Name: ID

CSE311L: Database Management Systems Lab

Lab Midterm Examination - Summer-2021

Total Marks: 50 Duration: 110 Minutes

Schema: Suppose, you own a Bank, and you have stored all the information in *account_details* schema. There are six tables in the *account_details* schema. Those tables are:

account, borrower, branch, customer, depositor, loan

account(account_number, balance, branch_name)

English: There is an account identified by account number. Total available balance at any given time is represented by balance, and hosted branch name is represented by branch_name.

borrower(customer_name, loan_number)

English: Each customer can take a loan from the bank against the loan_number. A loan number can be assigned to multiple borrowers. If the same loan number is assigned to multiple borrowers, this will represent a joint loan against that loan number.

branch(branch_name, branch_city, asset)

English: A branch having a name is situated in a city having assets of a certain amount. There can be multiple branches in a city.

customer(customer_name, customer_street, customer_city)

English: A customer having a valid name lives at a street address in a city.

depositor(account_number, customer_name)

English: A customer having a valid name has an account issued against an account number.

loan(loan_number, branch_name, amount)

English: Each loan is identified by loan number, and each loan is issued by branch having branch name. Amount represents the issued total loan by a branch.

Name: ID

Solve the following Questions

1. Create a table named ‘scheduled_charge’ having the following properties.

Column Name	Type	Null?/Key?
account_number	varchar(15)	Primary
half_yearly_charge	Int	Not Null
inflation_rate	double(4,2)	default=0
additional_rate	double(4,2)	default=0

2. Insert the following rows into ‘scheduled_charge’ table:

account_number	half_yearly_charge	inflation_rate	additional_rate
A-305	200	5.67%	0.19%
A-201	100	0	0
L-11	300	6.68%	3%
L-14	300	5.69%	2.5%

3. It's the end of the year 2021. Display the Account_number and adjusted Balance. Rename the adjusted Balance column as ’Adjusted_acc_info’. Only display the account numbers which are needed to adjust with reference to the scheduled_charge table. Round the result to one decimal place.
Adjusted balance = balance-yearly_charge + addtional_rate of balance + inflation_rate of balance

account_number	Adjusted_Acc_Info
A-305	711.5
A-201	300.0

Name: ID

4. Find out the customer name, average deposited amount who has multiple accounts in your bank.

AVG Balance
275.0000

5. Find out the branch name, and Loan to Deposit Ratio(LDR) in percentage having minimum Loan to Deposit Ratio(LDR) among all branches. Exclude the branches that have not issued any loan or have any deposit amount.

$LDR = Total\ Loan\ Amount\ /\ Total\ Deposit\ Amount$

loan_branch_name	LDR
Round-Hill	85.7143%

6. Find out the Average borrowed amount by the customers having a name that starts with 'J'.

AVERAGE Amount
1250.0000

7. Find out the customer name, street address who have both a deposit and a loan account.

customer_name	customer_street
Hayes	Main
Smith	North
Jones	Main

8. Find out the Total Asset, Total Loan, Total Deposit of your Bank.

Total Assest	Total Balance	Total Loan
32300000	2800	8700

Name: ID

9. Find out the customer name who opened an account with a branch which is situated in the same city where the customer lives.

customer_name
Hayes

10. Find out the customer name, street address, Account Number, Loan Number. Include the customer details also even if he/she doesn't have any deposit or loan account. Sort the result set in ascending order of customer name.

customer_name ▲ 1	customer_street	account_number	loan_number
Adams	Spring	*NULL*	L-16
Brooks	Senator	*NULL*	*NULL*
Curry	North	*NULL*	L-93
Glenn	Sand Hill	*NULL*	*NULL*
Green	Walnut	*NULL*	*NULL*
Hayes	Main	A-102	L-15
Johnson	Alma	A-201	*NULL*
Johnson	Alma	A-101	*NULL*
Jones	Main	A-217	L-17
Lex	Spring	*NULL*	*NULL*
Lindsay	Park	*NULL*	*NULL*
Smith	North	A-215	L-23
Smith	North	A-215	L-11
Turner	Putnam	A-305	*NULL*
Williams	Nassau	*NULL*	L-17