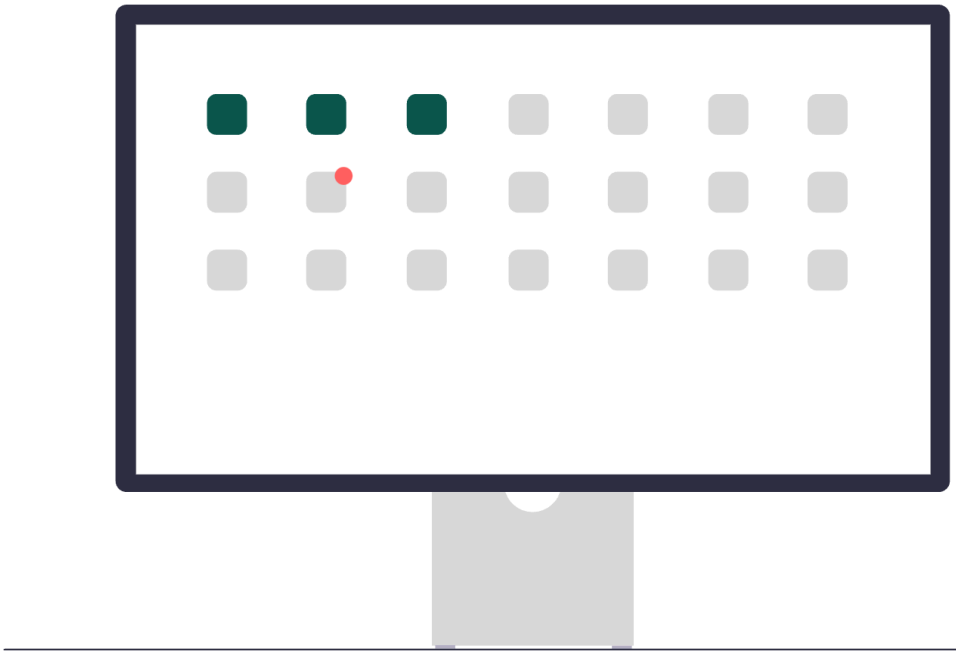
Lab Report of CSE302



Submitted By:

Aklhak Hossain
2022-3-60-057
https://ahjim.com

Submitted To:

Mahmuda Rawnak Jahan
Lecturer
Department of CSE
East West University

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Task - SQL Queries

1. Find all branch names and cities with assets more than 1000000. (on single table)

SELECT branch_name, branch_city FROM branch WHERE assets > 1000000;

BRANCH_NAME	BRANCH_CITY
Redwood	Palo Alto
Perryridge	Horseneck
Round Hill	Horseneck
North Town	Rye
Brighton	Brooklyn

5 rows returned in 0.02 seconds Download

2. Find all account numbers and their balances which are opened in ‘Downtown’ branches or which have balances in between 600 and 750. (on single table)

SELECT account_number, balance
FROM account
WHERE branch_name = 'Downtown' OR balance BETWEEN 600 AND 750;

ACCOUNT_NUMBER	BALANCE
A-101	500
A-215	700
A-222	700
A-217	750
A-444	625

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3. Find all account numbers which are opened in a branch located in ‘Rye’ city. (multiple tables)

SELECT account_number FROM account a, branch b WHERE a.branch_name = b.branch_name AND b.branch_city = 'Rye';

ACCOUNT_NUMBER
A-333
A-444

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4. Find all loan numbers which have an amount greater than or equal to 1000 and their customers are living in ‘Harrison’ city. (multiple tables)

```
SELECT l.loan_number
FROM loan l
JOIN borrower b ON l.loan_number = b.loan_number
JOIN customer c ON b.customer_name = c.customer_name
WHERE c.customer_city = 'Harrison';
```

LOAN_NUMBER
L-17
L-15

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5. Display the account related information based on the descending order of the balance. (order by clause)

```
SELECT *
FROM account
ORDER BY balance DESC;
```

ACCOUNT_NUMBER	BRANCH_NAME	BALANCE
A-201	Perryridge	900
A-333	Central	850
A-217	Brighton	750
A-215	Mianus	700
A-222	Redwood	700
A-444	North Town	625
A-101	Downtown	500
A-102	Perryridge	400
A-305	Round Hill	350

6. Display the customer related information in alphabetic order of customer cities. (order by clause)

```
SELECT *
FROM customer
ORDER BY customer_city ASC;
```

CUSTOMER_NAME	CUSTOMER_STREET	CUSTOMER_CITY
Brooks	Senator	Brooklyn
Hayes	Main	Harrison
Jones	Main	Harrison
Johnson	Alma	Palo Alto
Adams	Spring	Pittsfield
Lindsay	Park	Pittsfield
Williams	Nassau	Princeton
Curry	North	Rye
McBride	Safety	Rye
Smith	Main	Rye

More than 10 rows available. Increase rows selector to view more rows.

7. Find all customer names who have an account as well as a loan. (intersect)

```
SELECT customer_name
FROM depositor
INTERSECT
SELECT customer_name
FROM borrower;
```

CUSTOMER_NAME
Hayes
Jones
Smith

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8. Find all customer related information who have an account or a loan. (union)

```
SELECT customer_name
FROM depositor
UNION
SELECT customer_name
FROM borrower;
```

CUSTOMER_NAME
Adams
Curry
Hayes
Jackson
Johnson
Jones
Lindsay
Majeris
McBride
Smith
More than 10 rows available. Increase rows selector to view more rows.

9. Find all customer names and their cities who have a loan but not an account. (minus)

```
SELECT customer_name,customer_city
From customer NATURAL JOIN (SELECT customer_name
FROM borrower
MINUS
SELECT customer_name
FROM depositor);
```

CUSTOMER_NAME	CUSTOMER_CITY
Curry	Rye
Williams	Princeton
Adams	Pittsfield
Jackson	Salt Lake
McBride	Rye

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10. Find the total assets of all branches. (aggregate function)

```
SELECT SUM(assets) AS total_assets FROM branch;
```

TOTAL_ASSETS
24600480

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11. Find the average balance of accounts at each branch. (aggregate function)

SELECT branch_name, AVG(balance) AS avg_balance
FROM account
GROUP BY branch_name;

BRANCH_NAME	AVG_BALANCE
Central	850
Downtown	500
Perryridge	650
Mianus	700
North Town	625
Round Hill	350
Redwood	700
Brighton	750

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12. Find the average balance of accounts at each branch city. (aggregate function)

SELECT branch_city, AVG(balance) AS avg_balance
FROM account NATURAL JOIN branch
GROUP BY branch_city;

BRANCH_CITY	AVG_BALANCE
Palo Alto	700
Brooklyn	625
Horseneck	587.5
Rye	737.5

13. Find the lowest amount of loan at each branch. (aggregate function)

```
SELECT branch_name, MIN(amount) AS lowest_loan
FROM loan
GROUP BY branch_name;
```

BRANCH_NAME	LOWEST_LOAN
Central	570
Downtown	1000
Perryridge	1300
Mianus	500
North Town	7500
Round Hill	900
Redwood	2000

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14. Find the total number of loans at each branch. (aggregate function)

```
SELECT branch_name, COUNT(loan_number) AS loans
FROM loan
GROUP BY branch_name;
```

BRANCH_NAME	LOANS
Central	1
Downtown	2
Perryridge	2
Mianus	1
North Town	1
Round Hill	1
Redwood	1

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15. Find the customer name and account number of the account which has the highest balance. (aggregate function)

```
SELECT c.customer_name, a.account_number
FROM account a
JOIN depositor d ON a.account_number = d.account_number
JOIN customer c ON d.customer_name = c.customer_name
WHERE a.balance = (SELECT MAX(balance) FROM account);
```

CUSTOMER_NAME	ACCOUNT_NUMBER
Johnson	A-201

1 rows returned in 0.02 seconds Download