Mid Term

Question # 01:

Create a class called "BankAccount" with the following attributes and methods:

● account\_number (integer)

● balance (double)

● account\_type (string)

● interest\_rate (double)

● deposit(amount): adds the amount to the balance.

● withdraw(amount): subtracts the amount from the balance. You cannot withdraw

more than the current balance.

● add\_interest(): adds interest to the balance based on the interest rate.

● display(): prints out the account number, balance, account type, and interest rate.

Then, create two instances of the BankAccount class, each with its own account number,

balance, account type, and interest rate.

Finally, call the deposit(), withdraw(), add\_interest(), and display() methods on each instance

and confirm that the information is updated and displayed correctly.

## **Code 1:**

**class BankAccount {**

**int accountNumber;**

**double balance;**

**String accountType;**

**double interestRate;**

**BankAccount(this.accountNumber, this.balance, this.accountType, this.interestRate);**

**void deposit(double amount) {**

**balance += amount;**

**print("Deposited \$$amount. New balance: \$$balance");**

**}**

**void withdraw(double amount) {**

**if (amount > balance) {**

**print("Insufficient funds.");**

**} else {**

**balance -= amount;**

**print("Withdrew \$$amount. New balance: \$$balance");**

**}**

**}**

**void addInterest() {**

**double interest = balance \* (interestRate / 100);**

**balance += interest;**

**print("Added interest: \$$interest. New balance: \$$balance");**

**}**

**void display() {**

**print("Account Number: $accountNumber");**

**print("Balance: $balance");**

**print("Account Type: $accountType");**

**print("Interest Rate: $interestRate");**

**}**

**}**

**void main() {**

**var account1 = BankAccount(123456, 1000.0, "Savings", 5.0);**

**var account2 = BankAccount(987654, 5000.0, "Checking", 3.0);**

**print("----Account 1----");**

**account1.display();**

**account1.deposit(500);**

**account1.withdraw(200);**

**account1.addInterest();**

**account1.display();**

**print("\n----Account 2----");**

**account2.display();**

**account2.deposit(1000);**

**account2.withdraw(200);**

**account2.addInterest();**

**account2.display();**

**}**