

## Lab Assignment – 4

### I. DESCRIPTION:

The following relations keep track of a banking enterprise.

1. BRANCH (branch-name:varchar(20), branch-city:varchar(20), assets:numeric(8,2))

2. ACCOUNT (accno:int, branch-name:varchar(20), balance:numeric(8,2))

- `branch_name` Refers to `branch_name` of BRANCH table

3. CUSTOMER (customer-name:varchar(20), customer-street:varchar(25), customer-city:varchar(10))

4. LOAN (loan-number:int, branch-name:varchar(20), amount:numeric(8,2))

- `branch_name` Refers to `branch_name` of BRANCH table

5. DEPOSITOR (customer-name:varchar(20), accno:int)

- `customer-name` Refers to `customer-name` of CUSTOMER table
- `accno` Refers to `accno` of ACCOUNT table

6. BORROWER (customer-name:varchar(20), loan-number:int)

- `customer-name` Refers to `customer-name` of CUSTOMER table
- `loan-number` Refers to `loan-number` of LOAN table

### Queries:

Write each of the following queries in SQL.

1. Create the above tables by properly specifying the primary keys and the foreign keys
2. Enter at least three tuples for each relation.
3. Find all the customers who have at least two accounts at the 'Main' branch.
4. Find the average account balance at the 'Kollam' branch.
5. Find the number of depositors for each branch.
6. Find the names of all branches where the average account balance is more than RS. 1,200.
7. Increase all accounts with balances over Rs. 10,000 by 6%.

8. Increase all accounts with balances less than Rs. 10,000 by 5%
9. Find all customers who have a loan, an account, or both.
10. Find all customers who have both a loan and an account.
11. Find the number of branches that currently have loans.
12. Find the average loan amount for each branch.
13. Find all customers with more than one loan.
14. Total all loan amounts

## II. **Perform the String Functions, Date functions and Mathematical functions supported by PostgreSQL**

Refer:

<https://www.postgresql.org/docs/9.3/functions-string.html>

<https://www.postgresql.org/docs/9.4/functions-datetime.html>

<https://www.postgresql.org/docs/9.3/functions-math.html>