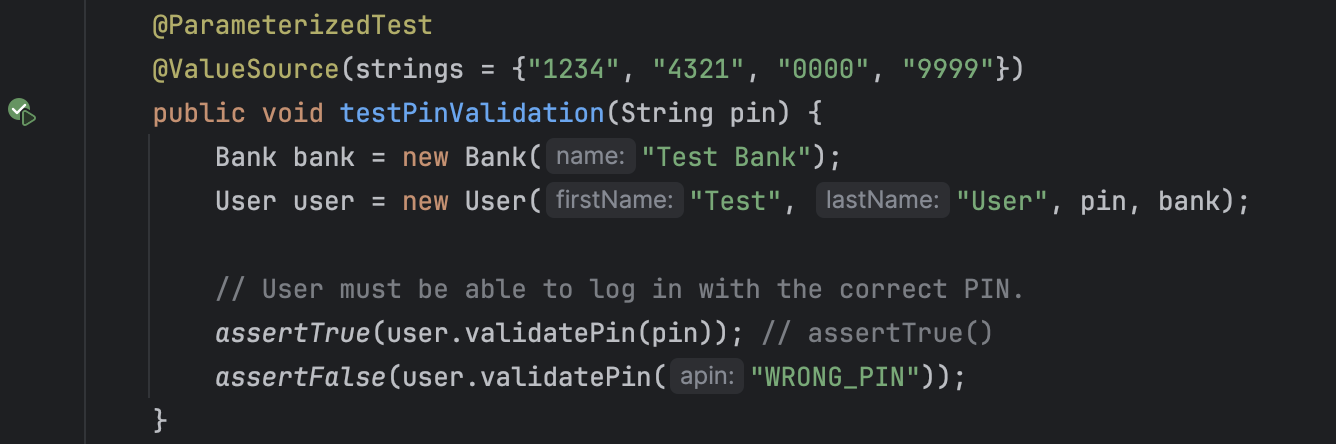


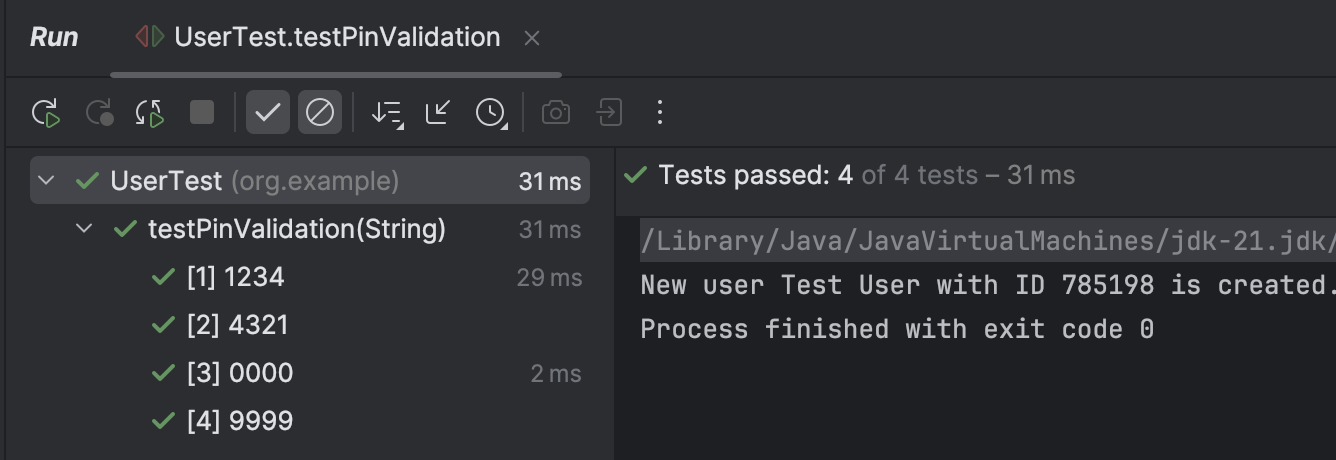


1. **Parameterized test and outputs**

 A test that runs multiple times with different input values.

 Ensures methods work for various cases without writing separate tests.

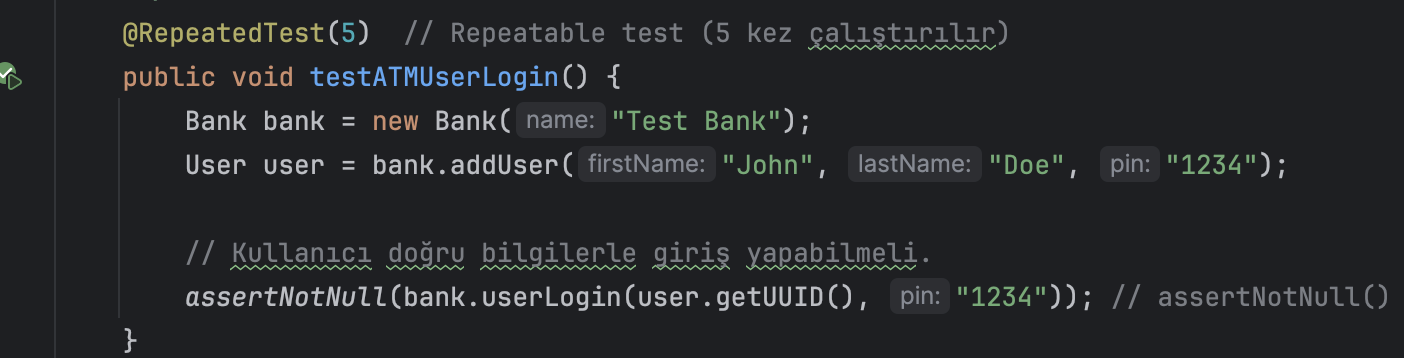


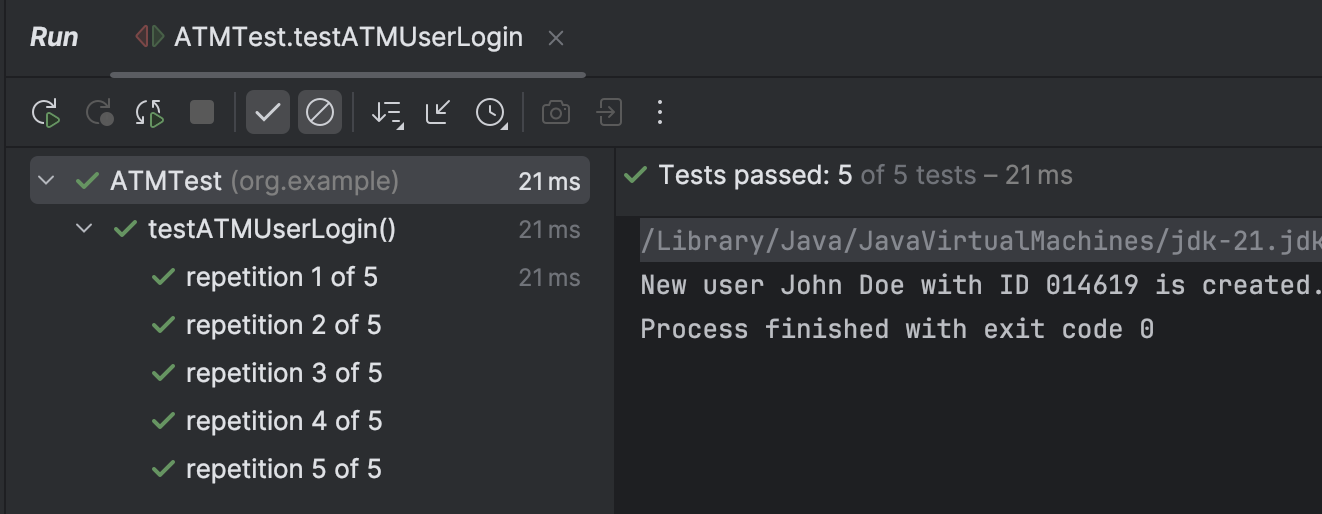


1. **Repeatable test and outputs**

 A test that always gives the same output when executed under the same conditions.

 Ensures consistency and reliability in testing.





**Conclusion**

This report presents the **UML class diagram**, **test cases** and **test results** of the project. It includes **assertion statements, parameterized tests, repeatable tests, and test suite executions**. The testing process confirms that all components of the ATM system function correctly according to the specified requirements.