

LAB REPORT

COURSE TITLE : Database Systems Lab

COURSE CODE : CSE 208

LAB REPORT NO. : 05

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SUBMITTED TO

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PROGRAM: B.Sc. Engg. in CSE

Database Systems Lab

This is a continuation of the topics discussed in the previous labs. It inherits the six data tables from the **2nd lab** and primary keys from the **3rd lab**.

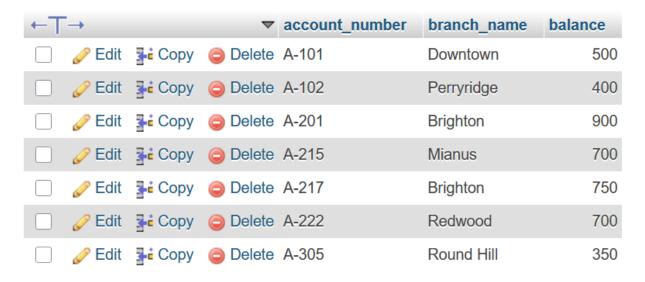


Figure - 1.1. Account relation

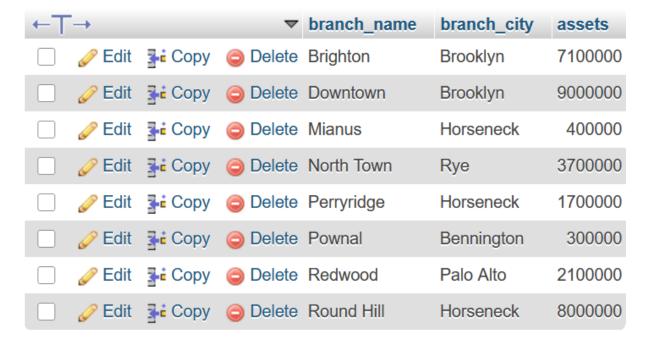


Figure - 1.2. Branch relation

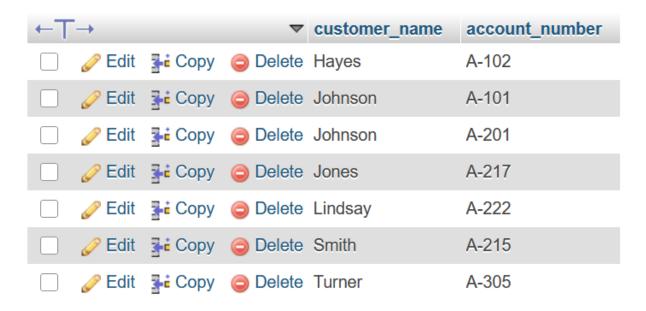


Figure - 1.3. Depositor relation



Figure - 1.4. Customer relation

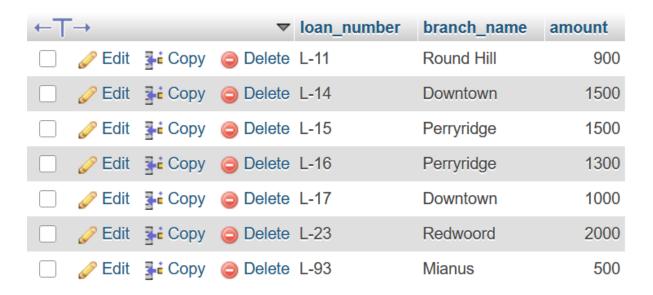


Figure - 1.5. Loan relation

$\leftarrow T$	→		\triangledown	customer_name	loan_number
	Edit	≩ Copy	Delete	Adams	L-16
	Edit	≩ Copy	Delete	Curry	L-93
	Edit	≩ Copy	Delete	Hayes	L-15
	Edit	≩ Copy	Delete	Johnson	L-14
	Edit	≩ Copy	Delete	Jones	L-17
	Edit	≩ Copy	Delete	Smith	L-11
	Edit	≩ Copy	Delete	Smith	L-23
	Edit	≩ Copy	Delete	Williams	L-17

Figure - 1.6. Borrower relation

Lab Tasks

1. Fetch all the customer's name in alphabetic order who lives in Harrison

```
SELECT customer_name FROM customer
WHERE customer_city="Harrison"
ORDER BY customer_name;

Customer_name ▲ 1

Copy © Delete Hayes

Edit Copy © Delete Jones
```

Figure - 1.7. Task 1

2. Find the list of all customers in alphabetic order who have a loan at the **Perryridge** branch

```
SELECT * FROM loan, borrower
WHERE loan.loan_number=borrower.loan_number
AND branch_name="Perryridge";
```

loan_number	branch_name	amount	customer_name	loan_number
L-16	Perryridge	1300	Adams	L-16
L-15	Perryridge	1500	Hayes	L-15

Figure - 1.8. Task 2A

Alternative approach:

```
SELECT * FROM loan NATURAL JOIN borrower
WHERE branch_name="Perryridge";
```

loan_number	branch_name	amount	customer_name
L-16	Perryridge	1300	Adams
L-15	Perryridge	1500	Hayes

Figure - 1.9. Task 2B

3. Find all customers who have a loan from the bank, find their names, loan numbers and loan amount

```
SELECT customer_name, loan.loan_number, amount
FROM loan, borrower
WHERE borrower.loan_number=loan.loan_number;
```

customer_name	loan_number	amount
Adams	L-16	1300
Curry	L-93	500
Hayes	L-15	1500
Johnson	L-14	1500
Jones	L-17	1000
Smith	L-11	900
Smith	L-23	2000
Williams	L-17	1000

Figure - 1.10. Task 3

4. Find the name of all branches from **loan** table

SELECT DISTINCT branch_name FROM loan;

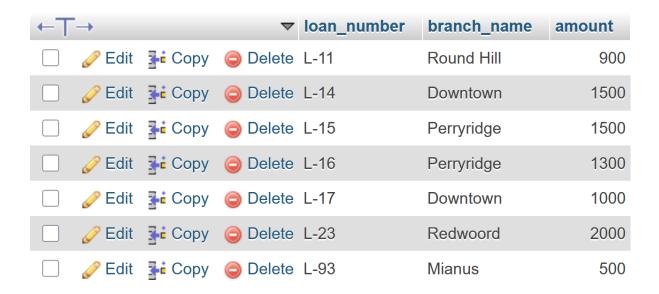


Figure - 1.11. Task 4

5. Find loan number and 5 times amount from <a>loan relation and replace the column name with <a>loan Balance

SELECT loan_number, amount*5 "Total Balance" FROM loan;

$\leftarrow \top$	\rightarrow		∇	loan_number	Total Balance
	<i></i> € Edit	≩ Copy	Delete	L-11	4500
	<i></i> € Edit	≩ Copy	Delete	L-14	7500
	<i></i> € Edit	≩ Copy	Delete	L-15	7500
	<i></i> € Edit	≩ Copy	Delete	L-16	6500
	🥜 Edit	≩ Copy	Delete	L-17	5000
	<i></i> € Edit	≩ Copy	Delete	L-23	10000
	<i></i> € Edit	≩ Copy	Delete	L-93	2500

Figure - 1.12. Task 5

6. Increase all loan amount by 5 percent from <a>loan relation

SELECT loan_number, amount*1.05 FROM loan;

← +				loan_number	amount*1.05
	<i></i> € Edit	Copy	Delete	L-11	945.00
	<i></i> € Edit	≩ Copy	Delete	L-14	1575.00
	<i></i> € Edit	≩ Copy	Delete	L-15	1575.00
	<i></i> € Edit	≩ Copy	Delete	L-16	1365.00
	<i></i> € Edit	Copy	Delete	L-17	1050.00
	<i></i> € Edit	Copy	Delete	L-23	2100.00
	<i></i> € Edit	≩ Copy	Delete	L-93	525.00

Figure - 1.13. Task 6

7. Give 6 percent interest for all loans with amount over 1000

SELECT loan_number, amount*1.06 FROM loan
WHERE amount > 1000;



Figure - 1.14. Task 7

8. Delete all information of Perryridge branch from **branch** table

DELETE FROM branch WHERE branch_name="Perryridge";

$\leftarrow T \rightarrow$		\triangledown	branch_name	branch_city	assets
☐ <i>⊘</i> Edit	≩ Copy	Delete	Brighton	Brooklyn	7100000
☐ <i>⊘</i> Edit	≩ Copy	Delete	Downtown	Brooklyn	9000000
☐ <i>⊘</i> Edit	≩ Copy	Delete	Mianus	Horseneck	400000
☐ <i>⊘</i> Edit	Copy	Delete	North Town	Rye	3700000
☐ Ø Edit	≩ Copy	Delete	Perryridge	Horseneck	1700000
☐ <i>⊘</i> Edit	≩ Copy	Delete	Pownal	Bennington	300000
☐ <i>⊘</i> Edit	≩ Copy	Delete	Redwood	Palo Alto	2100000
☐ <i>⊘</i> Edit	≩ Copy	Delete	Round Hill	Horseneck	8000000

Figure - 1.15. Task 8A

←T	\rightarrow		∇	branch_name	branch_city	assets
		≩ Copy	Delete	Brighton	Brooklyn	7100000
	Edit	≩ Copy	Delete	Downtown	Brooklyn	9000000
	🥜 Edit	≩ Copy	Delete	Mianus	Horseneck	400000
	Edit	≩ Copy	Delete	North Town	Rye	3700000
	🥜 Edit	≩ Copy	Delete	Pownal	Bennington	300000
	Edit	≩ Copy	Delete	Redwood	Palo Alto	2100000
	Edit	≩ € Copy	Delete	Round Hill	Horseneck	8000000

Figure - 1.16. Task 8B

9. Delete all loans with loan amounts between 1300 and 1500

Ø Edit
 ☐ Copy
 ☐ Delete L-23

DELETE FROM loan WHERE amount \geq 1300 AND amount \leq 1500; ▼ loan number branch name amount Round Hill Ø Edit
 ♣ Copy
 Opelete L-11 900 Ø Edit
 ♣ Copy
 Opelete L-14 Downtown 1500 Perryridge 1500 Perryridge 1300

Figure - 1.17. Task 9A

Downtown

Redwoord

Mianus

1000

2000

500



Figure - 1.18. Task 9B