

## C201: Project Guidelines

### Using Python to develop a simple banking system (15 Marks).

The students are required to use Python to develop a simple banking system according to the following guidelines:

- The system uses a CSV (Comma-Separated Values) file to store customers' data. This data file contains the following information about each customer:
  1. Account number
  2. Full name
  3. Current balance.
- When the system starts, it should show a welcome screen, and ask for the account number.
- If a user enters a wrong account number, the system should print an error message and ask the user to try again, and enter a valid account number.
- If a user enters the right account number, the system should print a welcome screen (showing user's full name), and print the menu of options.
- The menu of options should include the following tasks:
  1. **Show current balance:** show a message of the current account balance to the user.
  2. **Make a deposit:** The system should ask about the amount to deposit, make sure that the amount is a positive number, and print a message showing that the deposit was successful and show the new account balance after deposit.
  3. **Make withdrawal:** The system should ask about the amount to withdraw, make sure that the amount is a positive number, and make sure there is enough balance available for withdrawal (balance cannot be negative). The system should show a message showing whether the operation was successful or not, and show the current balance after withdrawal.
  4. **Exit the system:** Print a good-by message (showing customer's full name) and exit.
- **BONUS TASK: Update the data in the data file to reflect any deposit or withdrawal operations on the current balance when the user selects to exit the system.**
- The system should keep showing the menu to the user until he/she selects the Exit option.

- The code should include enough documentation (using comments ‘#’ ), to explain the purpose of the variables, function or hard-to-understand parts of the code.

### **Sample data file**

**This is a sample CSV data file. Students are required to create their own data files (with at least 5 records) and submit them with the source files:**

Account Number,Full name,Current balance

1,Ali Ahmed Mohamed,20000.0

2,Khalid Waleed Tamer,30000.0

3,Norhan Said Mussa,25000.0

4,Kamel Yasseen Hamid,5000.0

5,Hany Ahmed Mabrook,35000.0

6,Sama Mohamed Kamel,50000.0

7,Omar Said Abdullah,12000.0

### **Submission Guidelines:**

- Students can work individually or in groups (2-4 students per group)
- Students should submit the following 3 files on Blackboard:
  - a. Python source file (.py file)
  - b. The CSV data file.
  - c. At least 2 screen shots showing the output of the program when it's run.
- The first line of the source file should contain the name of student (or students if working in a group) as a comment (using #).
- Submission deadline: Monday 4 January 2021, 10:00PM