



## Introduction to Programming

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### Assignment 6

#### Objective:

To build a Python-based bank account management system that allows users to create accounts, make deposits, withdraw funds, and check their account balance.

#### Problem Statement:

Develop a Python program that simulates a bank account system with the following features:

1. **Account Creation:**
  - Allow users to create a bank account by entering their name.
  - Generate a unique 6-digit account number for each new account.
  - Require a minimum deposit of CAD100 to open a new account.
  - Display a success message with the account number upon successful creation.
2. **Deposit Funds:**
  - Enable users to deposit money into their account by providing their account number.
  - Validate the account number and ensure the deposit amount is positive.
  - Display a confirmation message showing the deposited amount and updated balance.
3. **Withdraw Funds:**
  - Allow users to withdraw funds from their account by entering their account number.
  - Check if the withdrawal amount is positive and does not exceed the current balance.
  - Display the new balance or an error message if there are insufficient funds.
4. **Display Balance:**
  - Provide an option for users to view their account balance by entering their account number.
  - Display the current balance or an error message if the account number is invalid.
5. **Exit Program:**
  - Allow users to exit the program by choosing the "Exit" option in the menu.

#### Requirements:

- Implement the program using a BankAccount class with attributes and methods to handle account creation, deposits, withdrawals, and balance display.
- Use a list to store multiple BankAccount objects to manage multiple user accounts.
- Ensure account numbers are unique and handle invalid inputs gracefully.

#### Submission:

- **You must submit one .py file answering all questions.**
- **Do your own work!** A mark of 0 will be assigned to the entire assignment for work that is not your own and will be handled as per the **Code of Student Rights and Responsibilities**



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- **All work must be run and validated to ensure that it is free of errors.** Any assignment that is submitted showing errors that prevent it from running will receive a mark of 0.
- **Only apply the knowledge that we have learned in class to this point.** Answers using any syntax or knowledge that we have not covered yet will receive a mark of 0 for that question.
- **Any assignment submitted past the posted due date and time will receive a mark of 0.** Do not wait until the last minute to complete and submit your work.