



Lab 8 - unit testing

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Instructions

Learning outcome:

By completing this exercise, learners will be able to write unit tests in Python using the unittest framework, apply the setUp method for test initialization, validate method behaviors, and ensure proper exception handling for edge cases.

Instruction:

- Complete class examples.
- Complete lab exercise.

Lab exercise description:

Given the class BankAccount, in file 'bankaccount.py', that allows users to deposit money, withdraw money, and check their balance. Within the class, if the user tries to withdraw more money than is available in the account, it should raise an exception.

Write a unit test file in Python using unittest to test the BankAccount class in bankaccount.py, which allows users to deposit money, withdraw money, and check their balance. The class should raise an appropriate exception (e.g., ValueError) if the user tries to withdraw more than the available balance.

Your unit test should include the following:

1. Use the setUp method from unittest.TestCase to create a default BankAccount instance before each test.
2. Test that the account is initialized with the correct balance.
3. Test that a deposit operation correctly adds the specified amount to the balance.
4. Test that a withdrawal operation correctly subtracts the specified amount from the balance.

5. Test that attempting to withdraw more than the available balance raises the appropriate exception.
6. Test a sequence of deposits and withdrawals to ensure correct balance calculations.

Submission:

- Attach the Python testing file.
- Copy and paste the GitHub repository URL for this lab.

Grading:

- Class examples: 40%
- Lab exercise: 60%

Due on Sep 29, 2024 11:59 PM

Available until Sep 29, 2024 11:59 PM. **Access restricted after availability ends.**

Attachments

 [bankaccount.py](#) (612 Bytes)

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