

Computer Science 220L

Laboratory 12 – Looping, Conditional Statements, Functions, and Class

Question: Bank Account Management

Please create a single Python file named "bank_account_management.py" that contains the complete implementation of the Bank Account Management program. Ensure that the file includes the BankAccount class with the specified attributes and methods. Additionally, implement a user interaction loop allowing users to perform actions on the bank accounts. Include comments to explain the logic and functionality of your code. The program should run successfully, handling user inputs and providing appropriate output messages.

The program should have the following features:

1. A **BankAccount** class with the following attributes:
 - a. `account_number` (a unique identifier for each account)
 - b. `account_holder` (the name of the account holder)
 - c. `balance` (the current balance of the account)
2. Implement the following methods in the `BankAccount` class:`
- a. `__init__(self, account_number, account_holder, balance)`: Initializes a new bank account with the given account number, account holder name, and initial balance.
 - b. `deposit(self, amount)`: Deposits the specified amount into the account.
 - c. `withdraw(self, amount)`: Withdraws the specified amount from the account. Ensure that the account has sufficient balance before allowing the withdrawal.
 - d. `get_balance(self)`: Returns the current balance of the account.
 - e. `__str__(self)`: Returns a string representation of the account in the format "Account Number: XXXX, Account Holder: XXXX, Balance: XXXX".
3. Create a loop that allows the user to interact with the program. In each iteration of the loop, provide the following options:
 - a. Create a new account
 - b. Deposit money into an account
 - c. Withdraw money from an account
 - d. Check the balance of an account
 - e. Quit
4. Depending on the user's choice, perform the corresponding action. Ensure that the user is informed of the result of their actions (e.g., account created successfully, insufficient balance, etc.).