Q1. Pseudo code for verify if number entered is prime number.

BEGIN

DECLARE Number AS N

ENTER Number as N

IF (N <= 1)

THEN DISPLAY N is “ not a prime number”

ELSE

FOR i = 2 to N-1

IF (N MOD i== 0)

THEN DISPLAY N “is a NOT a PRIME NUMBER”

ELSE DISPLAY N “is a a PRIME NUMBER”

END IF

Increment i with 1

END

Q2. Pseudo code for transferring amount from one account to another. [Should validate whether both accounts exists]

BEGIN

DECLARE ACC1, ACC2

IF

ACC1 EXISTS and ACC2 EXISTS

THEN

INPUT Source Account, Destination Account, AMOUNT, BALANCEACC1, BALANCEACC2

IF Source Account = ACC1 and Destination Account = ACC2

THEN Input BALANCEACC1, AMOUNT

Select ACC2

Confirm Amount

IF BALANCEACC1 < AMOUNT

THEN DISPLAY “AMOUNT is Insufficient”

ELSE

INITIATE TRANSFER

BALANCEACC1= BALANCEACC1 – AMOUNT

BALANCEACC2 = BALANCEACC2 + AMOUNT

DISPLAY “Transaction Successful”

END IF

ELSE

Input BALANCEACC2, AMOUNT

Select ACC1

Confirm Amount

IF BALANCEACC2 < AMOUNT

THEN DISPLAY “AMOUNT is Insufficient”

ELSE

INITIATE TRANSFER

BALANCEACC2= BALANCEACC2 – AMOUNT

BALANCEACC1 = BALANCEACC1 + AMOUNT

DISPLAY “Transaction Successful”

END IF

END IF

END

RDBMS

Q1. Write SQL Query to create following tables [DO NOT CREATE PRIMARY / FOREIGN KEYS ]

CREATE TABLE Customer (

CustomerId VARCHAR2(10)

Fullname VARCHAR2(20)

Address VARCHAR2(40)

City VARCHAR2(15)

Pan number VARCHAR2(10)

);

CREATE TABLE Account (

AccountNo INT(10)

CustomerId VARCHAR2(30)

AcctType VARCHAR2(20)

Balance FLOAT(40)

);

Write SQL to insert following records in Customer & Account tables:

INSERT values in Customer table

INSERT INTO Customer (CustomerId, Fullname, address, city, pan number)

VALUES (‘C1002’, ‘Rajiv Bhatia’, ‘Xyz Path, Chandni chowk’, ‘Delhi’, ‘AXNSS 1234 A’ );

INSERT INTO Customer (CustomerId, Fullname, address, city, pan number)

VALUES (‘C1003’, ‘Alia Bhatt’, ‘Khar’, ‘Mumbai’, ‘SZAXS 5656 B’);

INSERT INTO Customer (CustomerId, Fullname, address, city, pan number)

VALUES (‘C1004’, ‘Vijay Deol’, ‘Bandra’, ‘Mumbai’, ‘APOI 5675 A’);

INSERT INTO Customer (CustomerId, Fullname, address, city, pan number)

VALUES (‘C1005’, ‘Ajay Deol’, ‘Bandra’, ‘Mumbai’, ‘AUIO 7676 K’);

Insert Values in the Account table

INSERT INTO Account (AccountNo, accType, balance, customerId)

VALUES (‘SB122666’, ‘Savings’, ‘67000’, ‘C1002’ );

INSERT INTO Account (AccountNo, accType, balance, customerId)

VALUES (‘CB565556’, ‘Current’, ‘786928.98’, ‘C1002’ );

INSERT INTO Account (AccountNo, accType, balance, customerId)

VALUES (‘SB876565’, ‘Savings’, ‘547899.90’, ‘C1004’ );

INSERT INTO Account (AccountNo, accType, balance, customerId)

VALUES (‘SB565722’, ‘Savings’, ‘67600’, ‘C1003’ );

INSERT INTO Account (AccountNo, accType, balance, customerId)

VALUES (‘SB757676’, ‘Savings’, ‘66197.88’, ‘C1003’ );

INSERT INTO Account (AccountNo, accType, balance, customerId)

VALUES (‘SB166778’, ‘Current’, ‘16000’, ‘C1008’ );

Q3. Write a Left Join to get all customers and accounts. Join should display all customers [Even those who DO NOT have any account].

Select c.Fullname, a.CustomerId from Customer c LEFT JOIN Account a ON c.CustomerId = a.CustomerID;

UML

For RDBMS Question #1, Create Class Diagram for Both tables.

1..n

|  |
| --- |
| Customer |
| CustomerID  Fullname  Address  City  Pan number |
| GetCustomerdetail() |

|  |
| --- |
| Account |
| accountNo  accType  balance  customerId |
| Getaccountdetails() |

BEGIN

ENTER the Source Account

And destination Number

Account is not active

NO If the account number exists and is active

Account is not active

YES

Enter source, destination account number, balacc1, balacc2, amount

IF Balacc1 < amount YES DISplay “insufficient balance

NO

Initiate fund transfer

Account1 gets debited balance printed

END