

Shri Ramdeobaba College of Engineering & Management Nagpur-13

Department of Computer Application

Session: 2023-2024



Submission for

Course Name: Database Management Systems Lab

Course Code: MCP545

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Class Roll No: 26

Semester: MCA II semester

Shift: 2

Batch: 2

Under the Guidance of

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Date of submission: 10/02/2024

List of Experiments

1. Implementation of DDL commands of SQL with suitable examples
 - a) Create table b) Alter table c) Truncate table d) Drop table

Implementation of DML commands of SQL with suitable examples

- a) Select b) Insert c) Update d) Delete
2. Study and implementation of different types of constraints.
3. Implementation of different types of operators in SQL
 - a) Arithmetic Operators b) Logical Operators
 - c) Comparison Operators d) Set Operators
4. Study and Implementation of
 - a) Aggregate functions
 - b) Group By & Having clause
 - c) Order by clause
5. Study and Implementation of different types of joins like cross join, natural join, inner join, and outer joins.
6. Study and Implementation of Sub queries
7. Study and Implementation of views, and synonyms.
8. Study and Implementation of PL/SQL.

Practical 3

Aim: Implementation of different types of operators in SQL

- a) Arithmetic Operators b) Logical Operators
- c) Comparison Operators d) Set Operators

Solution:

DEPOSIT(Actno, Cname, Bname, Amount, Adate)

BRANCH(Bname, City)

CUSTOMERS(Cname, City)

BORROW(Loanno, Cname, Bname, Amount)

A.Arithmetic Operators:

1. Increase deposit of all customers by Rs. 10000

Query: UPDATE DEPOSIT SET Amount = Amount + 10000;

2. Find deposit of customers of the Union branch.

Query: SELECT Cname, Amount FROM DEPOSIT WHERE Bname = 'Union';

3. Display the list of customers whose loan is more or equal to 7000.

Query: SELECT * FROM BORROW WHERE Amount >= 7000;

4. Display the list of customers who live in Delhi.

Query: SELECT * FROM CUSTOMERS WHERE City = 'Delhi';

5. List branches in Nagpur city

Query: SELECT Bname FROM BRANCH WHERE City = 'Nagpur';

B.Logical Operators:

1. Display the list of customers whose loan is between 20000 and 50000.

Query: SELECT * FROM BORROW
WHERE Amount BETWEEN 20000 AND 50000;

2. Display the list of customers who access account from 1-MAR-95 to 31-MAR-96.

Query: SELECT * FROM DEPOSIT
WHERE Adate BETWEEN '03-01-1995' AND '03-31-1996';

3. Display the list of borrowers who borrow loan from Yes bank branch or whose loan amount greater than 3000.

Query: SELECT * FROM BORROW
WHERE Bname = 'Yes' OR Amount > 3000;

4. Display the list of borrowers who borrow loan from the Dena bank or Uco branch.

Query: SELECT * FROM BORROW WHERE Bname IN ('Dena', 'Uco');

5. Display the list of customers deposit is not less than 50000.

Query: SELECT * FROM DEPOSIT WHERE Amount >= 50000;

C.Comparison Operators:

1. Retrieve account number, and customer name of depositors whose deposit is between 10000 to 30000.

Query: SELECT Actno, Cname FROM DEPOSIT
WHERE Amount BETWEEN 10000 AND 30000;

2. Retrieve all bank branches whose branch names start with C or U.

Query: SELECT Bname FROM BRANCH
WHERE Bname LIKE 'C%' OR Bname LIKE 'U%';

3. Retrieve all bank branches whose branch city starts from A and ends with K.

Query: SELECT Bname FROM BRANCH WHERE City LIKE 'A%K';

4. Retrieve all bank branches whose city's first character is D and third character is N.

Query: SELECT Bname FROM BRANCH WHERE City LIKE 'D_N%';

5. Retrieve customer names who borrow loans between 3000 to 5000.

Query: SELECT Cname FROM BORROW
WHERE Amount BETWEEN 3000 AND 5000;

D.Set Operators:

1. Find all customers having a loan, an account, or both at the bank

Query: SELECT Cname FROM CUSTOMERS
UNION
SELECT Cname FROM DEPOSIT
UNION
SELECT Cname FROM BORROW;

2. Find all customers having a loan, an account, or both at the bank (including duplicate values)

Query: SELECT Cname FROM CUSTOMERS
UNION ALL
SELECT Cname FROM DEPOSIT
UNION ALL
SELECT Cname FROM BORROW;

3. Find all customers who have both a loan and an account at the bank.

Query: SELECT Cname FROM CUSTOMERS
INTERSECT
SELECT Cname FROM DEPOSIT
INTERSECT
SELECT Cname FROM BORROW;

4. Find all customers who have an account but no loan at the bank.

Query: SELECT Cname FROM DEPOSIT
EXCEPT
SELECT Cname FROM BORROW;