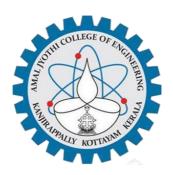
## 20MCA134 – ADVANCED DATABASE MANAGEMENT SYSTEM LAB

Lab Report Submitted By

SREELAKSHMI R Reg. No.:AJC21MCA-2101

In Partial fulfillment for the Award of the Degree Of

## MASTER OF COMPUTER APPLICATIONS (2 Year) (MCA) APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

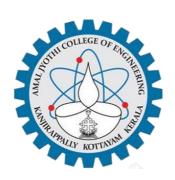


#### AMAL JYOTHI COLLEGE OF ENGINEERING KANJIRAPPALLY

[Affiliated to APJ Abdul Kalam Technological University, Kerala. Approved by AICTE, Accredited by NAAC with 'A' grade. Koovappally, Kanjirappally, Kottayam, Kerala – 686518]

2021-2022

# DEPARTMENT OF COMPUTER APPLICATIONS AMAL JYOTHI COLLEGE OF ENGINEERING KANJIRAPPALLY



#### **CERTIFICATE**

This is to certify that the Lab report, "20MCA134 ADVANCED DATABASE MANAGEMENT SYSTEM LAB" is the bonafide work of SREELAKSHMI R (Reg.No: AJC21MCA-2101) in partial fulfillment of the requirements for the award of the Degree of Master of Computer Applications under APJ Abdul Kalam Technological University during the year 2021-22.

MS. Nimmy Francis

Rev.Fr.Dr.Rubin Thottupurathu Jose

Lab In-Charge

Head of the Department

**Internal Examiner** 

**External Examiner** 

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Name: SREELAKSHMI R

Roll No: 41

**Batch: RMCA B** 

Date:08-04-2022

#### **ADVANCED ADBMS LAB**

#### **Experiment No.: 1**

#### Aim

To familiarize DDL Commands-

ALTER, DROP, TRUNCATE, RENAME

#### **Question**

1. Create a table emp with attributes empno number (4) as primary key, ename char(10), hiredate, salary, commission.

insert 5 rows of data

101	Ramesh	17-Jan 1980	5000	
102	Ajay	05-Jul 1985	5000	500
103	Ravi	12-Aug 1981	1500	
104	Nikesh	03-Mar 1983	3000	700
105	Ravi	05-jul 1985	3000	

- 2. Modifying the structure of tables
- a.Add new columns: sal number(7,2)
- b.Dropping a column from a table: sal
- c.Modifying existing column :ename varchar2(15)
- d.Renaming the tables: emp to emp1
- e.truncating the tables:emp1
- f.Destroying tables:emp
- 3. Create a table stud with sname varchar2(20) primary key, rollno number(10) not null,dob date not null
- 4. Create a table student as regno number (6), mark number (3) check constraint (mark >=0 and mark

<=100));

In table student add check constraint(length(regno<=4))

- 5.Create a table cust with(custid number(6) constraint unique, name char(10)
- 6. Refer the table "stud" in table "student"

#### **Procedure**

#### **Create table emp:**

CREATE TABLE EMP( EMPNO INT PRIMARY KEY , ENAME CHAR(10),HIREDATE DATE, SALARY INT,COMMISION INT);

INSERT INTO EMP VALUES(101, 'RAMESH', '1980-01-17', 5000,0);

INSERT INTO EMP VALUES(102, 'AJAY', '1985-07-05', 5000, 500);

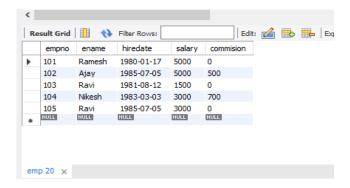
INSERT INTO EMP VALUES(103, 'RAVI', '1981-08-12', 1500, 0);

INSERT INTO EMP VALUES(104,'NIKESH','1983-03-03',3000,700);

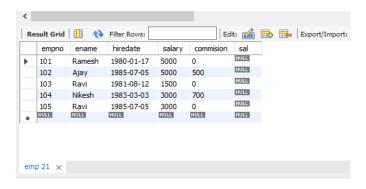
INSERT INTO EMP VALUES(105, 'RAVI', '1985-07-05', 3000, 0);

#### **OUTPUT SCREENSHOTS**

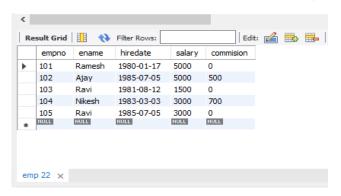
SELECT \* FROM EMP;



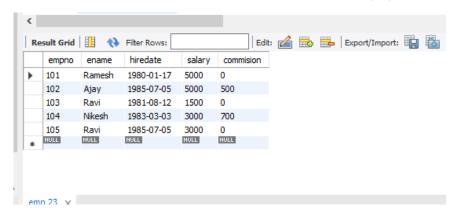
#### ALTER TABLE EMP ADD SAL INT;



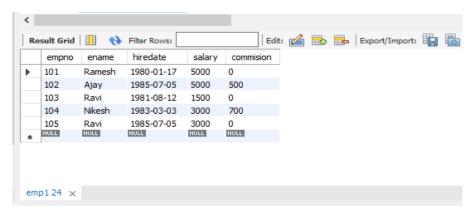
#### ALTER TABLE EMP DROP COLUMN SAL;



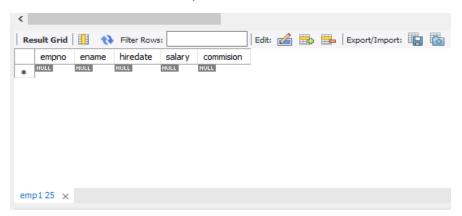
#### ALTER TABLE EMP MODIFY ENAME VARCHAR(15);



#### RENAME TABLE EMP TO EMP1;



#### TRUNCATE TABLE EMP1;



#### DROP TABLE EMP1;

•	65 10:50:12 DROP TABLE emp1	0 row(s) affected	0.750 sec
3	66 10:50:21 select *from emp1 LIMIT 0, 1000	Error Code: 1146. Table 'myacc.emp1' doesn't exist	0.000 sec

CREATE TABLE STUD(SNAME VARCHAR(20) PRIMARY KEY, ROLLNO INT NOT NULL, DOB DATE NOT NULL);

SELECT \* FROM STUD;



CREATE TABLE STUDENT (REGNO INT, MARK INT(3) CONSTRAINT B CHECK (MARK >=0 AND MARK <=100));

**SELECT \* FROM STUDENT;** 



CREATE TABLE CUST(CUSTID NUMBER(6) UNIQUE, NAME CHAR(10));



#### **ADVANCED DBMS LAB**

#### **Experiment No.: 2**

Name: SREELAKSHMI R

Roll No:41

Batch: B

Date:25-03-2022

#### Aim

To familiarize DML commands SELECT, INSERT, UPDATE, DELETE

#### **Questions**

Create the following Tables and insert values.

#### **Table 1: DEPOSIT**

ACTNO VARCHAR2 (5) PRIMARY KEY, FIRST LETTER MUST START WITH 'D' CNAME VARCHAR2 (15) FOREIGN KEY REFERENCES CUSTOMER BNAME VARCHAR2 (20) FOREIGN KEY REFERENCES BRANCH AMOUNT NUMBER (8,2) NOT NULL, CANNOT BE 0 ADATE DATE

#### **Table 2: BRANCH**

BNAME VARCHAR2(20) PRIMARY KEY CITY VARCHAR2(30) NOT NULL, any one of NAGPUR, DELHI, BANGALORE, BOMBAY

#### **Table 3: CUSTOMER**

CNAME VARCHAR2(15) PRIMARY KEY CITY VARCHAR (20) NOT NULL,

#### **Table 4: BORROW**

LOANNO VARCHAR2(8) PRIMARY KEY / FIRST LETTER MUST START WITH 'L' CNAME VARCHAR2(15) FOREIGN KEY REFERENCES CUSTOMER BNAME VARCHAR2(20) FOREIGN KEY REFERENCES BRANCH AMOUNT NUMBER (8,2) NOT NULL, CANNOT BE 0

- 1. List all data from table deposite
- 2. List all data from borrow
- 3. List all data from customer
- 4. List all data from branch
- 5. Give account no and amount of deposite
- 6. Give customer name and account no of depositors
- 7. Give name of customers
- 8. Give name of branches
- 9. Give name of borrows
- 10. Give names of customer living in city Nagpur

- 11. Give names of depositors having amount greater than 4000
- 12. Give account date of Anil
- 13. Give name of all branches located in Bombay
- 14. Give name of borrower having loan number 1205
- 15. Give names of depositors having account at VRCE
- 16. Give names of all branched located in city Delhi
- 17. Give name of the customers who opened account date '1-12-96'
- 18. Give account no and deposit amount of customers having account opened between dates '1-12-96' and '1-5-96'
- 19. Give name of the city where branch KAROLBAGH is located
- 20. Give details of customer ANIL

#### **Procedure**

CREATE DATABASE ddl;

#### **DEPOSIT**

CREATE TABLE DEPOSIT (ACTNO VARCHAR (5) CHECK (ACTNO LIKE 'D%') PRIMARY KEY, CNAME VARCHAR (15) REFERENCES CUSTOMER(CNAME), BNAME VARCHAR (20) REFERENCES BRANCH(BNAME)AMOUNT FLOAT (8) CHECK(AMOUNT>0) NOT NULL, ADATE DATE);

INSERT INTO DEPOSIT VALUES('D100','ANIL','VRCE',1000.00,'1995-03-01') ('D101', 'SUNIL', 'ANJNI',500.00,'1996-01-04'), ('D102','MEHUL','KAROLBAGH',3500.00,'1995-11-17'), ('D104', 'MADHURI','CHANDNI',1200.00,'1995-10-17'), ('D105','PRAMOD','MG ROAD',3000.00,'1996-0327'), ('D106','SANDIP','ANDHERI',2000.00,'1996-03-31'), ('D107','SHIVANI','VIRAR',1000.00,'1995-09-05'), ('D108','KRANTI','NEHRU PLACE',5000.00,'1995-07-02'), ('D109', 'MINU',' POWAI', 7000.00,'1995-08-10');

#### **BRANCH**

CREATE TABLE BRANCH (BNAME VARCHAR (20) PRIMARY KEY, CITY VARCHAR (30) CHECK (CITY IN('NAGPUR', 'DELHI', 'BANGALORE', 'BOMBAY')) NOT NULL);

INSERT INTO BRANCH VALUES('VRCE','NAGPUR'), ('AJNI','NAGPUR'), ('KAROLBAGH', 'DELHI'), ('CHANDNI','DELHI'), ('DHARAMPETH','NAGPUR'), ('MG ROAD', 'BANGALORE'), ('ANDHERI','BOMBAY'), ('NEHRU PALACE','DELHI'), ('POWAI','BOMBAY');

#### **CUSTOMER**

CREATE TABLE CUSTOMER (CNAME VARCHAR (15) PRIMARY KEY, CITY VARCHAR (20) NOT NULL);

INSERT INTO CUSTOMER VALUES ('ANIL','CALCUTTA'), ('SUNIL','DELHI'), ('MEHUL', 'BARODA'), ('MANDAR','PATINA'), ('MADHURI','NAGPUR'), ('PRAMOD','NAGPUR'), ('SANDIP','SURAT'), ('SHIVANI','BOMBAY'), ('KRANIT','BOMBAY'), ('NAREN','BOMBAY');

#### **BORROW**

CREATE TABLE BORROW (LOANNO VARCHAR (8) CHECK (LOANNO LIKE 'L%')
PRIMARY KEY, CNAME VARCHAR (15) REFERENCES CUSTOMER(CNAME) BNAME
VARCHAR (20) REFERENCES BRANCH(BNAME)AMOUNT FLOAT (8) CHECK(AMOUNT>0)
NOT NULL);

INSERT INTO BORROW VALUES('L201','ANIL','VRCE',1000.00), ('L206', 'MEHUL', 'AJNI', 5000.00), ('L311','SUNIL','DHARAMPETH',3000.00), ('L321','MADHURI','ANDHERI',2000.00), ('L371','PRAMOD','VIRAR',8000.00), ('L481','KRANTI','NEHRU PLACE',3000.00);

SELECT \* FROM CUSTOMER;

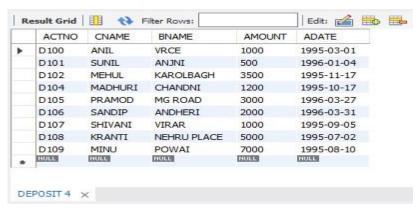
SELECT \* FROM BRANCH; SELECT

\* FROM DEPOSIT;

SELECT \* FROM BORROW;

#### **Output Screenshot**

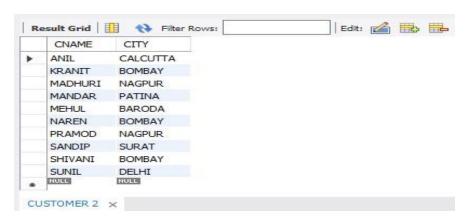
#### **DEPOSIT**



#### **BRANCH**



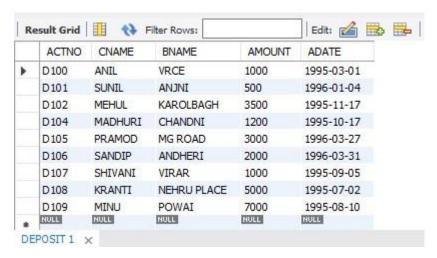
#### **CUSTOMER**



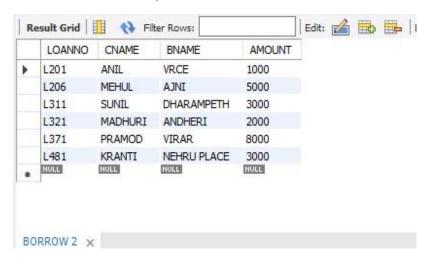
#### **BORROW**



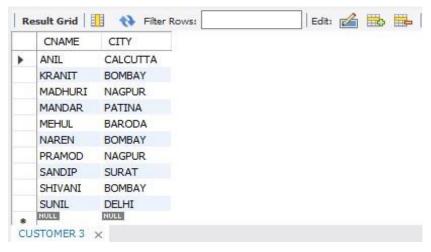
1. select \* from DEPOSIT;



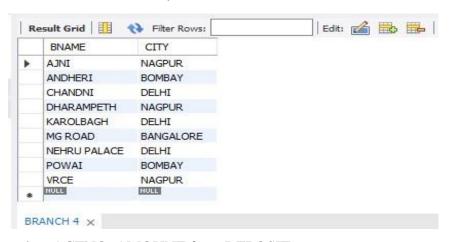
2. select \* from BORROW;



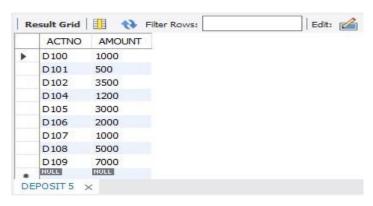
3. select \* from CUSTOMER;



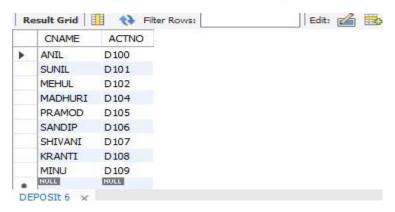
4. select \* from BRANCH;



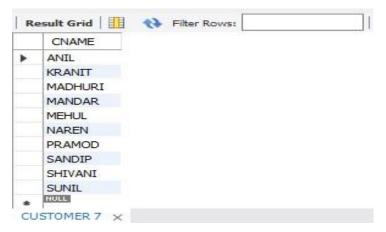
5. select ACTNO, AMOUNT from DEPOSIT;



06. select CNAME, ACTNO from DEPOSIT;



7. select CNAME from CUSTOMER;



8. select BNAME from BRANCH;



9. select CNAME from BORROW;



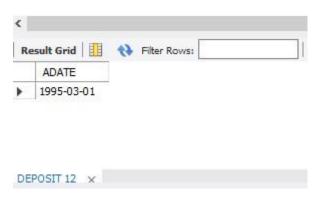
10. nselect CNAME from CUSTOMER where CITY='NAGPUR';



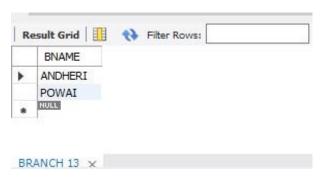
11. select CNAME from DEPOSIT where AMOUNT>4000;



12. select ADATE from DEPOSIT where CNAME='ANIL';



13. SELECT BNAME from BRANCH where CITY='Bombay';



14. SELECT CNAME from BORROW where LOANNO='L205';



15. SELECT CNAME from DEPOSIT WHERE BNAME='VRCE';



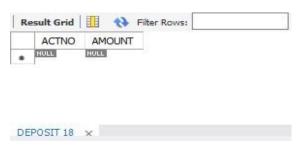
16. SELECT BNAME from BRANCH WHERE CITY='Delhi';



17. SELECT CNAME from DEPOSIT WHERE ADATE='1996-12-1';



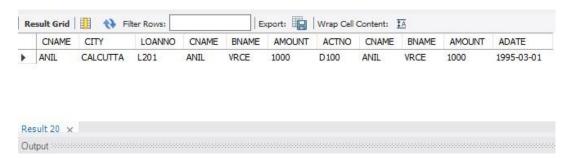
18. SELECT ACTNO, AMOUNT from DEPOSIT WHERE ADATE BETWEEN '1996-12-1' AND '1996-05-1':



19. SELECT CITY from BRANCH WHERE BNAME='KAROLBAGH';



20. SELECT \* from CUSTOMER join borrow on CUSTOMER.CNAME=BORROW.CNAME join deposit on DEPOSIT.CNAME=BORROW.CNAME WHERE CUSTOMER.CNAME='ANIL';



### **Questions**

- 1.List total loan
- 2.List total deposit
- 3.List total loan taken from KAROLBAGH branch
- 4.List total deposit of customers having account date later than 1-Jan-96
- 5.List total deposit of customers living in city NAGPUR
- 6.List maximum deposit of customer living in Bombay
- 7.List total deposit of customer having branch in BOMBAY
- 8. Count total number of branch cities
- 9. Count total number of customers cities
- 10. Give branch names and branch wise deposit
- 11. Give city wise name and branch wise deposit
- 12. Give the branch wise loan of customer living in NAGPUR
- 13. Count total number of customers
- 14. Count total number of depositors branch wise
- 15. Count total number of depositors branch wise
- 16. Give maximum loan from branch VRCE
- 17. Give the number of customers who are depositors as well as borrowers

Name: SREELAKSHMI R

Roll No: 41

Batch: B

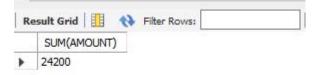
Date: 19-04-2022

#### **Procedure**

1. SELECT SUM(AMOUNT) FROM BORROW;

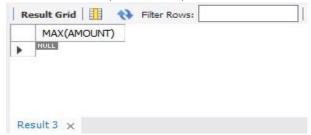


2. SELECT SUM(AMOUNT) FROM DEPOSIT;





3. SELECT MAX(AMOUNT) FROM BORROW WHERE BNAME ='KAROLBAGH';



4. SELECT SUM(AMOUNT) from deposit where adate>'1995-03-01';



|--|--|

5. SELECT SUM(D1.AMOUNT) FROM DEPOSIT D1 , CUSTOMER C1 WHERE C1.CITY = 'NAGPUR' AND C1.CNAME = D1.CNAME;

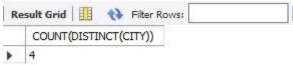


20MCA134 - ADVANCED DBMS LAB **Dept. of Computer Applications** 6. SELECT MAX(D1.AMOUNT) FROM DEPOSIT D1, CUSTOMER C1 WHERE C1.CITY = 'Bombay' AND C1.CNAME = D1.CNAME; MAX(D1.AMOUNT) 1000 Result 6 x 7. SELECT SUM(AMOUNT) from deposit, BRANCH where city='BOMBAY'; 





8. SELECT COUNT(DISTINCT(CITY)) FROM BRANCH;

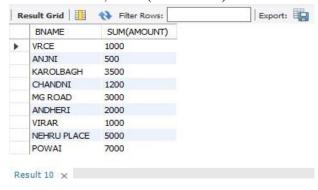




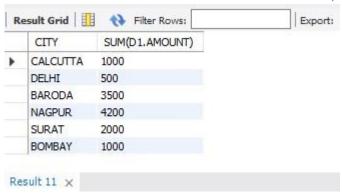
9. SELECT count(city) from CUSTOMER;



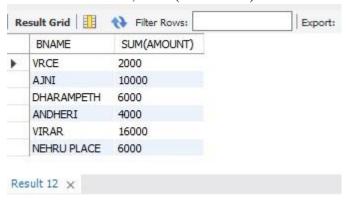
10. SELECT BNAME, SUM(AMOUNT) FROM DEPOSIT GROUP BY BNAME;



11. SELECT C1.CITY, SUM(D1.AMOUNT) FROM CUSTOMER C1, DEPOSIT D1 WHERE D1.CNAME = C1.CNAME GROUP BY C1.CITY;



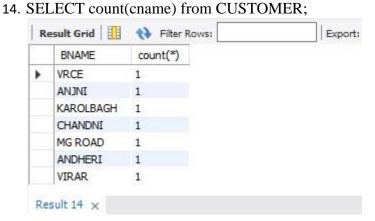
12. SELECT BNAME, SUM(AMOUNT) FROM BORROW



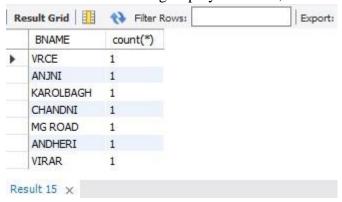
13. OW, CUSTOMER WHERE city = 'NAGPUR' GROUP BY BNAME;



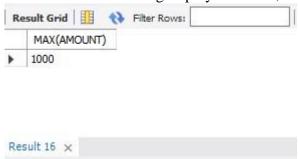
Result 13 🗙



15. SELECT BNAME, count(\*) from DEPOSIT, CUSTOMER where deposit.CNAME CUSTOMER.CNAME group by BNAME;



16. SELECT BNAME, count(\*) from DEPOSIT, CUSTOMER where deposit.CNAME = CUSTOMER.CNAME group by BNAME;



17. select count(customer.CNAME) from customer where customer.CNAME IN (select deposit.cname from deposit) and customer.CNAME IN (select borrow.cname from borrow);



Result 17 🗙

#### **ADVANCED DBMS LAB**

#### **Experiment No.: 3**

#### <u>Aim</u>

To familiarize with set operations

### Batch: RMCA S2B

Roll No: 41

Name: SREELAKSHMI R

Date: 19-04-2022

#### **QUESTION**

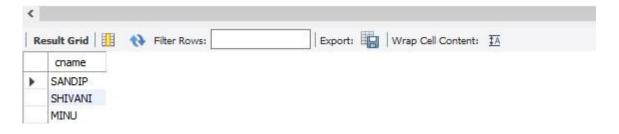
- 1. List all the customers who are depositors but not borrowers.
- 2. List all the customers who are both depositors and borrowers
- 3. List all the depositors having deposit in all the branches where Sunil is having Account
- 4. List all the customers living in city NAGPUR and having branch city

#### **BOMBAYor DELHI**

- 5. List all the depositors living in city NAGPUR
- 6. List all the depositors living in the city NAGPUR and having branch in city BOMBAY
- 7. List the branch cities of Anil and Sunil
- 8. List the customers having deposit greater than 1000 and loan less than 10000.
- 9. List the cities of depositors having branch VRCE.
- 10. List the depositors having amount less than 1000 and living in the same city as Anil
- 11. List all the cities where branches of Anil and Sunil are locate
- 12. List the amount for the depositors living in the city where Anil is living

#### PROCEDURE AND OUTPUT SCREENSHOT

1. Select cname from deposit where cname not in (select cname from borrow);



2. SELECT CNAME FROM DEPOSIT UNION(SELECT CNAME FROM BORROW);



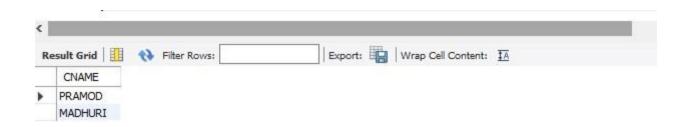
**3.** SELECT D1.CNAME FROM DEPOSIT D1 WHERE D1.BNAME IN (SELECT D2.BNAME FROM DEPOSIT D2 WHERE D2.CNAME= 'SUNIL');



**4.** SELECT C1.CNAME FROM CUSTOMER C1,DEPOSIT D1, BRANCH B1 WHERE C1.CITY = 'NAGPUR' AND C1.CNAME = D1.CNAME AND D1.BNAME = B1.BNAME AND B1.CITY IN ('BOMBAY','DELHI');



**5.** SELECT Distinct(CUSTOMER.CNAME) from CUSTOMER, DEPOSIT WHERE City='NAGPUR';



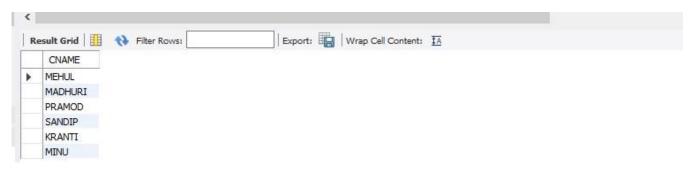
6. SELECT C1.CNAME FROM CUSTOMER C1, DEPOSIT D1, BRANCH B1 WHERE C1.CITY = 'NAGPUR' AND C1.CNAME = D1.CNAME AND D1.BNAME = B1.BNAME AND B1.CITY IN ('BOMBAY');



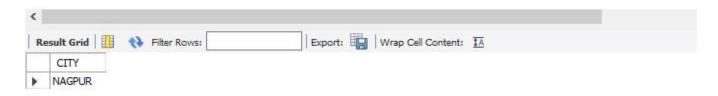
7. SELECT B1.CITY FROM DEPOSIT D1, BRANCH B1 WHERE D1.BNAME = B1.BNAME AND D1.CNAME IN ('SUNIL', 'ANIL');



**8.** SELECT DISTINCT D1.CNAME FROM deposit D1, borrow B1 WHERE D1.AMOUNT>1000 AND B1.AMOUNT<10000;



**9.**SELECT B1.CITY FROM deposit D1, branch B1 WHERE D1.BNAME=B1.BNAME AND B1.BNAME='VRCE';



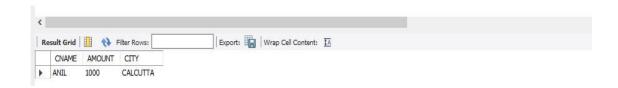
**10**.SELECT D1.CNAME FROM DEPOSIT D1, CUSTOMER C1, CUSTOMER C2 WHERE C1.CITY=C2.CITY AND C2.CNAME ='ANIL' AND C1.CNAME AND D1.AMOUNT <1000;



**11.**SELECT B1.CITU FROM BRANCH B1 WHERE B1.BNAME IN(SELECT D1.BNAME FROM DEPOSIT D1.CNAME IN('ANIL', 'SUNIL'));



**12**.SELECT DISTINCT(D1.CNAME),D1.AMOUNT ,C1.CITY FROM deposit D1, CUSTOMER C1, BRANCH B1 WHERE D1.CNAME=C1.CNAME AND C1.CITY IN(SELECT C2.CITY FROM customer C2 WHERE C2.CNAME='ANIL');



#### **ADVANCED DBMS LAB**

#### **Experiment No.: 4**

#### <u>Aim</u>

To familiarize with join or cartesian product

Name: SREELAKSHMI R

Roll No:41

Batch:RMCA S2B

Date:6-05-2022

#### **QUESTIONS**

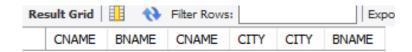
- 1. Give name of customers having living city BOMBAY and branch city NAGPUR
- 2. Give names of customers having the same living city as their branch city
- 3. Give names of customers who are borrowers as well as depositors and having city NAGPUR.
- 4. Give names of borrowers having deposit amount greater than 1000 and loan amount greater than 2000.
- 5. Give names of depositors having the same branch as the branch of Sunil
- 6. Give names of borrowers having loan amount greater than the loan amount of Pramod
- 7. Give the name of the customer living in the city where branch of depositor Sunil is located.
- 8. Give branch city and living city of Pramod
- 9. Give branch city of Sunil and branch city of Anil
- 10. Give the living city of Anil and the living city of Sunil.

#### PROCEDURE AND OUTPUT

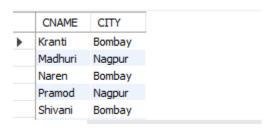
1. SELECT D1.CNAME,D1.BNAME,C1.CNAME,C1.CITY,B1.CITY,B1.BNAME

FROM DEPOSIT D1,CUSTOMER C1,BRANCH B1 WHERE C1.CITY = 'BOMBAY' AND

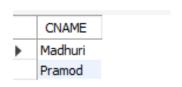
B1.CITY = 'NAGPUR' AND D1.CNAME = C1.CNAME AND D1.BNAME = B1.BNAME;



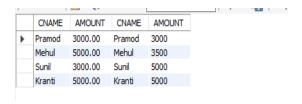
**2.** SELECT distinct(customer.CNAME), BRANCH.CITY FROM BRANCH, customer WHERE BRANCH.city = customer.city;



**3.** SELECT C1.CNAME FROM CUSTOMER C1, DEPOSIT D1, BORROW B1 WHERE C1.CITY='NAGPUR' AND C1.CNAME=D1.CNAME AND D1.CNAME = B1.CNAME;



**4.** SELECT BR1.CNAME, BR1.AMOUNT, D1.CNAME, D1.AMOUNT FROM BORROW BR1,DEPOSIT D1 WHERE D1.CNAME = BR1.CNAME AND D1.AMOUNT > 1000 AND BR1.AMOUNT > 2000;



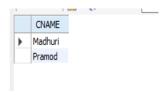
**5.** SELECT D1.CNAME FROM DEPOSIT D1 WHERE D1.BNAME IN (SELECT D2.BNAME FROM DEPOSIT D2 WHERE D2.CNAME = 'SUNIL');



6. SELECT BR1.CNAME,BR1.AMOUNT FROM BORROW BR1 WHERE BR1.AMOUNT > ALL (SELECT BR2.AMOUNT FROM BORROW BR2 WHERE BR2.CNAME = 'PRAMOD');



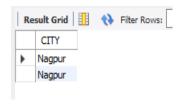
7. SELECT C.CNAME FROM CUSTOMER C WHERE C.CITY IN (SELECT B.CITY FROM BRANCH B WHERE B.BNAME IN (SELECT D.BNAME FROM DEPOSIT D WHERE D.CNAME='SUNIL'));



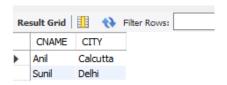
**8.** SELECT B1.CITY, C1.CITY FROM BRANCH B1,CUSTOMER C1, DEPOSIT D1
WHERE C1.CNAME = 'PRAMOD' AND C1.CNAME = D1.CNAME AND D1.BNAME = B1.BNAME;



9. SELECT B1.CITY FROM DEPOSIT D1, BRANCH B1 WHERE D1.BNAME = B1.BNAME AND D1.CNAME IN ('SUNIL', 'ANIL');



**10.** SELECT C1.CNAME, C1.CITY FROM CUSTOMER C1 WHERE C1.CNAME = 'ANIL' OR C1.CNAME = 'SUNIL';



#### ADVANCED DBMS LAB

**Experiment No.: 5** 

Name: Sreelakshmi R

Roll No:41

**Batch: S2B RMCA** 

Date: 6-05-2022

#### <u>Aim</u>

To familiarize with Group by and Having clause

#### **Questions**

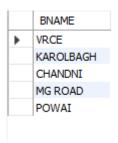
- 1.List the branches having sum of deposit more than 5000.
- 2.List the branches having sum of deposit more than 500 and located in city BOMBAY
- 3.List the names of customers having deposited in the branches where the average deposit is more than 5000.
- 4.List the names of customers having maximum deposit
- 5.List the name of branch having highest number of depositors?
- 6. Count the number of depositors living in NAGPUR.
- 7. Give names of customers in VRCE branch having more deposite than any other customer in same branch
- 8. Give the names of branch where number of depositors is more than 5
- 9. Give the names of cities in which the maximum number of branches are located
- 10. Count the number of customers living in the city where branch is located

#### PROCEDURE AND OUTPUT

1. SELECT D.BNAME FROM DEPOSIT D, BRANCH B WHERE D.BNAME=B.BNAME AND B.CITY='BOMBAY' GROUP BY D.BNAME HAVING SUM(D.AMOUNT)>5000;



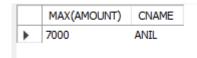
2. SELECT D.BNAME FROM DEPOSIT D, BRANCH B, customer c WHERE D.BNAME=B.BNAME and c.city='bombay' GROUP BY D.BNAME HAVING SUM(D.AMOUNT)>500;



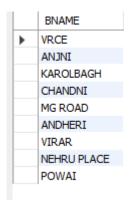
3. SELECT CNAME FROM DEPOSIT WHERE AMOUNT=(SELECT AVG(AMOUNT) FROM DEPOSIT GROUP BY BNAME HAVING AVG(AMOUNT)>5000);



4. SELECT MAX(AMOUNT), CNAME FROM deposit;



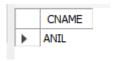
5. SELECT D1.BNAME FROM DEPOSIT D1 GROUP BY D1.BNAME HAVING COUNT(D1.CNAME) >= ALL (SELECT COUNT(D2.CNAME) FROM DEPOSIT D2 GROUP BY D2.BNAME);



6. SELECT COUNT(DEPOSIT.CNAME)FROM DEPOSIT,CUSTOMER WHERE CUSTOMER.CITY='NAGPUR';



7. SELECT CNAME FROM DEPOSIT WHERE BNAME='VRCE' AND AMOUNT=(SELECT MAX(AMOUNT) FROM DEPOSIT WHERE BNAME='VRCE');



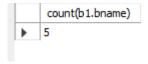
8. SELECT BNAME FROM DEPOSIT GROUP BY BNAME HAVING COUNT(BNAME)>5;



9. SELECT C.CNAME, COUNT(B.BNAME) FROM CUSTOMER C INNER JOIN BRANCH B ON C.CNAME=B.BNAME GROUP BY C.CNAME ORDER BY COUNT(B.BNAME) DESC;



10. SELECT COUNT(B1.BNAME) FROM DEPOSIT D1, BORROW B1, CUSTOMER C1 WHERE C1.CNAME=D1.CNAME AND D1.CNAME=B1.CNAME AND C1.CITY IN (SELECT CITY FROM CUSTOMER);



#### **ADVANCED DBMS LAB**

#### **Experiment No.: 6**

#### <u>Aim</u>

Create a Trigger for student table that will update another table shows the name, total marks and percentage

Name: SREELAKSHMI R

Roll No: 41

Batch:RMCA B

Date: 10-06-2022

#### **COMMANDS**

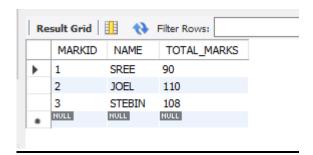
1.CREATE TABLE MARKS(MARKID INT PRIMARY KEY AUTO\_INCREMENT,NAME VARCHAR(20),TOTAL\_MARKS INT);

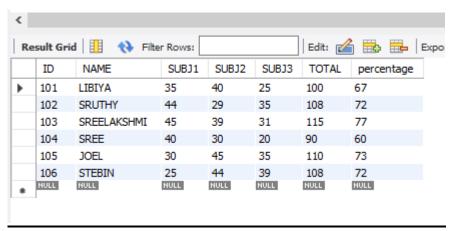
**2.**CREATE TRIGGER MARK\_TRIGGER AFTER INSERT ON STUDENTINFO FOR EACH ROW INSERT INTO MARKS(NAME, TOTAL\_MARKS) VALUES(new.NAME, new.TOTAL);

**3.**INSERT INTO STUDENTINFO(ID,NAME,SUBJ1,SUBJ2,SUBJ3) values(104,'SREE',40,30,20),(105,'JOEL',30,45,35),(106,'STEBIN',25,44,39);

4.SELECT \*FROM MARKS;

#### **OUTPUT SCREENSHOT**





#### Aim

Create a student table with fields

id,name,subject1,subject2,subject3 and total percentage. For each entry of row, update total marks and percentage using triggers in SQL

Name: SREELAKSHMI R

Roll No: 41

Batch:RMCA B

Date: 10-06-2022

#### **PROCEDURE**

step 1: start

step 2: create table student

step 3: create trigger on student table

step 4: insert records

step 5: select the table to see if the triggers has been executed

step 6: stop

#### **COMMANDS**

1.CREATE DATABASE STUDENTD;

**2.**USE STUDENTD;

**3.**CREATE TABLE STUDENTINFO(ID INT PRIMARY KEY, NAME VARCHAR(20) NOT NULL, SUBJ1 INT,SUBJ2 INT,SUBJ3 INT,TOTAL INT, percentage INT);

**4.**CREATE TRIGGER MARKCHANGE BEFORE INSERT ON STUDENTINFO FOR EACH ROW SET new.total=new.SUBJ1+new.SUBJ2+new.SUBJ3,new.percentage=new.total/150\*100;

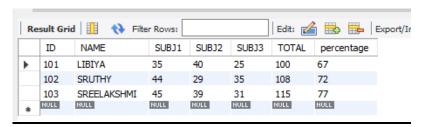
**5.**INSERT INTO studentinfo(ID,NAME,SUBJ1,SUBJ2,SUBJ3) VALUES(103,'SREELAKSHMI',45,39,31);

**6.**INSERT INTO studentinfo(ID,NAME,SUBJ1,SUBJ2,SUBJ3) VALUES(101,'LIBIYA',35,40,25);

7.INSERT INTO studentinfo(ID,NAME,SUBJ1,SUBJ2,SUBJ3) VALUES(102,'SRUTHY',44,29,35);

**8.**SELECT \*FROM STUDENTINFO;

#### **OUTPUT SCREENSHOT**



Name: SREELAKSHMI R

Roll No:41

Batch: MCA -B

Date:24-05-2022

#### **Experiment No.: 7**

#### <u>Aim</u>

Installation of MongoDB on Windows

#### **Procedure**

The installers for MongoDB are available in both the 32-bit and

64-bit format. The 32-bit installers are good for development and test environments. But for production environments you should use the 64-bit installers. Otherwise, you can be limited to the amount of data that can be stored within MongoDB.

#### Download & Install MongoDB on Windows

The following steps can be used to install MongoDB on Windows 10:

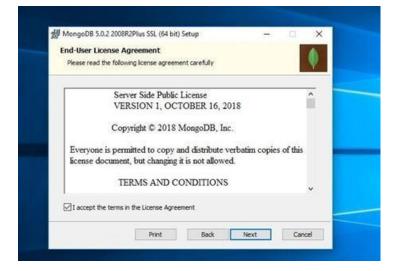
#### Step 1:

After downloading MongoDB, open the msi file and click next.



Step 2:

Accept the End-User License Agreement And Click Next

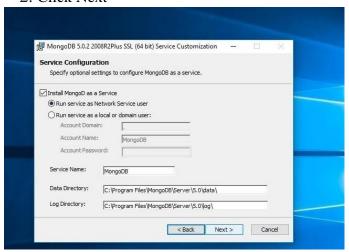


#### Step 3:

Click on the "complete" button to install all of the components. The custom option can be used to install selective components or if you want to change the location of the installation.

1. Select "Run service as Network Service user". Make a note of the data directory, we'll need this later.

#### 2. Click Next

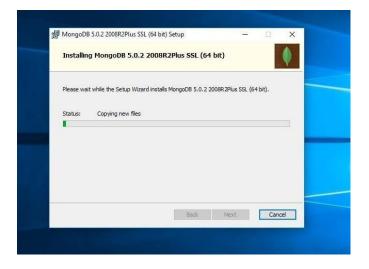


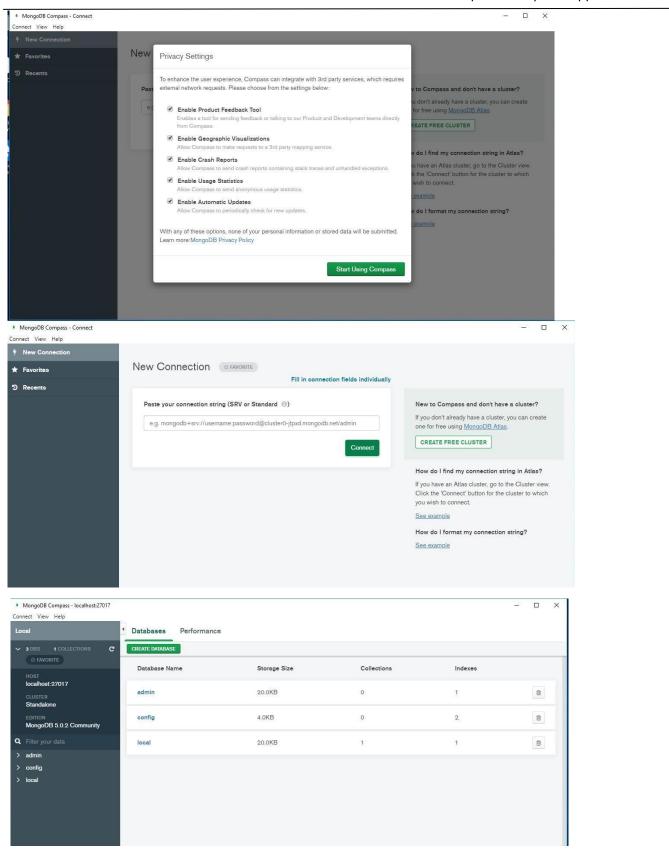
#### Step 4:

Click on the Install button to start the installation. Installation begins.

Click next once completed.

Click on the Finish button to complete the installation.





#### **Experiment No.: 8**

<u>Aim</u>

Designing Databases using NoSQL: MongoDB

Name: SREEELAKSHMI R

Roll No:41

Batch: MCA -B

Date:24-05-2022

#### **Procedure**

Download correct mongodb driver for PHP, based on your PHP

version, Architecture and whether Thread Safety is enabled. You can get that information from the phpinfo page.

Do the following steps to install and configure MongoDB driver on Windows XAMPP Server.

1. Download the latest stable version of the PHP MongoDB driver from following URL https://pecl.php.net/package/mongodb.

Available Releases			
State	Release Date	Downloads	
stable	2017-10-30	mongodb-1.3.2.tgz (904.0kB) 💶 🖳	
stable	2017-10-16	mongodb-1.3.1.tgz (904.0kB) ■D	
stable	2017-09-19	mongodb-1.3.0.tgz (906.1kB) ■DLL	
	stable stable	stable 2017-10-30 stable 2017-10-16	

- 2. Extract the archive File.
- 3. Copy the php\_mongodb.dll file from the extracted folder to the PHP extension directory. this is usually the "C:\xampp\php\ext" folder in XAMPP Server.
- 4. Open the php.ini file inside your PHP installation (C:\xampp\php) and add the following line:

#### extension=php\_mongodb.dll

5. Save the file and close it. Restart the Apache web server.

Test MongoDB Connection From PHP Script

Let's write a very simple PHP program that creates a connection to the MongoDB server and dump the connection status.

Add following PHP code to your php script and access from the Web browser. The above PHP example will output something similar to:

#### <?php

```
$connection = new MongoDB\Driver\Manager(''mongodb://localhost:27017'');
var_dump($connection);
?>
```

#### Result

#### **ADVANCED DBMS LAB**

#### **EXPERIMENTNO:9**

Name:Sreelakshmi R

RollNo:41

**Batch: MCA** 

Date: 3-06-2022

#### AIM:

Query Processing: Performing CRUD operations with NoSQL database

#### **PROCEDURE:**

#### 1.CREATE

use databasename: To create Database.

```
> use db1
switched to db db1
```

show dbs: Listing All Databases.

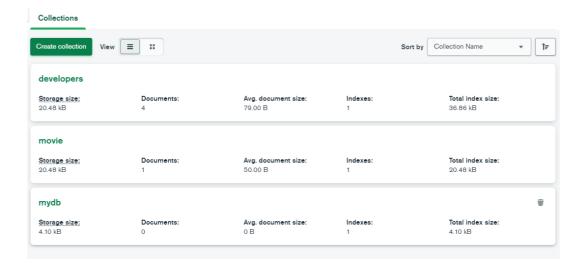
```
> show dbs
AJCE 0.000GB
admin 0.000GB
config 0.000GB
local 0.000GB
mca2023a 0.000GB
```

db.createCollection: Creating Collections(Tables).

```
> db.createCollection("mydb")
{ "ok" : 1 }
> db.createCollection("movie")
{ "ok" : 1 }
```

show Collections: To show Collections.

```
> show collections
developers
employees
movie
mydb
```



#### Insert(): Inserting Values to Collection

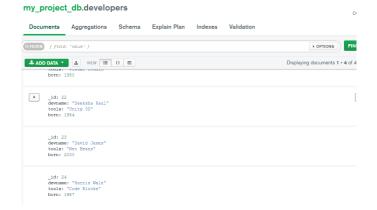
#### InsertMany():

```
> db.developers.insertMany(
... [
... { _id: 20, devname: "John Wick", tools: "Visual Studio", born: 1948 },
... { _id: 21, devname: "Ganesh Roy", tools: "Net Beans", born: 1945 },
... { _id: 22, devname: "Deeksha Raul", tools: "Unity 3D", born: 1954 }
... ]
... )
{ "acknowledged" : true, "insertedIds" : [ 20, 21, 22 ] }
```

#### 2.READ

#### Find():

```
> db.movie.find()
{ "_id" : ObjectId("629987c9542a9d332df6fc69"), "name" : "Avengers: Endgame" }
{ "_id" : ObjectId("62998ffd542a9d332df6fc6a"), " name " : "Avengers: Infinity War" }
{ "_id" : ObjectId("62998ffd542a9d332df6fc6b"), "name " : "Avengers: Endgame" }
> db.developers.find()
{ "_id" : 20, "devname" : "John Wick", "tools" : "Visual Studio", "born" : 1948 }
{ "_id" : 21, "devname" : "Ganesh Roy", "tools" : "Net Beans", "born" : 1945 }
{ "_id" : 22, "devname" : "Deeksha Raul", "tools" : "Unity 3D", "born" : 1954 }
```



#### 3.UPDATE

#### Update();

```
> db.developers.update({"devname":"Deeksha Raul"},{$set:{"devname":"meena"}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.developers.find()
{ "_id" : 20, "devname" : "John Wick", "tools" : "Visual Studio", "born" : 1948 }
{ "_id" : 21, "devname" : "Ganesh Roy", "tools" : "Net Beans", "born" : 1945 }
{ "_id" : 22, "devname" : "meena", "tools" : "Unity 3D", "born" : 1954 }
```

#### UpdateMany();

```
> db.developers.updateMany({"devname":"Johny"}, { $set: {location: "USA"}})
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 1 }
> db.developers.find()
{ "_id" : 20, "devname" : "Johny", "tools" : "Visual Studio", "born" : 1948, "location" : "USA" ]
{ "_id" : 21, "devname" : "Ganesh Roy", "tools" : "Net Beans", "born" : 1945 }
{ "_id" : 22, "devname" : "meena", "tools" : "Unity 3D", "born" : 1954 }
```

#### 4.DELETE

#### DeleteOne():

```
> db.developers.deleteOne({ location: "USA" })
{ "acknowledged" : true, "deletedCount" : 1 }
> db.developers.find()
{ "_id" : 21, "devname" : "Ganesh Roy", "tools" : "Net Beans", "born" : 1945 }
{ "_id" : 22, "devname" : "meena", "tools" : "Unity 3D", "born" : 1954 }
```

#### DeleteMany():

```
> db.movie.deleteMany({ })
{ "acknowledged" : true, "deletedCount" : 3 }
> db.movie.find()
> _
```

#### **Experiment No.: 10**

#### <u>Aim</u>

PHP form data to mongodb

#### **PROCEDURE**

<?php

Name: SREELAKSHMI R

Roll No: 41

**Batch: RMCA-B** 

Date:06/06/2022

```
$con = new MongoDB\Driver\Manager('mongodb://localhost:27017');
$last_name=$_POST["lastname"];
$rollno=$_POST["rollno"];
$passwd=$_POST["password"]; global
$con;
$writer=new MongoDB\Driver\Bulkwrite;
$writer->insert(["name"=>$name,"
rollno"=>$rollno,"passwd"=>$passwd,"lastname"
=>$last_name]);
$con->executeBulkWrite('jesdb.insertion',$writer);
die(); }
?>
<html>
<head>
  <title>Document</title>
</head>
<body>
  <h2>insert to mongo</h2>
  <form action="" method="POST">
    <input type="text" name="name" placeholder="name">
```

#### **OUTPUT**

