Umm Al-Qura university 2019/2020
Computer & Information Systems college
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Lab 04: Object Oriented programming

Objectives:

- Building Blocks
- Learn how to define your own classes, with instance and class data members and instance methods.

I. Exercise 1 :

Write a class **Name** and a Test class **NameTest** to test each constructor and method in the Name class. Each Name object should have three instance variables: String first, middle, last;

Include two constructors:

- public **Name(String f, String m, String lt)** that initializes the three instance variables.
- public **Name(String wholeName)** that is split to initialize the three instance variables.

Include the methods:

- public String **intials()** returns a String containing the three initials of the name
- public String **toString()** returns a String containing the first name, middle initial and last name.
- public String **toFullString()** returns a String containing the first, middle and last names.
- public String **toLastString()** returns a String containing the last name, a comma, and the first name.
- public String **toUpperCase()** returns a String containing the full name in upper case letters.

II. Exercise 2 :

Write a class **BankAccount** and a test class, **BankAccountTest**, that creates at least two BankAccount objects and fully tests all methods.

A BankAccount has instance variables: double beginBalance, double balance, and String owner.

Include two constructors:

- public **BankAccount(String n, double begin)** initializes the name and beginBalance. balance is initialized to zero.

- public **BankAccount(String n)** initializes the name. Other data members are initialized to zero.

Include these methods:

- public double **getBalance():** returns the balance.
- public void **deposit(double amount)** adds amount onto the balance.
- Public void **withdraw(double amount)** subtracts amount from the balance.
- public String **toString()** returns a String containing the name and balance.