4. More Queries on Bank Database

PROGRAM 4: More Queries on Bank Database
 Branch (branch-name: String, branch-city: String, assets: real)
BankAccount(accno: int, branch-name: String, balance: real)
BankCustomer (customer-name: String, customer-street: String, customer-city: String)
Depositer(customer-name: String, accno: int)
LOAN (loan-number: int, branch-name: String, amount: real)

i.   Find all the customers who have an account at all the branches located in a specific city (Ex. Delhi).

ii.   Find all customers who have a loan at the bank but do not have an account.

iii.   Find all customers who have both an account and a loan at the Bangalore branch .

iv.   Find the names of all branches that have greater assets than all branches located in Bangalore.

v.   Demonstrate how you delete all account tuples at every branch located in a specific city (Ex. Bombay).

vi.   Update the Balance of all accounts by 5%

Queries :

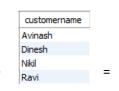**i. Find all the customers who have an account at all the branches located in a specific city (Ex. Delhi).**

SELECT customer_name FROM BankCustomer WHERE customer_city = 'Delhi' AND NOT EXISTS (SELECT branch_name FROM Branch WHERE branch_city = 'Delhi' AND NOT EXISTS (SELECT * FROM BankAccount WHERE BankAccount.branch_name = Branch.branch_name AND BankCustomer.customer_name = Depositer.customer_name));

customername
Nikil
Ravi

ii. Find all customers who have a loan at the bank but do not have an account.

SELECT customer_name FROM BankCustomer WHERE EXISTS (SELECT * FROM Loan WHERE Loan.branch_name = Branch.branch_name AND NOT EXISTS (SELECT * FROM BankAccount WHERE BankAccount.branch_name = Branch.branch_name AND BankCustomer.customer_name = Depositer.customer_name));

customername
Mohan

iii. Find all customers who have both an account and a loan at the Bangalore branch.

SELECT DISTINCT customer_name FROM BankCustomer WHERE EXISTS (SELECT * FROM BankAccount WHERE BankAccount.branch_name = 'SBI_ResidencyRoad' AND BankCustomer.customer_name = Depositer.customer_name) AND EXISTS (SELECT * FROM Loan WHERE Loan.branch_name = 'SBI_ResidencyRoad' AND BankCustomer.customer_name = Depositer.customer_name);

customername
Avinash
Dinesh
Nikil
Ravi

iv. Find the names of all branches that have greater assets than all branches located in Bangalore.

SELECT branch_name FROM Branch WHERE assets > ALL (SELECT assets FROM Branch WHERE branch_city = 'Bangalore');

branch_name

v. Demonstrate how you delete all account tuples at every branch located in a specific city (Ex. Bombay).

DELETE FROM BankAccount WHERE branch_name IN (SELECT branch_name FROM Branch WHERE branch_city = 'Bombay');
select * from BankAccount;

Accno	Branch_name	Balance
1	SBI_Chamrajpet	2000
2	SBI_ResidencyRoad	5000
4	SBI_ParlimentRoad	9000
5	SBI_Jantarmantar	8000
8	SBI_ResidencyRoad	4000
9	SBI_ParlimentRoad	3000
10	SBI_ResidencyRoad	5000
11	SBI_Jantarmantar	2000
NULL	NULL	NULL

Accno	Branch_name	Balance
1	SBI_Chamrajpet	2100
2	SBI_ResidencyRoad	5250
4	SBI_ParlimentRoad	9450
5	SBI_Jantarmantar	8400
8	SBI_ResidencyRoad	4200
9	SBI_ParlimentRoad	3150
10	SBI_ResidencyRoad	5250
11	SBI_Jantarmantar	2100

vi. Update the Balance of all accounts by 5%

UPDATE BankAccount set Balance=(Balance + (Balance*0.05));