

Study Prompts

Console app

The console app has two simple bank account programmes where one can display one's bank balance as well as debit and deposit an amount into it. One account is dodgy (unsecure) and one is secure.

The person's bank account balance is outputted, as well as comments on how someone can hack/change their balance in the unsecure one, and comments on how they cannot do that in the secure one.

DodgyBankAccount

AccountNumber, **AccountBalance** and **RewardAmount** are all public, so people can just change these values. In fact, they can just change their account balance to any figure they wish to by setting its value directly.

Differences

- **SecureBankAccount** has **_accountNumber** as read-only so it cannot be changed.
- **REWARD_AMOUNT** is a constant and is private so is also secure.
- **_accountBalance** is private and can only be changed by calling methods **DepositAmount()** and **DebitAmount()**.
- **AddReward()** is a private method so it cannot be called outside **SecureBankAccount**.
- The word "display" in **DisplayAccountBalanceDetails()** gives the idea that the balance can only be displayed and not changed.

Extension Challenge

See uploaded code. (p/s: The weather emojis are displayed as "??")

A note: In **WeatherReporter.cs**, the method **PrintWeatherReport()** does not follow the Single Responsibility Principle in that it converts the temperature from Celsius into Fahrenheit there. This calculation should have been done as a separate function and hence would have been easier to test as well.