20MCA134 – ADVANCED DBMS LAB

Lab Report Submitted By

BHADRA RAJAN

Reg. No.: AJC21MCA-2048

In Partial fulfilment 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. Koovapally, 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 DBMS LAB”** is the bonafide work of **BHADRA RAJAN (AJC21MCA-2048)** in partial fulfilment of the requirements for the award of the Degree of Master of Computer Applications under APJ Abdul Kalam Technological University duringthe year **2021-22.**

Ms. Shelly Shiju George
Lab In- Charge

Rev. Fr. Dr. Rubin Thottupurathu Jose
Head of the Department

Internal Examiner

External Examiner

CONTENT

	marks int not null (>=0 & <=100) Insert the data into these tables and perform operations		
7	Create following tables in the SETOPR DB 1) MCA1(s1_Rollno int, s1_Name char(20), Subject char(20)) 2) MCA2(s2_Rollno int, s2_Name char(20), Subject char(20)) 3) MCA3(s3_Rollno int, s3_Name char(20), Subject char(20)) And perform operations	21-4-22	**28**
8	Create following tables in NDB Database 1) teacher(id int,name char(20),place int, dept, int, salary int); 2) dept(id int, dept char(50)); 3) place(id int, place char(20)); 4) salary(id int, salary char(20)); Insert 5 teachers details (sunil,popo,appu,nandu,ammu)Insert 5 dept Insert 5 places Insert salary table as (1,50000), (2,60000) and perform operations.	28-4-22	**32**
9	Create following table MCA(Roll,Name,Age,Phone,Mark1,Mark2,Mark3) Rollno-PK House(hid,Rollno,House_Name,Place,Pin) Rollno- FK references(RollNo in MCA), hid-PK and perform operations.	5-5-22	**36**
10	Create a table student info and insert data Apply a trigger to this table	12-5-22	**39**

EXPERIMENT NO: 1

AIM

Steps to install MYSQL Workbench.

PROCEDURE

1. Open the MySQL website on a browser.

2. Select the Downloads option.

3. Select MySQL Installer for Windows.

4. Choose the desired installer and click on download.

5. After the download, open the installer.

6. It will ask for permission; when it does, click Yes. The installer will then open. Now, it willask to choose the setup type. Here, select Custom.

7. Click on Next. With this, you will install MySQL server, MySQL Workbench, and MySQL shell.

8. Open MySQL Servers, select the server you want to install, and move it to the Products/Features to be installed window section. Now, expand Applications, choose MySQL Workbench and MySQL shell.Move both of them to 'Products/Features to be installed'.

9. Click on the Next button. Now, click on the Execute button to download and install the MySQLserver, MySQL Workbench, and the MySQL shell.

10. Once the product is ready to configure, click on Next. Under Type and Networking, gowith the default settings and select Next.

11. For authentication, use the recommended strong password encryption.

12. Set your MySQL Root password and click on next.

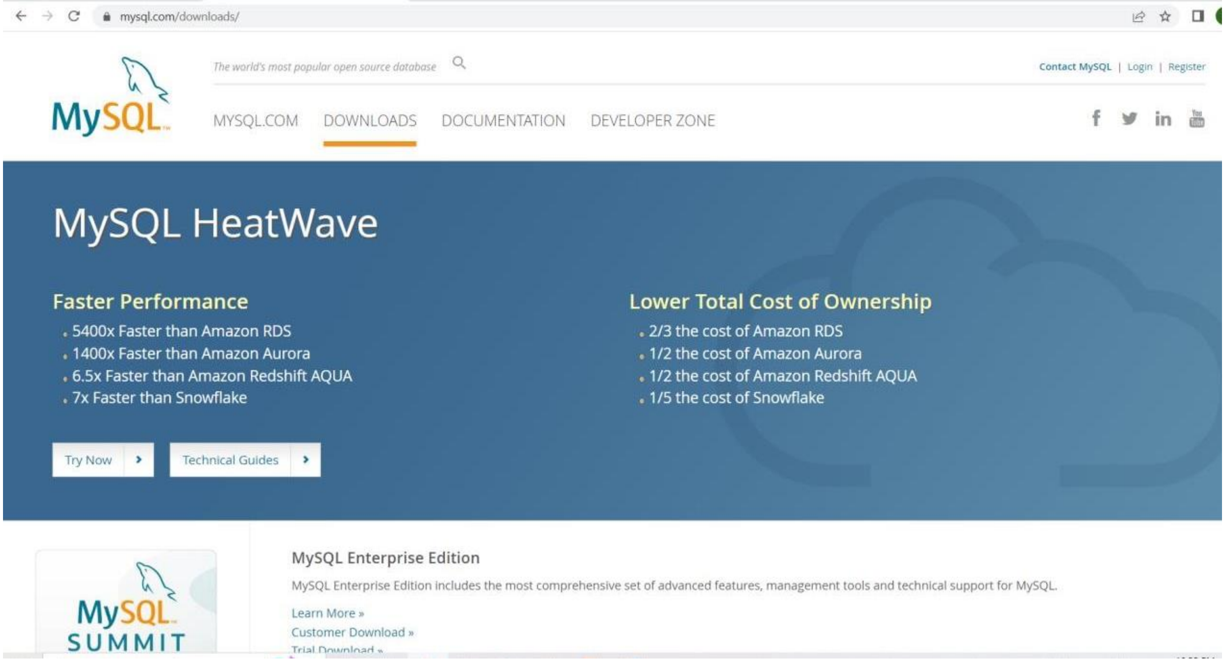
13. Go for the default windows service settings and under apply configuration, click on execute. Once the configuration is complete, click on finish.

14. Complete the installation. This will now launch the MySQL Workbench and the MySQL Shell.

Once MySQL Workbench is installed, select the Local instance and enter the password.

Now, you can use the MySQL query tab to write your SQL queries.

OUTPUT



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Faster Performance

- 5400x Faster than Amazon RDS
- 1400x Faster than Amazon Aurora
- 6.5x Faster than Amazon Redshift AQUA
- 7x Faster than Snowflake

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- 1/2 the cost of Amazon Aurora
- 1/2 the cost of Amazon Redshift AQUA
- 1/5 the cost of Snowflake

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MySQL Enterprise Edition includes the most comprehensive set of advanced features, management tools and technical support for MySQL.

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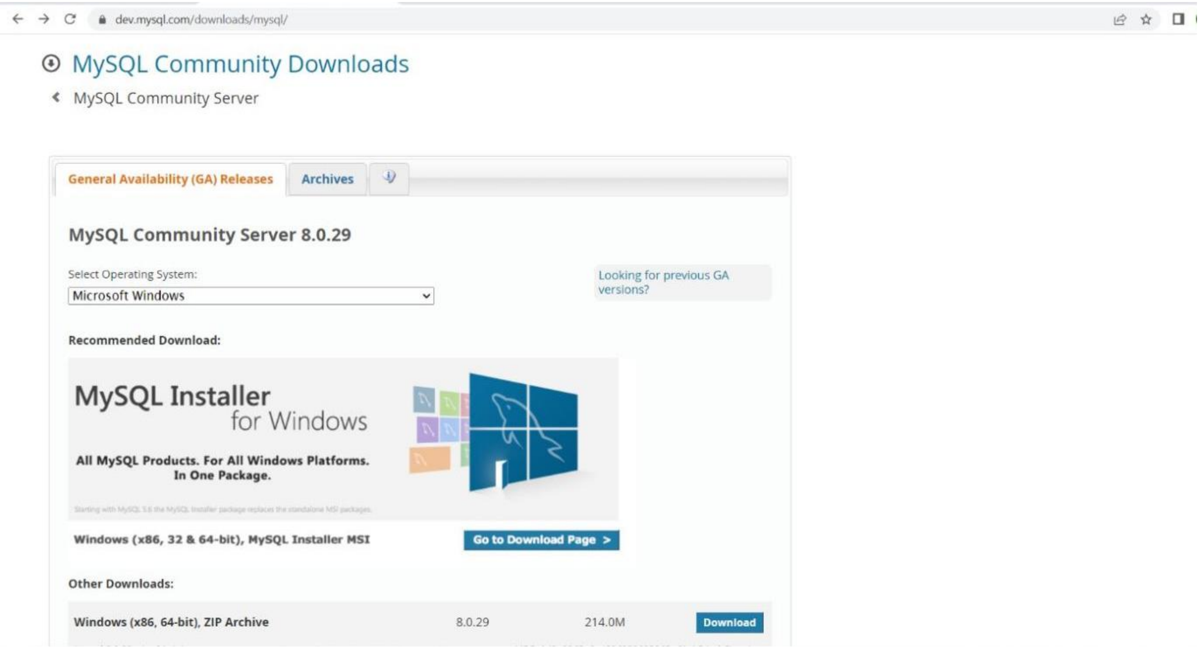
dev.mysql.com/downloads/mysql/
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MySQL Community Downloads

MySQL Community Server

MySQL Community Server 8.0.29

Select Operating System:
Microsoft Windows

Looking for previous GA versions?

Recommended Download:

MySQL Installer for Windows

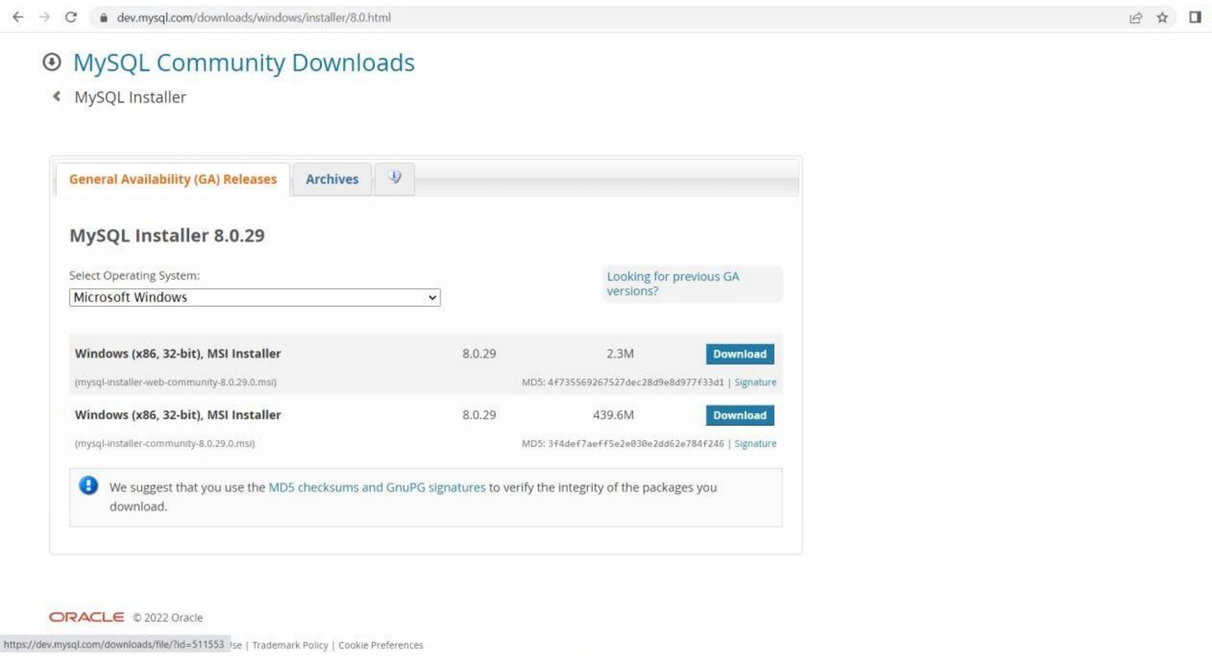
All MySQL Products. For All Windows Platforms. In One Package.

Starting with MySQL 5.6 the MySQL Installer package replaces the standalone MSI packages.

Windows (x86, 32 & 64-bit), MySQL Installer MSI

Other Downloads:

Windows (x86, 64-bit), ZIP Archive	8.0.29	214.0M	Download



dev.mysql.com/downloads/windows/installer/8.0.html

MySQL Community Downloads

‹ MySQL Installer

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MySQL Installer 8.0.29

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Windows (x86, 32-bit), MSI Installer (mysql-installer-web-community-8.0.29.0.msi)	8.0.29	2.3M	Download MD5: 4f735569267527dec28d9e8d977f33d1 | Signature
Windows (x86, 32-bit), MSI Installer (mysql-installer-community-8.0.29.0.msi)	8.0.29	439.6M	Download MD5: 3f4def7aeff5e2e030e2dd62e784f246 | Signature

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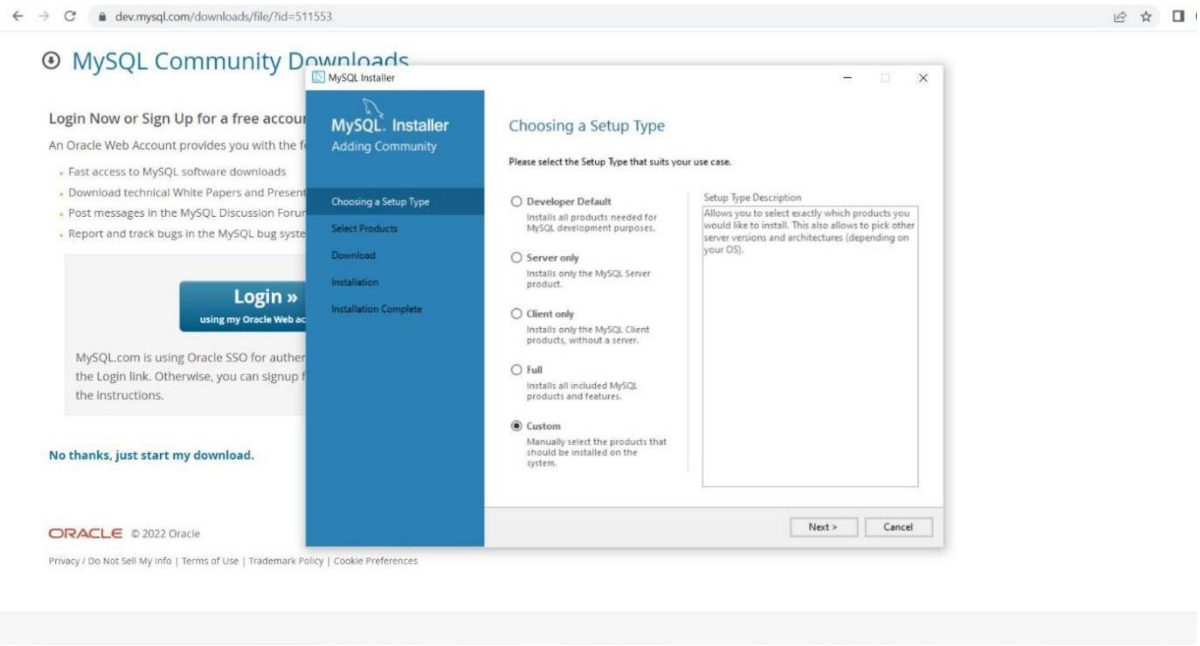

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MySQL Installer

MySQL. Installer
Adding Community

- Choosing a Setup Type
- Select Products
- Download
- Installation
- Installation Complete

Choosing a Setup Type

Please select the Setup Type that suits your use case.

○ Developer Default
Installs all products needed for MySQL development purposes.

○ Server only
Installs only the MySQL Server product.

○ Client only
Installs only the MySQL Client products, without a server.

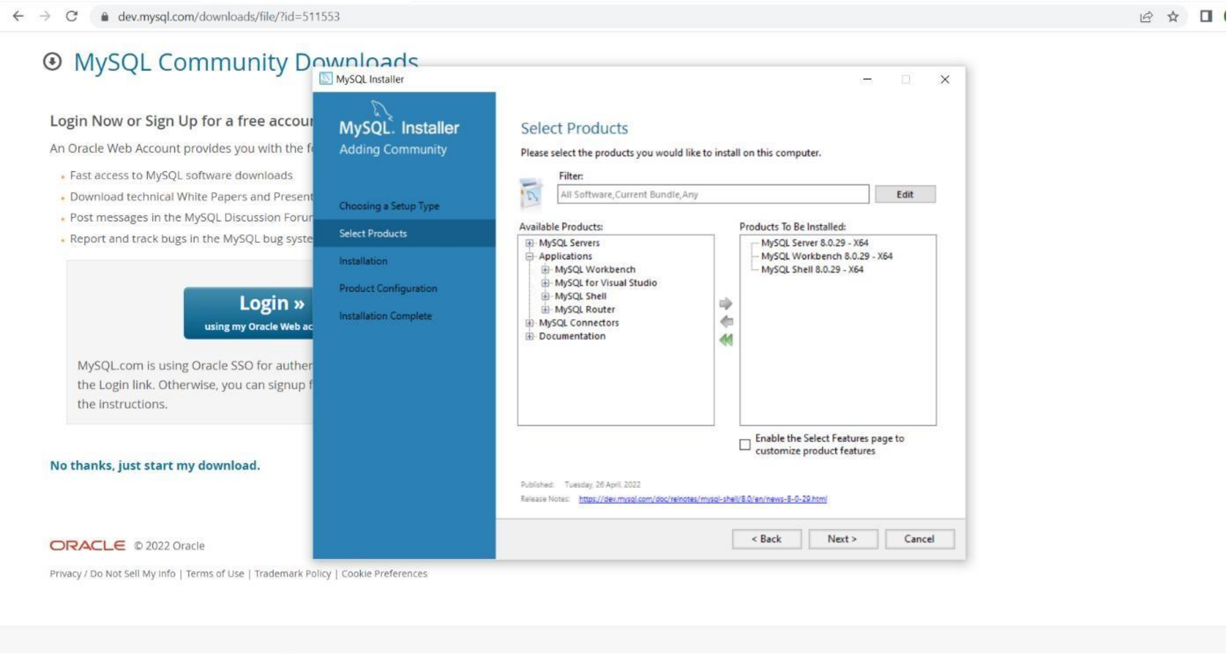
○ Full
Installs all included MySQL products and features.

● Custom
Manually select the products that should be installed on the system.

Setup Type Description

Allows you to select exactly which products you would like to install. This also allows to pick other server versions and architectures (depending on your OS).

Next > | Cancel



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MySQL Installer

Select Products

Please select the products you would like to install on this computer.

Filter: All Software,Current Bundle,Any

Available Products:

```
⊞ MySQL Servers
⊟ Applications
   ⊞ MySQL Workbench
   ⊞ MySQL for Visual Studio
   ⊞ MySQL Shell
   ⊞ MySQL Router
⊞ MySQL Connectors
⊞ Documentation
```

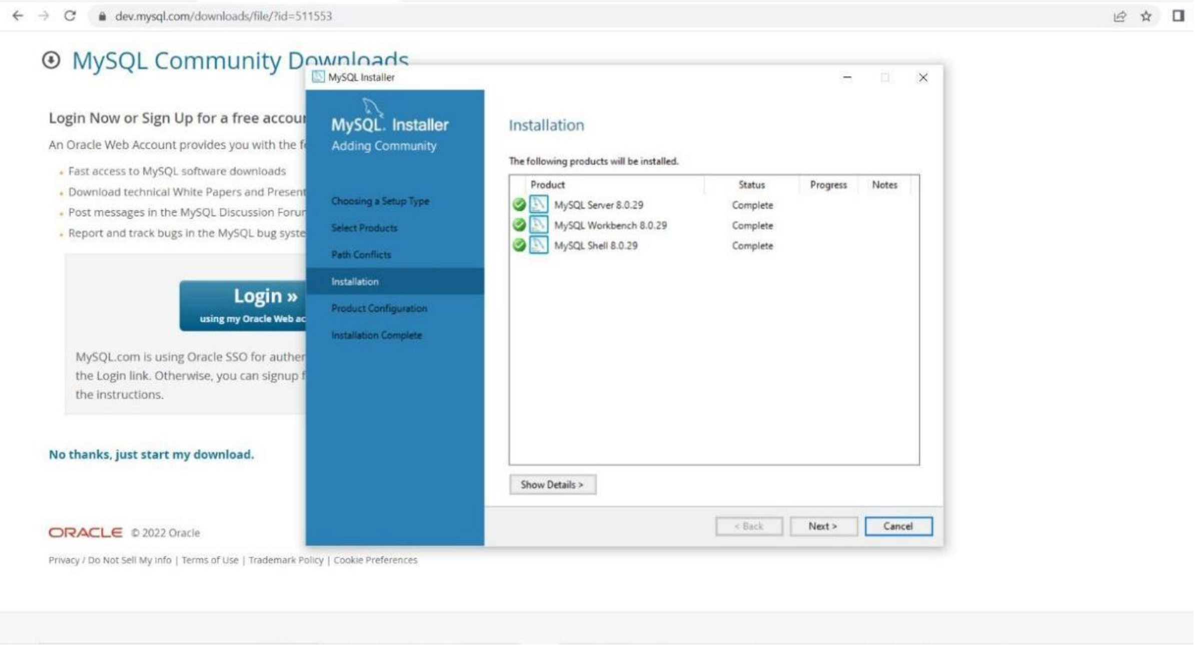
Products To Be Installed:

```
MySQL Server 8.0.29 - X64
MySQL Workbench 8.0.29 - X64
MySQL Shell 8.0.29 - X64
```

☐ Enable the Select Features page to customize product features

Published: Tuesday, 26 April, 2022

Release Notes: https://dev.mysql.com/doc/relnotes/mysql-shell/8.0/en/news-8-0-29.html



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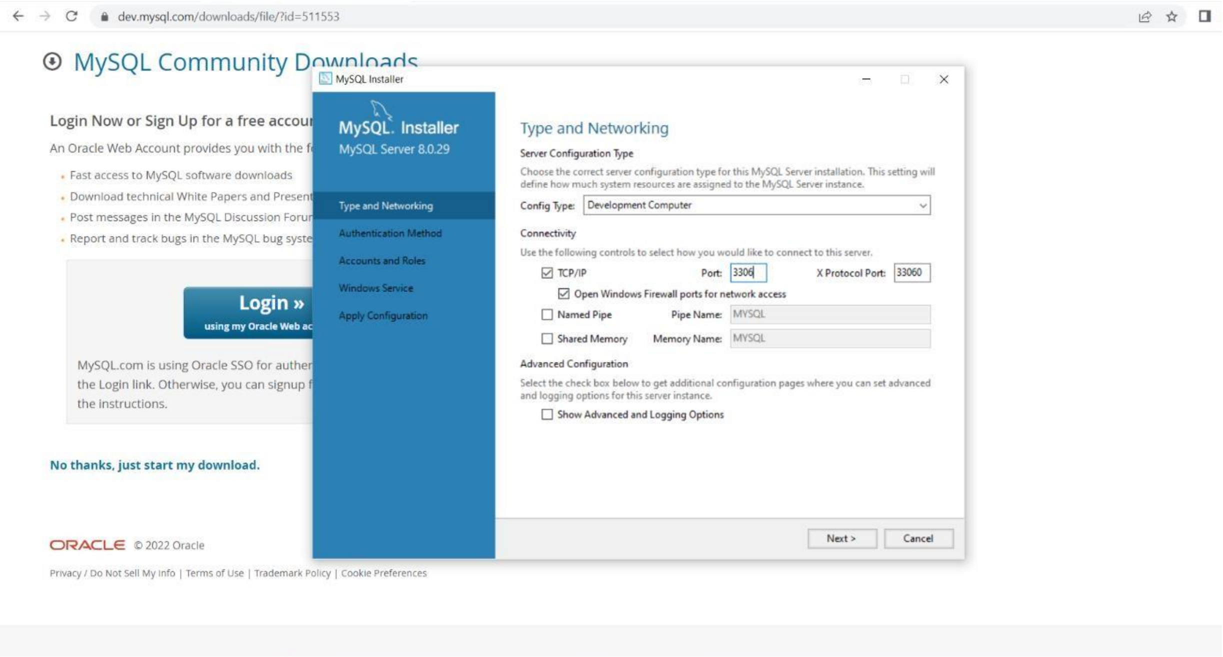
MySQL Installer

Installation

The following products will be installed.

Product	Status	Progress	Notes
MySQL Server 8.0.29	Complete		
MySQL Workbench 8.0.29	Complete		
MySQL Shell 8.0.29	Complete		



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MySQL Installer

MySQL. Installer
MySQL Server 8.0.29

Type and Networking

Server Configuration Type

Choose the correct server configuration type for this MySQL Server installation. This setting will define how much system resources are assigned to the MySQL Server instance.

Config Type: Development Computer

Connectivity

Use the following controls to select how you would like to connect to this server.

☑ TCP/IP Port: 3306 X Protocol Port: 33060

☑ Open Windows Firewall ports for network access

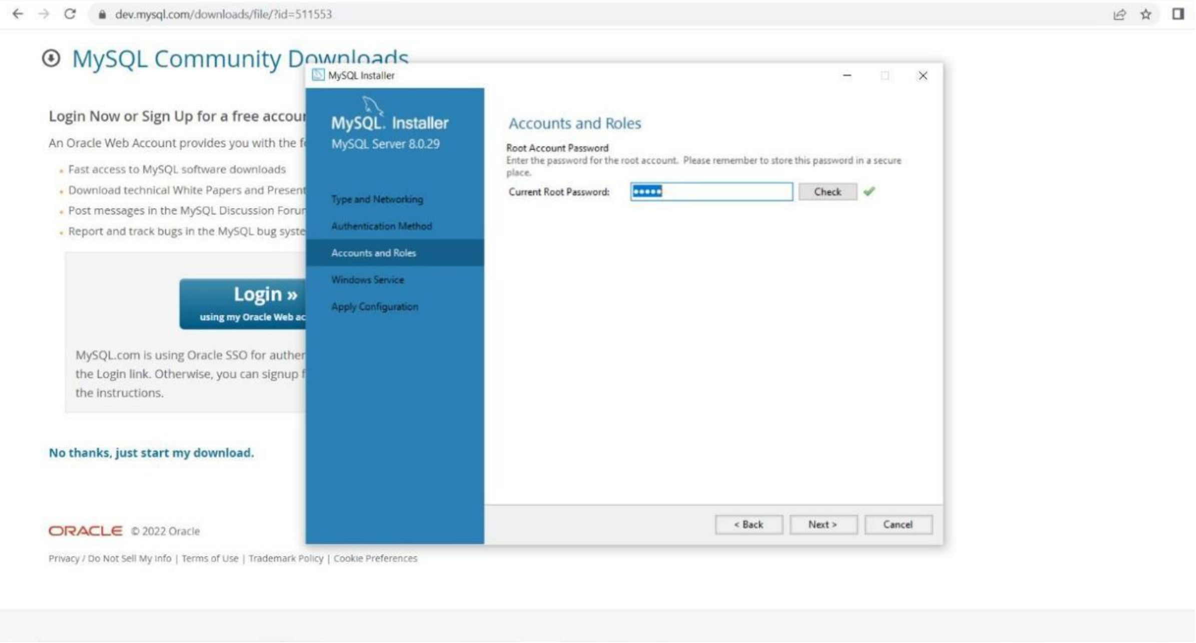
☐ Named Pipe Pipe Name: MYSQL

☐ Shared Memory Memory Name: MYSQL

Advanced Configuration

Select the check box below to get additional configuration pages where you can set advanced and logging options for this server instance.

☐ Show Advanced and Logging Options



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MySQL Installer

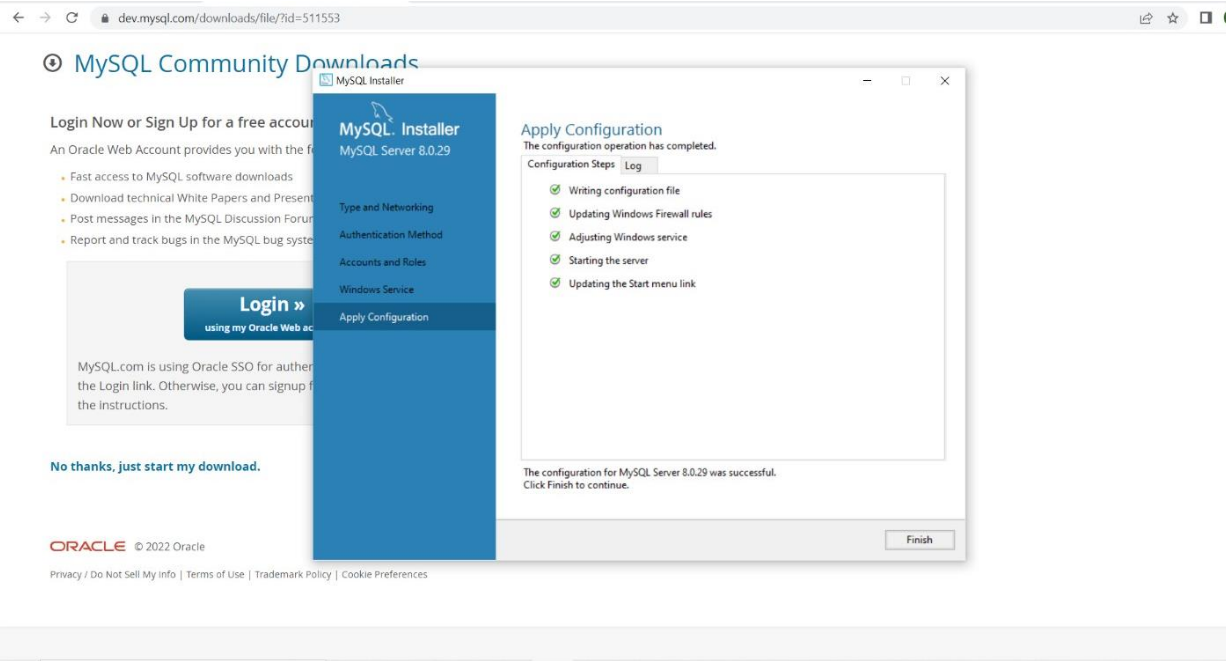
MySQL. Installer
MySQL Server 8.0.29

Accounts and Roles

Root Account Password

Enter the password for the root account. Please remember to store this password in a secure place.

Current Root Password: ●●●●● Check ✓



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MySQL Installer

MySQL. Installer
MySQL Server 8.0.29

- Type and Networking
- Authentication Method
- Accounts and Roles
- Windows Service
- Apply Configuration

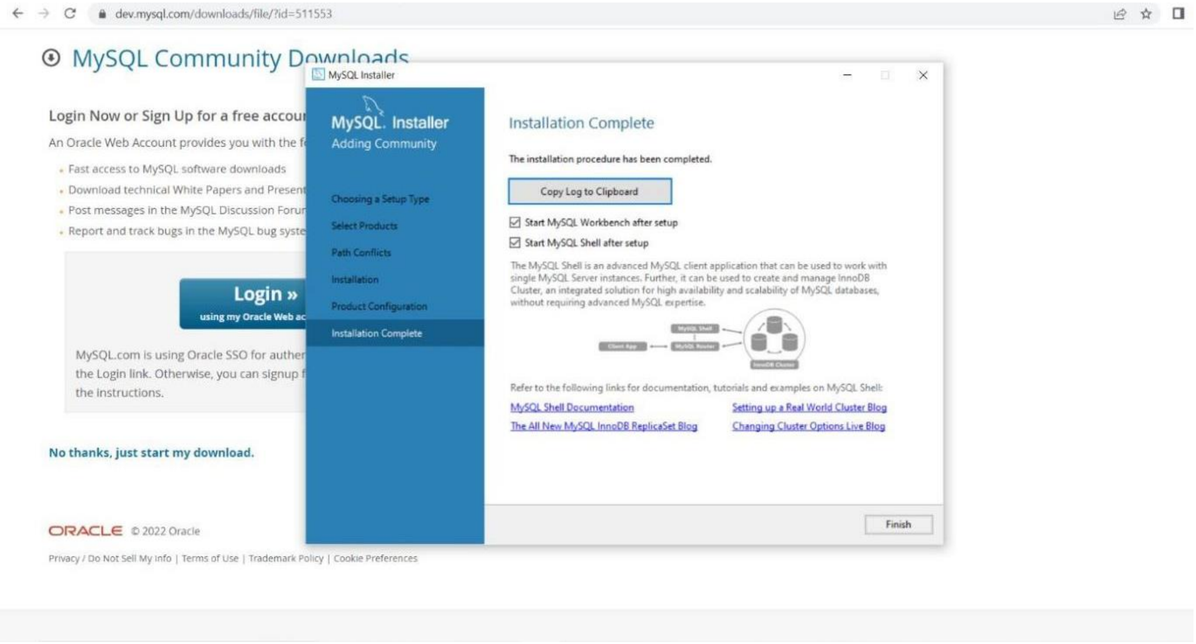
Apply Configuration

The configuration operation has completed.

Configuration Steps | Log

- ✓ Writing configuration file
- ✓ Updating Windows Firewall rules
- ✓ Adjusting Windows service
- ✓ Starting the server
- ✓ Updating the Start menu link

The configuration for MySQL Server 8.0.29 was successful.
Click Finish to continue.



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MySQL Installer

MySQL. Installer
Adding Community

- Choosing a Setup Type
- Select Products
- Path Conflicts
- Installation
- Product Configuration
- Installation Complete

Installation Complete

The installation procedure has been completed.

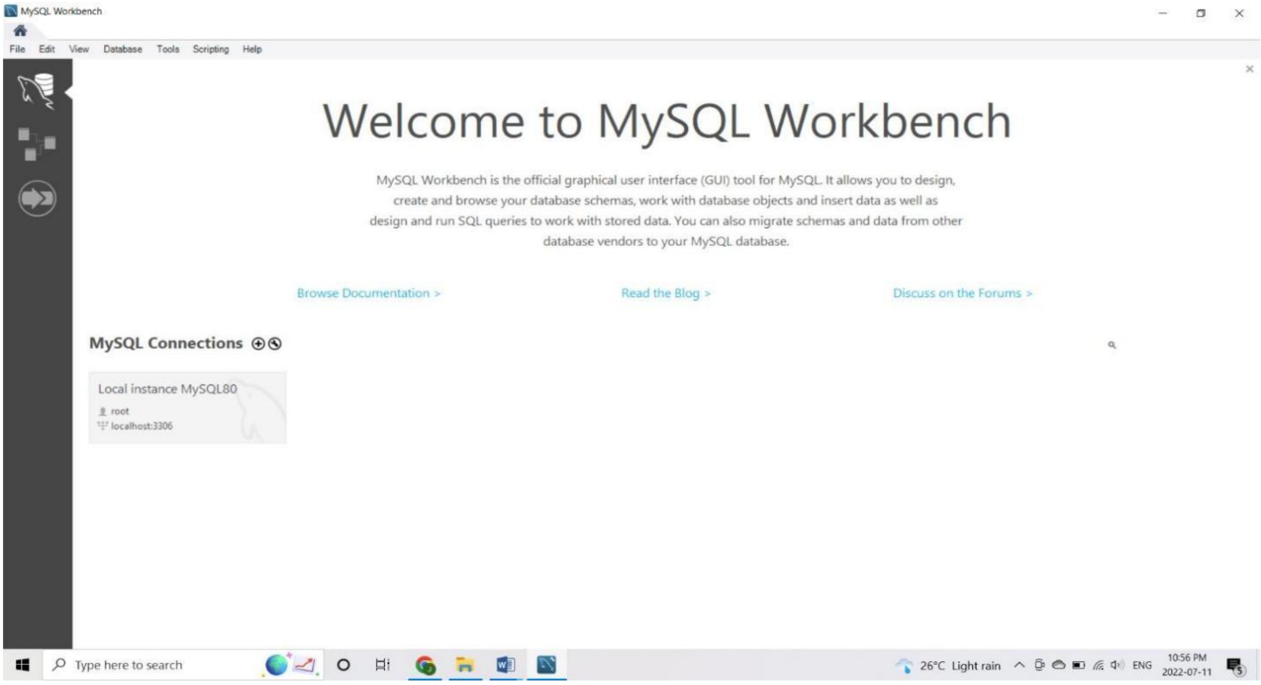
☑ Start MySQL Workbench after setup

☑ Start MySQL Shell after setup

The MySQL Shell is an advanced MySQL client application that can be used to work with single MySQL Server instances. Further, it can be used to create and manage InnoDB Cluster, an integrated solution for high availability and scalability of MySQL databases, without requiring advanced MySQL expertise.

Refer to the following links for documentation, tutorials and examples on MySQL Shell:

MySQL Shell Documentation | Setting up a Real World Cluster Blog
The All New MySQL InnoDB ReplicaSet Blog | Changing Cluster Options Live Blog



Welcome to MySQL Workbench

MySQL Workbench is the official graphical user interface (GUI) tool for MySQL. It allows you to design, create and browse your database schemas, work with database objects and insert data as well as design and run SQL queries to work with stored data. You can also migrate schemas and data from other database vendors to your MySQL database.

Browse Documentation >

Read the Blog >

Discuss on the Forums >

MySQL Connections

Local instance MySQL80
root
localhost:3306

EXPERIMENT NO: 2

AIM

Create following tables in the SAMPLE Database

TAB1

COLUMN	DATA TYPE	SIZE
ADMIN_NO	CHAR	5
NAME	CHAR	20
PHONE	CHAR	10

TAB2

COLUMN	DATA TYPE	SIZE
ROLL_NO	CHAR	5
COURSE	CHAR	20
DEPT	CHAR	10

TAB 3

COLUMN	DATA TYPE	SIZE
T1_ID	CHAR	5
T2_ID	CHAR	5
TEACHER NAME	CHAR	20

Questions

1) Create Database SAMPLE

2) Add new Column into TAB 3 Named SUBJECT (VARCHAR(30))

3) Modify the column NAME in TAB1 to STU_NAME

4) Change the size of the column PHONE to 12 in TAB1

5) ADD new column PLACE (VARCHAR(50)) in TAB 1

6) Create new Table STUDENT (Roll_No int, Name varchar(20), Semester varchar(15), Room int, primary key(Roll_No));

7) Delete 4 tables

PROCEDURE

CREATE DATABASE SAMPLE;

USE SAMPLE;

CREATE TABLE TAB1(ADMIN_NO CHAR(5),NAME CHAR(20),PHONE CHAR(10));

CREATE TABLE TAB2(ROLL_NO CHAR(5),COURSE CHAR(20),DEPT CHAR(10));

CREATE TABLE TAB3(T1_ID CHAR(5),T2_ID CHAR(5),TEACHER_NAME CHAR(20));

DESC TAB1;

DESC TAB2;

DESC TAB3;

ALTER TABLE TAB3 ADD COLUMN SUBJECT VARCHAR(30);

DESC TAB3;

ALTER TABLE TAB1 CHANGE NAME STU_NAME CHAR(20);

ALTER TABLE TAB1 MODIFY PHONE CHAR(12);

ALTER TABLE TAB1 ADD COLUMN PLACE VARCHAR(50);

CREATE TABLE STUDENT(ROLL_NO INT,NAME VARCHAR(20),SEMESTER VARCHAR(15),ROOM INT,PRIMARY KEY(ROLL_NO));

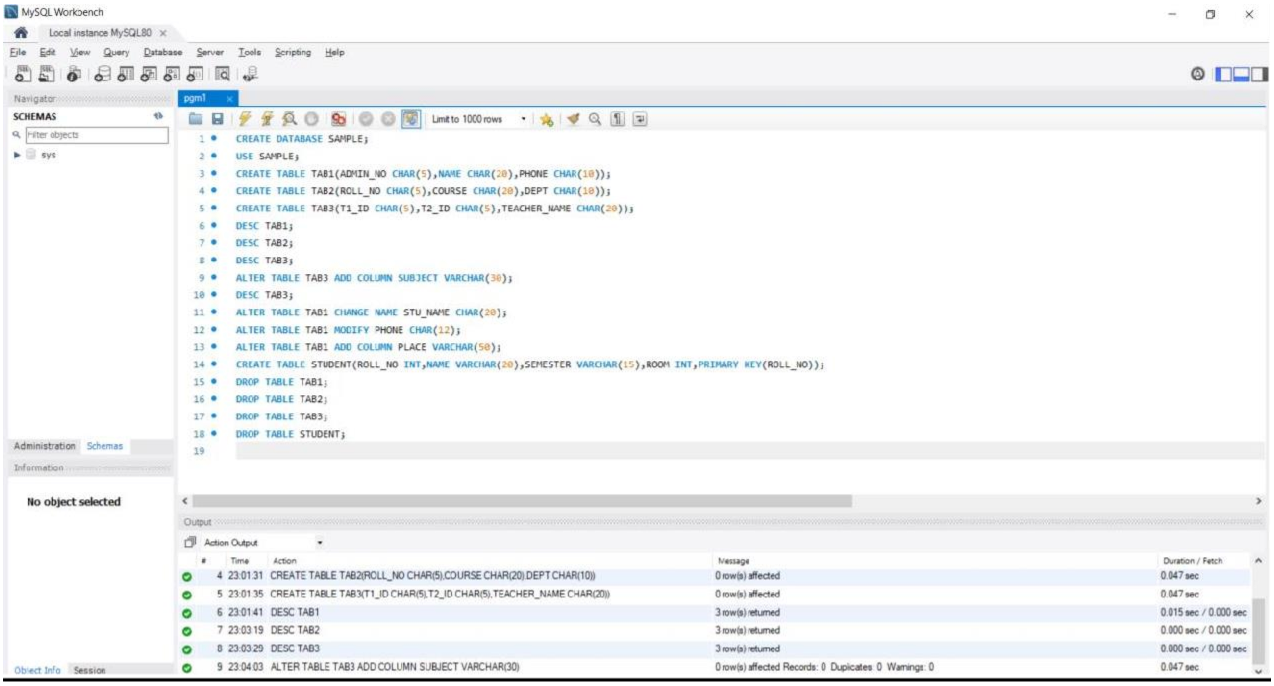
DROP TABLE TAB1;

DROP TABLE TAB2;

DROP TABLE TAB3;

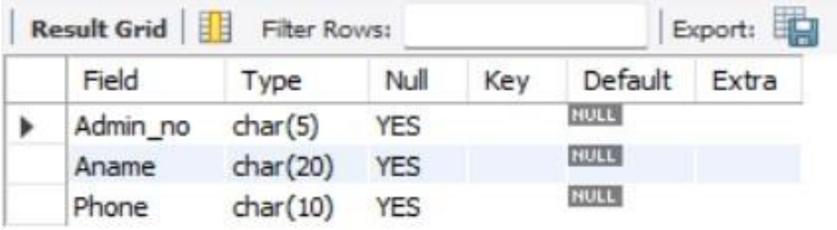
DROP TABLE STUDENT;

OUTPUT

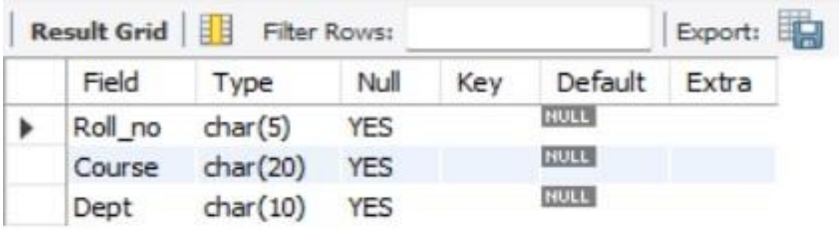


```
CREATE DATABASE SAMPLE;
USE SAMPLE;
CREATE TABLE TAB1(ADMIN_NO CHAR(5),NAME CHAR(20),PHONE CHAR(10));
CREATE TABLE TAB2(ROLL_NO CHAR(5),COURSE CHAR(20),DEPT CHAR(10));
CREATE TABLE TAB3(T1_ID CHAR(5),T2_ID CHAR(5),TEACHER_NAME CHAR(20));
DESC TAB1;
DESC TAB2;
DESC TAB3;
ALTER TABLE TAB3 ADD COLUMN SUBJECT VARCHAR(30);
DESC TAB3;
ALTER TABLE TAB1 CHANGE NAME STU_NAME CHAR(20);
ALTER TABLE TAB1 MODIFY PHONE CHAR(12);
ALTER TABLE TAB1 ADD COLUMN PLACE VARCHAR(50);
CREATE TABLE STUDENT(ROLL_NO INT,NAME VARCHAR(20),SEMESTER VARCHAR(15),ROOM INT,PRIMARY KEY(ROLL_NO));
DROP TABLE TAB1;
DROP TABLE TAB2;
DROP TABLE TAB3;
DROP TABLE STUDENT;
```

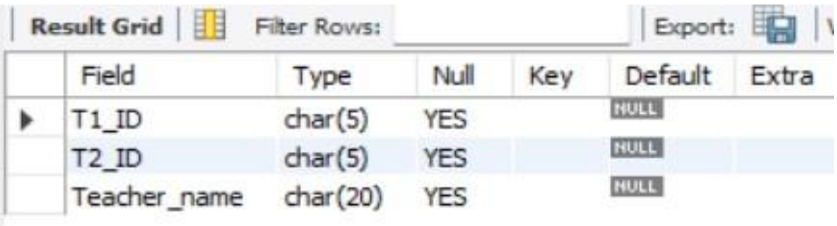
```
#  Time      Action                                                                   Message                                               Duration / Fetch
4  23:01:31  CREATE TABLE TAB2(ROLL_NO CHAR(5),COURSE CHAR(20),DEPT CHAR(10))          0 row(s) affected                                     0.047 sec
5  23:01:35  CREATE TABLE TAB3(T1_ID CHAR(5),T2_ID CHAR(5),TEACHER_NAME CHAR(20))      0 row(s) affected                                     0.047 sec
6  23:01:41  DESC TAB1                                                                3 row(s) returned                                     0.015 sec / 0.000 sec
7  23:03:19  DESC TAB2                                                                3 row(s) returned                                     0.000 sec / 0.000 sec
8  23:03:29  DESC TAB3                                                                3 row(s) returned                                     0.000 sec / 0.000 sec
9  23:04:03  ALTER TABLE TAB3 ADD COLUMN SUBJECT VARCHAR(30)                          0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0 0.047 sec
```



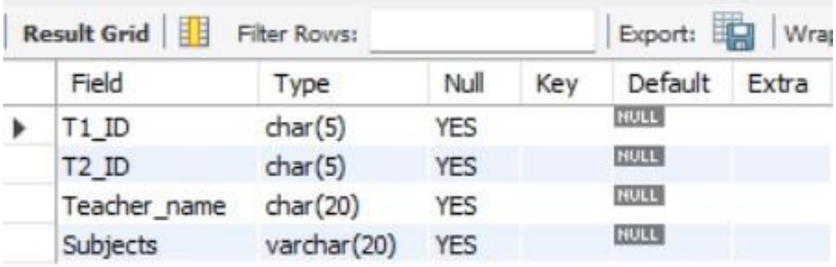
	Field	Type	Null	Key	Default	Extra
▶	Admin_no	char(5)	YES		NULL	
	Aname	char(20)	YES		NULL	
	Phone	char(10)	YES		NULL	



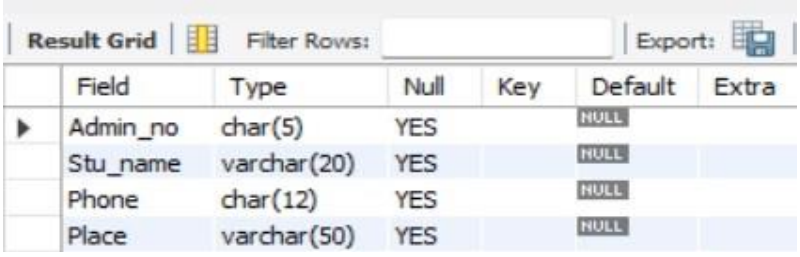
	Field	Type	Null	Key	Default	Extra
▶	Roll_no	char(5)	YES		NULL	
	Course	char(20)	YES		NULL	
	Dept	char(10)	YES		NULL	



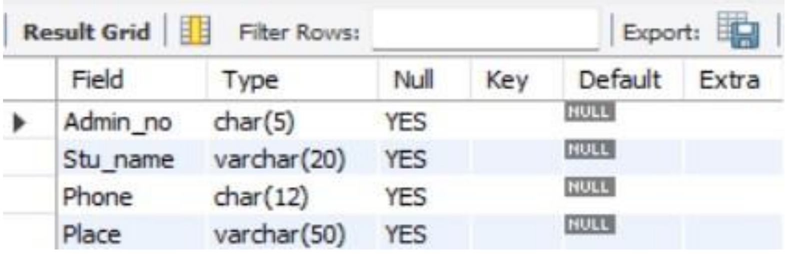
	Field	Type	Null	Key	Default	Extra
▶	T1_ID	char(5)	YES		NULL	
	T2_ID	char(5)	YES		NULL	
	Teacher_name	char(20)	YES		NULL	



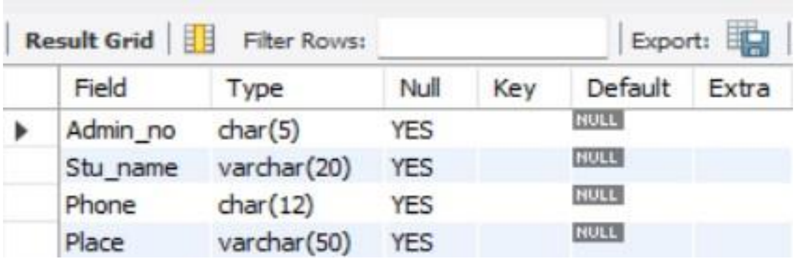
	Field	Type	Null	Key	Default	Extra
▶	T1_ID	char(5)	YES		NULL	
	T2_ID	char(5)	YES		NULL	
	Teacher_name	char(20)	YES		NULL	
	Subjects	varchar(20)	YES		NULL	



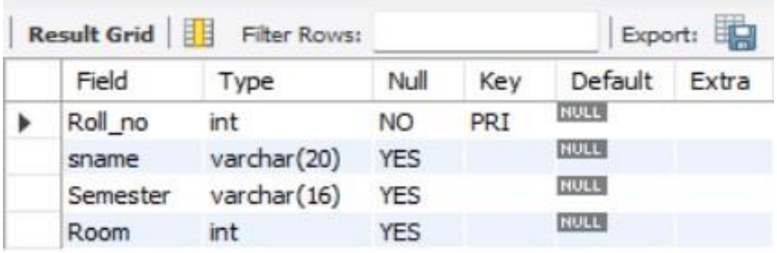
	Field	Type	Null	Key	Default	Extra
▶	Admin_no	char(5)	YES		NULL	
	Stu_name	varchar(20)	YES		NULL	
	Phone	char(12)	YES		NULL	
	Place	varchar(50)	YES		NULL	



	Field	Type	Null	Key	Default	Extra
▶	Admin_no	char(5)	YES		NULL	
	Stu_name	varchar(20)	YES		NULL	
	Phone	char(12)	YES		NULL	
	Place	varchar(50)	YES		NULL	



Field	Type	Null	Key	Default	Extra
Admin_no	char(5)	YES		NULL	
Stu_name	varchar(20)	YES		NULL	
Phone	char(12)	YES		NULL	
Place	varchar(50)	YES		NULL	



Field	Type	Null	Key	Default	Extra
Roll_no	int	NO	PRI	NULL	
sname	varchar(20)	YES		NULL	
Semester	varchar(16)	YES		NULL	
Room	int	YES		NULL	

EXPERIMENT NO: 3

AIM

Create a table personal with following fields

Rollno (int),P_Name(char(20), Address(char(20)), Phone(char(10)), Weight(float), Age (int), DOB(date)

1) Insert 10 rows of data

2) List all P_Name, Phone and Rollno

3) List all P_name where p_name=’rajan’ and weight&gt;50

4) List all P_name and phone where p_name=’Ammu’ OR weight &lt;60

5) List all records where (roll&gt;100 &amp; &lt; 200) OR weight&gt;50

6) List all P_name and Phone of (‘appu’,’Ammu’,’saji’)

7) Rewrite the above SQL with OR

8) List all records where age &gt;20 and 30 (using between)

9) List all P_name DOB between ’02-MAR-15’ and ’12-NOV-18’

10) Display all records where weight not between 20 AND 30

PROCEDURE

CREATE SAMPLE;

USE SAMPLE;

CREATE TABLE PERSONAL(ROLL_NO INT,PNAME CHAR(20),ADDRESS CHAR(20),PHONE CHAR(10),WEIGHT FLOAT,AGE INT,DOB DATE);

DESC PERSONAL;

INSERT INTO PERSONAL VALUES

(98, "MAYA", "KOTTAYAM", "8536471259", 45, 23, "2018-03-05"),

(115, "LUKKA", "ERNAKULAM", "9656471259", 49, 25, "2015-05-01"),

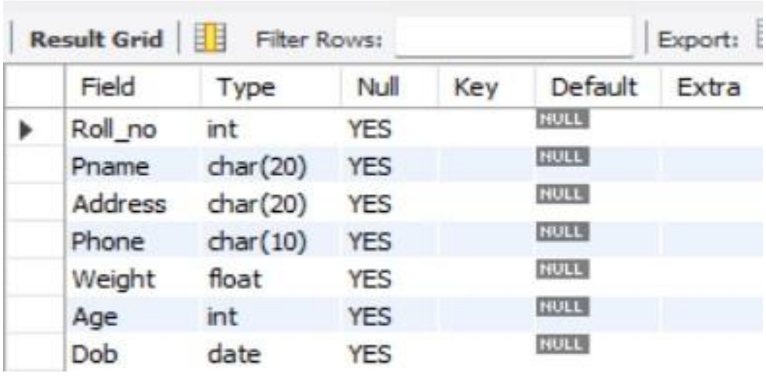
(130, "RAJAN", "KOTTARAKARA", "9996471259", 45, 12, "2020-12-12"),

(145, "AMMU", "KOTTARAKARA", "9996471259", 45, 12, "2019-12-12"),

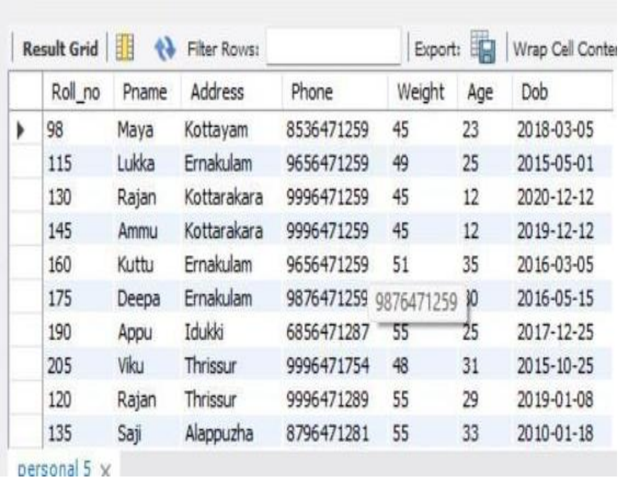
(160, "KUTTU", "ERNAKULAM", "9656471259", 51, 35, "2016-03-05"),

```
(175, "DEEPA", "ERNAKULAM", "9876471259", 38, 30, "2016-05-15"),
(190, "APPU", "IDUKKI","6856471287", 55, 25, "2017-12-25"),
205, "VIKU", "THRISSUR", "9996471754", 48, 31, "2015-10-25"),
(120, "RAJAN", "THRISSUR", "9996471289", 55, 29, "2019-01-08"),
(135, "SAJI", "ALAPPUZHA", "8796471281", 55, 33, "2010-01-18");
SELECT * FROM PERSONAL;
SELECT ROLL_NO,PNAME,PHONE FROM PERSONAL;
SELECT PNAME,WEIGHT FROM PERSONAL WHERE PNAME="RAJAN" AND WEIGHT > 50;
SELECT * FROM PERSONAL WHERE (ROLL_NO>100 AND ROLL_NO<200) OR WEIGHT > 50;
SELECT PNAME,PHONE FROM PERSONAL WHERE (PNAME="APPU" OR PNAME="AMMU" OR PNAME="SAJI");
SELECT PNAME,PHONE FROM PERSONAL WHERE (PNAME="APPU" || PNAME="AMMU" || PNAME="SAJI");
SELECT * FROM PERSONAL WHERE AGE BETWEEN 20 AND 30;
SELECT PNAME,DOB FROM PERSONAL WHERE DOB BETWEEN "2015-03-15" AND "2018-11-12";
SELECT * FROM PERSONAL WHERE WEIGHT NOT BETWEEN 20 AND 30;
```

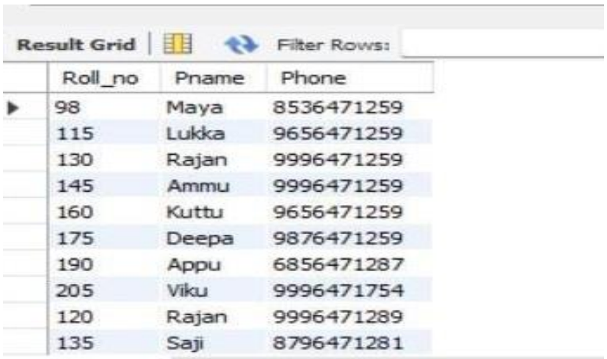
OUTPUT



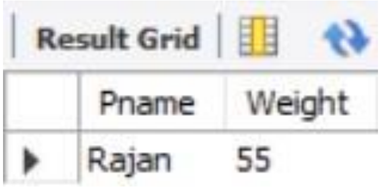
Field	Type	Null	Key	Default	Extra
Roll_no	int	YES		NULL	
Pname	char(20)	YES		NULL	
Address	char(20)	YES		NULL	
Phone	char(10)	YES		NULL	
Weight	float	YES		NULL	
Age	int	YES		NULL	
Dob	date	YES		NULL	



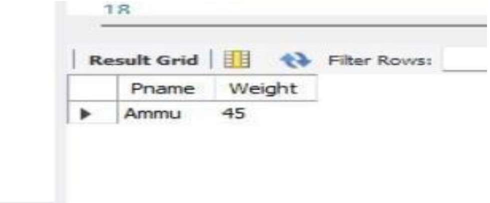
Roll_no	Pname	Address	Phone	Weight	Age	Dob
98	Maya	Kottayam	8536471259	45	23	2018-03-05
115	Lukka	Ernakulam	9656471259	49	25	2015-05-01
130	Rajan	Kottarakara	9996471259	45	12	2020-12-12
145	Ammu	Kottarakara	9996471259	45	12	2019-12-12
160	Kuttu	Ernakulam	9656471259	51	35	2016-03-05
175	Deepa	Ernakulam	9876471259	9876471259	[illegible]	2016-05-15
190	Appu	Idukki	6856471287	55	25	2017-12-25
205	Viku	Thrissur	9996471754	48	31	2015-10-25
120	Rajan	Thrissur	9996471289	55	29	2019-01-08
135	Saji	Alappuzha	8796471281	55	33	2010-01-18



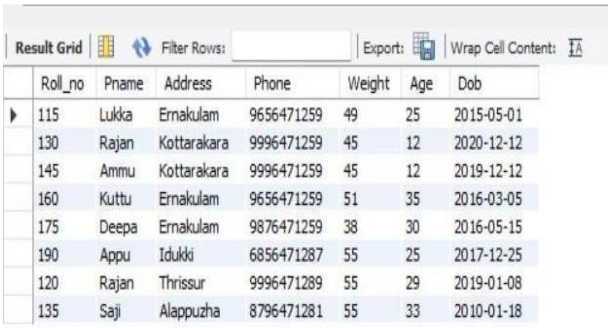
Roll_no	Pname	Phone
98	Maya	8536471259
115	Lukka	9656471259
130	Rajan	9996471259
145	Ammu	9996471259
160	Kuttu	9656471259
175	Deepa	9876471259
190	Appu	6856471287
205	Viku	9996471754
120	Rajan	9996471289
135	Saji	8796471281



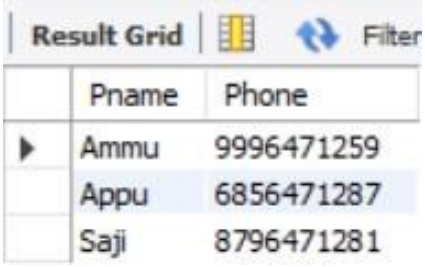
Pname	Weight
Rajan	55



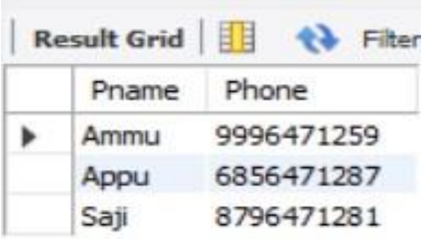
Pname	Weight
Ammu	45



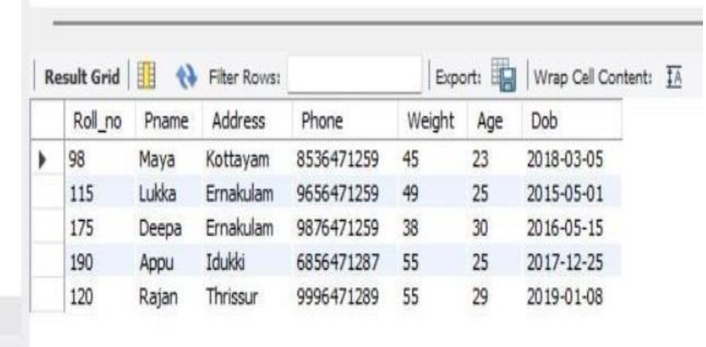
Roll_no	Pname	Address	Phone	Weight	Age	Dob
115	Lukka	Ernakulam	9656471259	49	25	2015-05-01
130	Rajan	Kottarakara	9996471259	45	12	2020-12-12
145	Ammu	Kottarakara	9996471259	45	12	2019-12-12
160	Kuttu	Ernakulam	9656471259	51	35	2016-03-05
175	Deepa	Ernakulam	9876471259	38	30	2016-05-15
190	Appu	Idukki	6856471287	55	25	2017-12-25
120	Rajan	Thrissur	9996471289	55	29	2019-01-08
135	Saji	Alappuzha	8796471281	55	33	2010-01-18



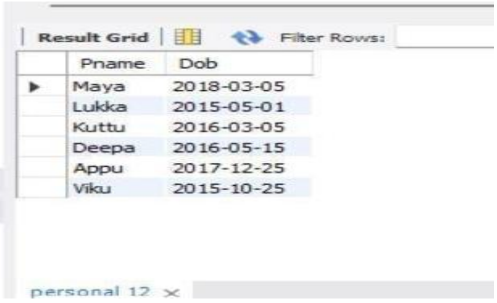
	Pname	Phone
▶	Ammu	9996471259
	Appu	6856471287
	Saji	8796471281



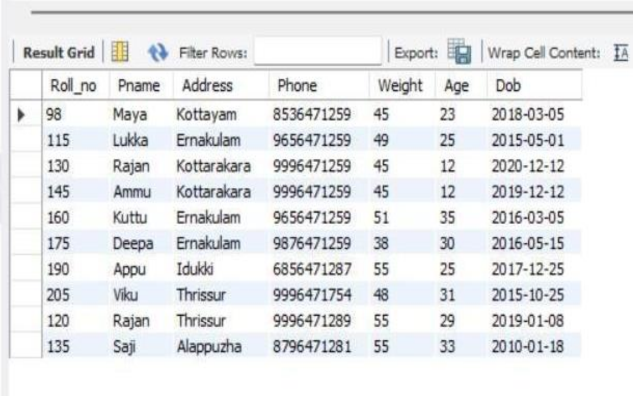
	Pname	Phone
▶	Ammu	9996471259
	Appu	6856471287
	Saji	8796471281



	Roll_no	Pname	Address	Phone	Weight	Age	Dob
▶	98	Maya	Kottayam	8536471259	45	23	2018-03-05
	115	Lukka	Ernakulam	9656471259	49	25	2015-05-01
	175	Deepa	Ernakulam	9876471259	38	30	2016-05-15
	190	Appu	Idukki	6856471287	55	25	2017-12-25
	120	Rajan	Thrissur	9996471289	55	29	2019-01-08



	Pname	Dob
▶	Maya	2018-03-05
	Lukka	2015-05-01
	Kuttu	2016-03-05
	Deepa	2016-05-15
	Appu	2017-12-25
	Viku	2015-10-25



	Roll_no	Pname	Address	Phone	Weight	Age	Dob
▶	98	Maya	Kottayam	8536471259	45	23	2018-03-05
	115	Lukka	Ernakulam	9656471259	49	25	2015-05-01
	130	Rajan	Kottarakara	9996471259	45	12	2020-12-12
	145	Ammu	Kottarakara	9996471259	45	12	2019-12-12
	160	Kuttu	Ernakulam	9656471259	51	35	2016-03-05
	175	Deepa	Ernakulam	9876471259	38	30	2016-05-15
	190	Appu	Idukki	6856471287	55	25	2017-12-25
	205	Viku	Thrissur	9996471754	48	31	2015-10-25
	120	Rajan	Thrissur	9996471289	55	29	2019-01-08
	135	Saji	Alappuzha	8796471281	55	33	2010-01-18

EXPERIMENT NO: 4

AIM

Create a table student with the following fields:

Rollno, Name, mark1, Mark2, Mark3, Mark4

Rollno - PK &amp; Auto increment

All other fields not contain NULL

Maximum mark for each subject is 100

Insert 5 rows of data

Questions

1) Print list of students Total marks&gt;=200
2) Print Rollno, Name,Mark1,Mark2,Mark3,Mark4 and Total of all students
3) Display rank list
4) List of students whose Mark1 not 20 &amp; 30
5) Display Rollno, Name, 4 marks total, and Average
6) List students details with total who average mark &gt;=80
7) Print all Students Names (duplicates eliminated).
8) Show the details of all Students whose name starts with A.
9) Find number of students in the student table

10)Find the total Marks of all students.

11)Find the average Marks.

12)Find the Maximum Mark.

PROCEDURE

CREATE DATABASE STUD;

USE STUD;

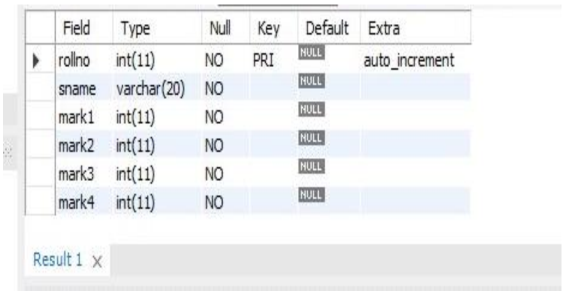
CREATE TABLE STUDENT(Roll_no INT AUTO_INCREMENT, SNAME VARCHAR(20), MARK1 INT NOT NULL CHECK(MARK1<=100), MARK2 INT NOT NULL

```
CHECK(MARK2<=100), MARK3 INT NOT NULL CHECK(MARK3<=100),MARK4 INT NOT
NULL CHECK(MARK4<=100), PRIMARY KEY(Roll_no));

INSERT INTO   STUDENT (SNAME,MARK1,MARK2,MARK3,MARK4)
VALUES("AYSHA",45,35,25,67);

INSERT INTO STUDENT(SNAME,MARK1,MARK2,MARK3,MARK4)
VALUES("BHADRA",75,85,95,77);

INSERT INTO STUDENT (SNAME,MARK1,MARK2,MARK3,MARK4)
VALUES("BINU",30,25,15,97);

INSERT INTO STUDENT (SNAME,MARK1,MARK2,MARK3,MARK4)
VALUES("ACHU",55,75,65,37);

INSERT INTO STUDENT (SNAME,MARK1,MARK2,MARK3,MARK4)
VALUES("AMMU",20,78,92,57);

SELECT * FROM STUDENT;

SELECT *,MARK1+MARK2+MARK3+MARK4 as TOTAL FROM STUDENT WHERE
MARK1+MARK2+MARK3+MARK4>=200;

SELECT *,MARK1+MARK2+MARK3+MARK4 as TOTAL FROM STUDENT;

SELECT *,MARK1+MARK2+MARK3+MARK4 as TOTAL FROM STUDENT ORDER BY
MARK1+MARK2+MARK3+MARK4 DESC;

SELECT * FROM STUDENT WHERE MARK1 NOT IN(20,30);

SELECT *,MARK1+MARK2+MARK3+MARK4 as TOTAL, (MARK1+MARK2
+MARK3+MARK4)/4 as AVERAGE FROM STUDENT;

SELECT *,MARK1+MARK2+MARK3+MARK4 as TOTAL, (MARK1+MARK2
+MARK3+MARK4)/4 as AVERAGE FROM STUDENT WHERE (MARK1
+MARK2+MARK3+MARK4)/4>=80;

SELECT DISTINCT SNAME FROM STUDENT;

SELECT * FROM STUDENT WHERE SNAME LIKE 'A%' or 'a%';

SELECT COUNT(*) as TOTAL_STUDENTS FROM STUDENT;

SELECT SUM(MARK1+MARK2+MARK3+MARK4) as TOTAL_MARKS FROM STUDENT;
```

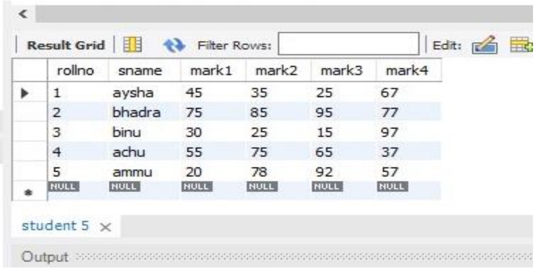
SELECT AVG(MARK1+MARK2+MARK3+MARK4) as AVERAGE_MARKS FROM STUDENT;

SELECT MAX(MARK1+MARK2+MARK3+MARK4) as MAXIMUM_MARKS FROM STUDENT;

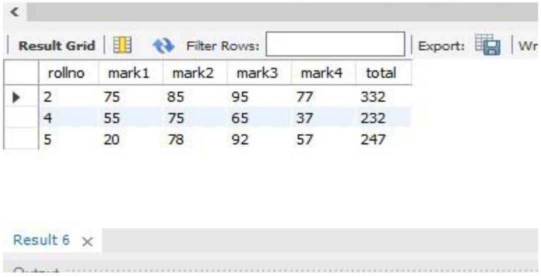
OUTPUT



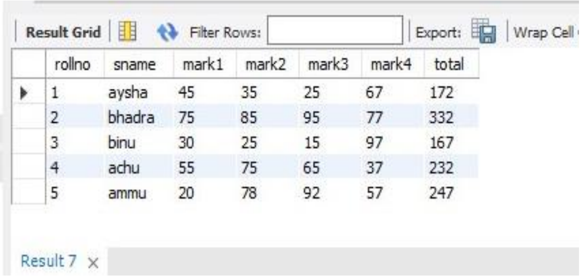
Field	Type	Null	Key	Default	Extra
rollno	int(11)	NO	PRI	NULL	auto_increment
sname	varchar(20)	NO		NULL	
mark1	int(11)	NO		NULL	
mark2	int(11)	NO		NULL	
mark3	int(11)	NO		NULL	
mark4	int(11)	NO		NULL	



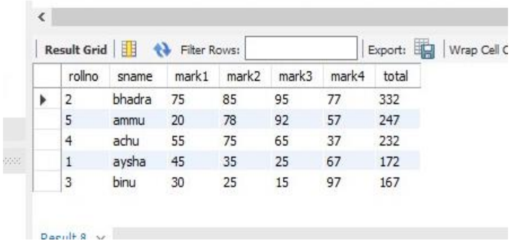
	rollno	sname	mark1	mark2	mark3	mark4
▸	1	aysha	45	35	25	67
	2	bhadra	75	85	95	77
	3	binu	30	25	15	97
	4	achu	55	75	65	37
	5	ammu	20	78	92	57
*	NULL	NULL	NULL	NULL	NULL	NULL



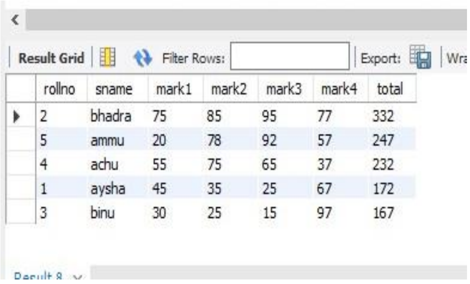
rollno	mark1	mark2	mark3	mark4	total
2	75	85	95	77	332
4	55	75	65	37	232
5	20	78	92	57	247



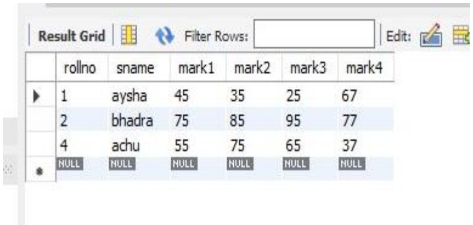
rollno	sname	mark1	mark2	mark3	mark4	total
1	aysha	45	35	25	67	172
2	bhadra	75	85	95	77	332
3	binu	30	25	15	97	167
4	achu	55	75	65	37	232
5	ammu	20	78	92	57	247



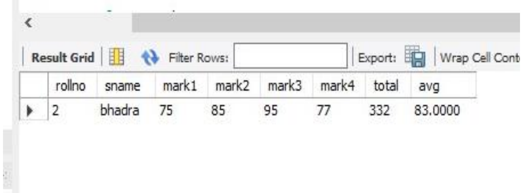
rollno	sname	mark1	mark2	mark3	mark4	total
2	bhadra	75	85	95	77	332
5	ammu	20	78	92	57	247
4	achu	55	75	65	37	232
1	aysha	45	35	25	67	172
3	binu	30	25	15	97	167



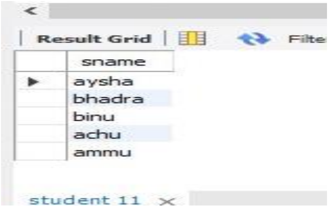
rollno	sname	mark1	mark2	mark3	mark4	total
2	bhadra	75	85	95	77	332
5	ammu	20	78	92	57	247
4	achu	55	75	65	37	232
1	aysha	45	35	25	67	172
3	binu	30	25	15	97	167



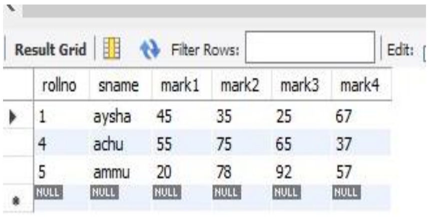
rollno	sname	mark1	mark2	mark3	mark4
1	aysha	45	35	25	67
2	bhadra	75	85	95	77
4	achu	55	75	65	37
NULL	NULL	NULL	NULL	NULL	NULL



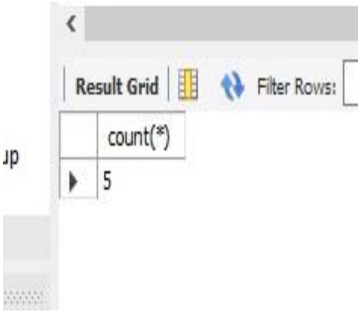
rollno	sname	mark1	mark2	mark3	mark4	total	avg
2	bhadra	75	85	95	77	332	83.0000



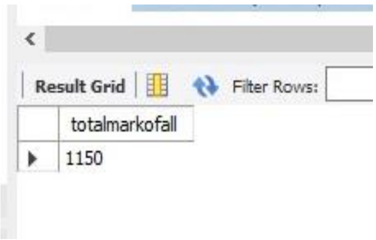
sname
aysha
bhadra
binu
achu
ammu



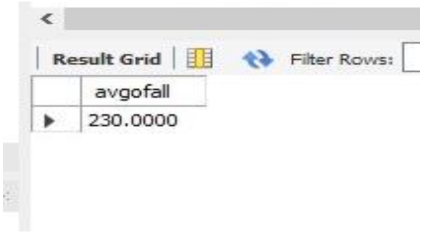
rollno	sname	mark1	mark2	mark3	mark4
1	aysha	45	35	25	67
4	achu	55	75	65	37
5	ammu	20	78	92	57
NULL	NULL	NULL	NULL	NULL	NULL



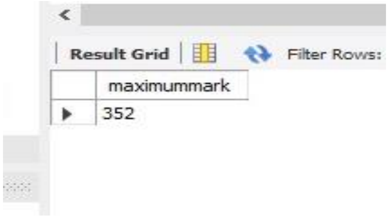
```
count(*)
5
```



```
totalmarkofall
1150
```



```
avgofall
230.0000
```



```
maximummark
352
```

EXPERIMENT NO: 5

AIM

Create following table in DBLAB5 database:

STUDENT(ROLL_NO int PK, S_NAME varchar, SUB1 int, SUB2 int, SUB3 int, SUB4 int,LAB1 int, LBA2 int, LAB3 int, TOTAL int)

Questions

1) Insert 10 Students details without total mark
2) Find Total marks of 10 students(Sub1+Sub2+Sub3+Sub4+Lab1+Lab2+Lab3)
3) Display Total Marks of all students, average marks, Highest mark, and minimum mark
4) Display Total Lab marks of each student
5) Display the Students where the sum of Labmarks is 250 or more

PROCEDURE

```
CREATE DATABASE DBLAB5;

USE DBLAB5;

CREATE TABLE STUDENT(Roll_no INT PRIMARY KEY,S_name varchar(20), Sub1 INT, Sub2 INT,Sub3 INT,Sub4 INT,Lab1 INT,Lab2 INT,Lab3 INT,Total INT);

INSERT INTO STUDENT(Roll_no, S_name, Sub1, Sub2, Sub3, Sub4, Lab1, Lab2, Lab3)
VALUES

(1, 'Appu', 90, 85, 86, 87, 95, 94, 96),

(2, 'Appu', 75, 79, 84, 81, 76, 77, 81),

(3, 'Ammu', 80, 80, 87, 80, 81, 82, 81),

(4, 'Shambu', 70, 75, 76, 77, 75, 74, 76),

(5, 'Subru', 60, 65, 66, 67, 65, 64, 86),

(6, 'Vikram', 80, 85, 86, 87, 85, 91, 86),

(7, 'Sethu', 100, 100, 100, 1000, 100, 100, 100),

(8, 'Thomas', 90, 92, 93, 94, 92, 92, 93),
```

(9, 'Thara', 67, 69, 63, 64, 68, 68, 70),

(10, 'Kavya', 75, 75, 78, 75, 78, 79, 74);

SELECT * FROM STUDENT;

SET SQL_SAFE_UPDATES=0;

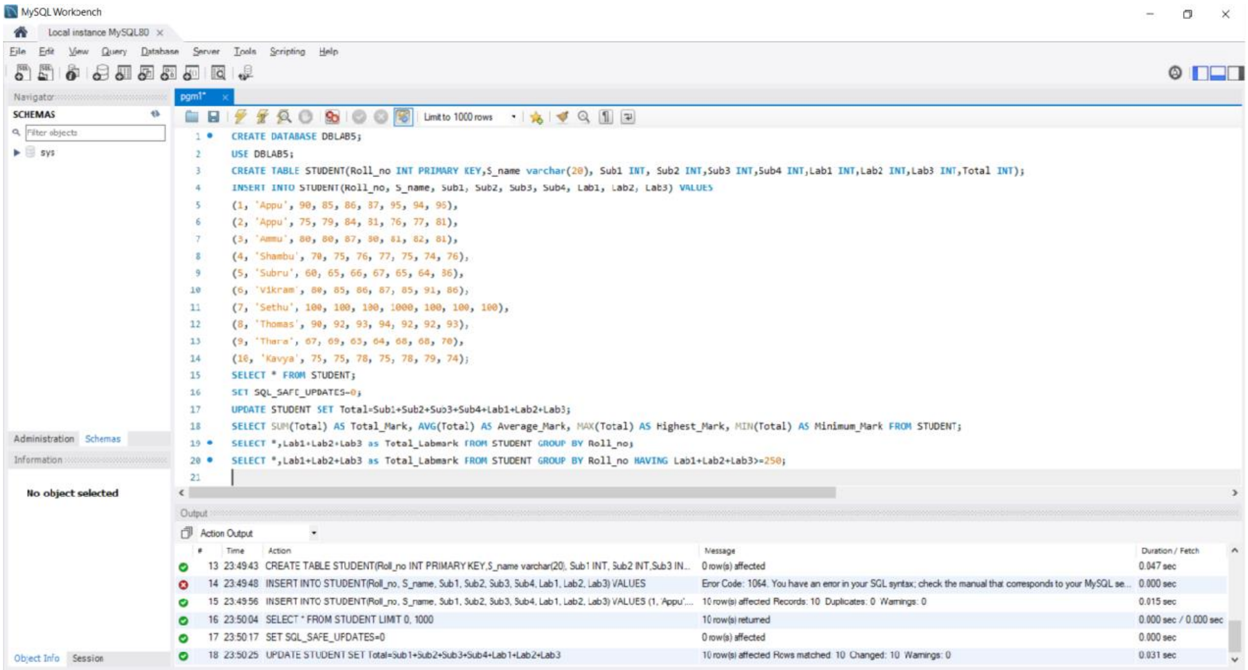
UPDATE STUDENT SET Total=Sub1+Sub2+Sub3+Sub4+Lab1+Lab2+Lab3;

SELECT SUM(Total) AS Total_Mark, AVG(Total) AS Average_Mark, MAX(Total) AS Highest_Mark, MIN(Total) AS Minimum_Mark FROM STUDENT;

SELECT *,Lab1+Lab2+Lab3 as Total_Labmark FROM STUDENT GROUP BY Roll_no;

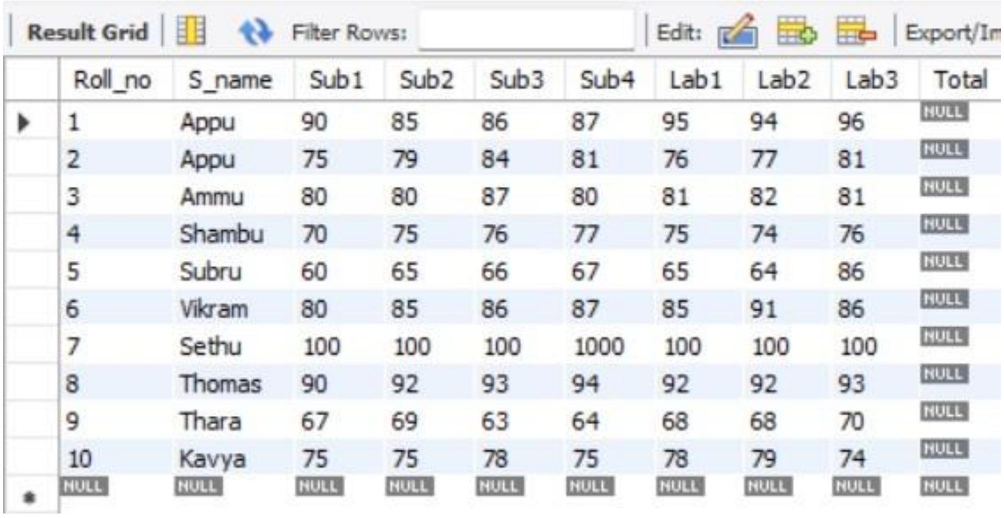
SELECT *,Lab1+Lab2+Lab3 as Total_Labmark FROM STUDENT GROUP BY Roll_no HAVING Lab1+Lab2+Lab3>=250;

OUTPUT

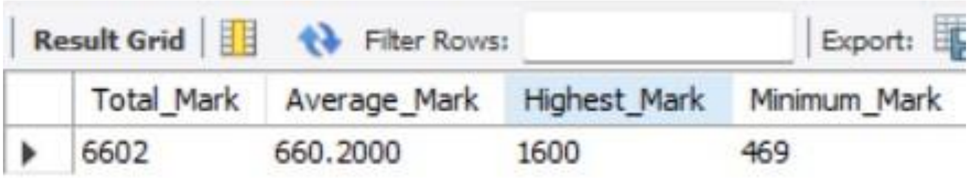


```
CREATE DATABASE DBLAB5;
USE DBLAB5;
CREATE TABLE STUDENT(Roll_no INT PRIMARY KEY,S_name varchar(20), Sub1 INT, Sub2 INT,Sub3 INT,Sub4 INT,Lab1 INT,Lab2 INT,Lab3 INT,Total INT);
INSERT INTO STUDENT(Roll_no, S_name, Sub1, Sub2, Sub3, Sub4, Lab1, Lab2, Lab3) VALUES
(1, 'Appu', 90, 85, 86, 87, 95, 94, 95),
(2, 'Appu', 75, 79, 84, 81, 76, 77, 81),
(3, 'Ammu', 80, 80, 87, 80, 81, 82, 81),
(4, 'Shambu', 70, 75, 76, 77, 75, 74, 76),
(5, 'Subru', 60, 65, 66, 67, 65, 64, 86),
(6, 'Vikram', 80, 85, 86, 87, 85, 91, 86),
(7, 'Sethu', 100, 100, 100, 1000, 100, 100, 100),
(8, 'Thomas', 90, 92, 93, 94, 92, 92, 93),
(9, 'Thara', 67, 69, 63, 64, 68, 68, 70),
(10, 'Kavya', 75, 75, 78, 75, 78, 79, 74);
SELECT * FROM STUDENT;
SET SQL_SAFE_UPDATES=0;
UPDATE STUDENT SET Total=Sub1+Sub2+Sub3+Sub4+Lab1+Lab2+Lab3;
SELECT SUM(Total) AS Total_Mark, AVG(Total) AS Average_Mark, MAX(Total) AS Highest_Mark, MIN(Total) AS Minimum_Mark FROM STUDENT;
SELECT *,Lab1+Lab2+Lab3 as Total_Labmark FROM STUDENT GROUP BY Roll_no;
SELECT *,Lab1+Lab2+Lab3 as Total_Labmark FROM STUDENT GROUP BY Roll_no HAVING Lab1+Lab2+Lab3>=250;
```

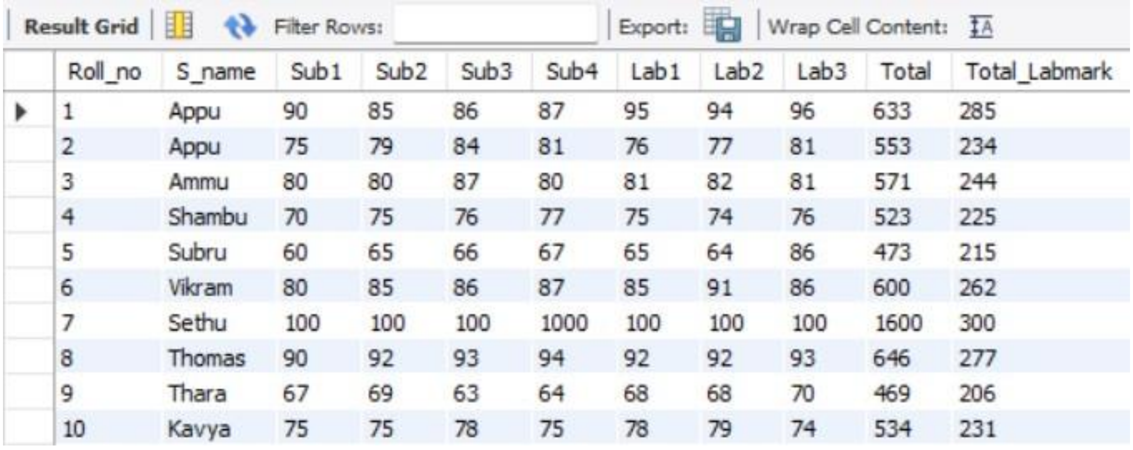
	#	Time	Action	Message	Duration / Fetch
✓	13	23:49:43	CREATE TABLE STUDENT(Roll_no INT PRIMARY KEY,S_name varchar(20), Sub1 INT, Sub2 INT,Sub3 IN...	0 row(s) affected	0.047 sec
✗	14	23:49:48	INSERT INTO STUDENT(Roll_no, S_name, Sub1, Sub2, Sub3, Sub4, Lab1, Lab2, Lab3) VALUES	Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to your MySQL se...	0.000 sec
✓	15	23:49:56	INSERT INTO STUDENT(Roll_no, S_name, Sub1, Sub2, Sub3, Sub4, Lab1, Lab2, Lab3) VALUES (1, 'Appu',...	10 row(s) affected Records: 10 Duplicates: 0 Warnings: 0	0.015 sec
✓	16	23:50:04	SELECT * FROM STUDENT LIMIT 0, 1000	10 row(s) returned	0.000 sec / 0.000 sec
✓	17	23:50:17	SET SQL_SAFE_UPDATES=0	0 row(s) affected	0.000 sec
✓	18	23:50:25	UPDATE STUDENT SET Total=Sub1+Sub2+Sub3+Sub4+Lab1+Lab2+Lab3	10 row(s) affected Rows matched: 10 Changed: 10 Warnings: 0	0.031 sec



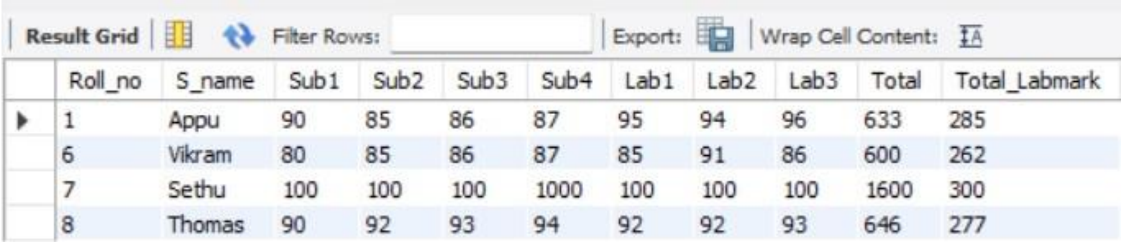
	Roll_no	S_name	Sub1	Sub2	Sub3	Sub4	Lab1	Lab2	Lab3	Total
▶	1	Appu	90	85	86	87	95	94	96	NULL
	2	Appu	75	79	84	81	76	77	81	NULL
	3	Ammu	80	80	87	80	81	82	81	NULL
	4	Shambu	70	75	76	77	75	74	76	NULL
	5	Subru	60	65	66	67	65	64	86	NULL
	6	Vikram	80	85	86	87	85	91	86	NULL
	7	Sethu	100	100	100	1000	100	100	100	NULL
	8	Thomas	90	92	93	94	92	92	93	NULL
	9	Thara	67	69	63	64	68	68	70	NULL
	10	Kavya	75	75	78	75	78	79	74	NULL
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL



	Total_Mark	Average_Mark	Highest_Mark	Minimum_Mark
▶	6602	660.2000	1600	469



	Roll_no	S_name	Sub1	Sub2	Sub3	Sub4	Lab1	Lab2	Lab3	Total	Total_Labmark
▶	1	Appu	90	85	86	87	95	94	96	633	285
	2	Appu	75	79	84	81	76	77	81	553	234
	3	Ammu	80	80	87	80	81	82	81	571	244
	4	Shambu	70	75	76	77	75	74	76	523	225
	5	Subru	60	65	66	67	65	64	86	473	215
	6	Vikram	80	85	86	87	85	91	86	600	262
	7	Sethu	100	100	100	1000	100	100	100	1600	300
	8	Thomas	90	92	93	94	92	92	93	646	277
	9	Thara	67	69	63	64	68	68	70	469	206
	10	Kavya	75	75	78	75	78	79	74	534	231



	Roll_no	S_name	Sub1	Sub2	Sub3	Sub4	Lab1	Lab2	Lab3	Total	Total_Labmark
▶	1	Appu	90	85	86	87	95	94	96	633	285
	6	Vikram	80	85	86	87	85	91	86	600	262
	7	Sethu	100	100	100	1000	100	100	100	1600	300
	8	Thomas	90	92	93	94	92	92	93	646	277

EXPERIMENT NO: 6

AIM

Create a table student with following fields:

- roll no int (primary key),accept only numbers &gt;=1 &amp; &lt;=60
- Name char (20) not null,
- gender char (1) accept only M or F,
- dob date not null,
- course (values must be MCA, INTMCA),
- sem(values must be S2, S3).

Create second table marks with following data:

- Sid in (primary key),
- roll no int (foreign key) referencing student tables).
- Sub_code char (5) not null and
- marks int not null (>=0 & <= 100)

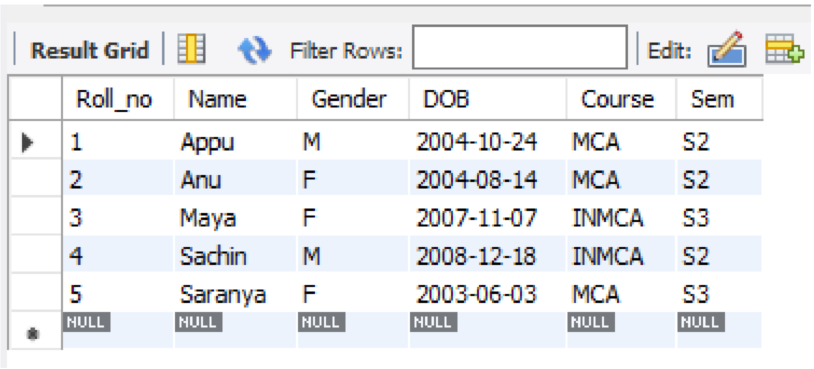
Questions

1) Insert the data into these tables.
2) List the name, Course and Sem of students who joined MCA.
3) List all roll no from two tables (avoid duplicate roll no).
4) List name from student table and all marks from marks of roll no 2 in student table.
5) List the roll no, Name and total marks of each students from 2 tables

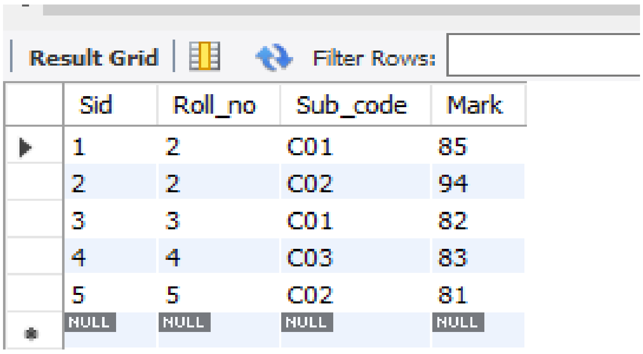
PROCEDURE

```
CREATE DATABASE STUDENT;

USE STUDENT;

CREATE TABLE STUDENT

        (Roll_no INT PRIMARY KEY AUTO_INCREMENT,

        Name CHAR(20) NOT NULL,

        Gender CHAR(1) CHECK(Gender='M' OR Gender='F'),
        DOB DATE NOT NULL,
        Course VARCHAR(20) CHECK(Course='MCA' OR Course='INMCA'),
        Sem VARCHAR(20) CHECK(Sem='S2'or Sem='S3'));
INSERT INTO STUDENT(Name, Gender, DOB, Course, Sem) VALUES
        ('Appu', 'M', 2004-10-24, 'MCA', 'S2'),
        ('Anu', 'F', 2004/08/14, 'MCA', 'S2'),
        ('Maya', 'F', 2007/11/07, 'INMCA', 'S3'),
        ('Sachin', 'M', 2008/12/18, 'INMCA', 'S2'),
        ('Saranya', 'F', 2003/06/03, 'MCA',
'S3');SELECT * FROM STUDENT;
        CREATE TABLE MARKS
        (Sid INT PRIMARY KEY AUTO_INCREMENT,
        Roll_no INT REFERENCES STUDENT(Roll_no),
        Sub_code CHAR(5) NOT NULL,
        Mark INT NOT NULL CHECK(Mark>0 or Mark<=100));
INSERT INTO MARKS(Roll_no,Sub_code,Mark) VALUES(2,'C01',85),
(2,'C02',94),(3,'C01',82),(4,'C03',83),(5,'C02',81);
SELECT * FROM MARKS;
SELECT Name,Course,Sem FROM STUDENT WHERE Course='MCA';
SELECT DISTINCT STUDENT.Roll_no FROM STUDENT UNION SELECT MARKS.Roll_no
FROM MARKS;
SELECT STUDENT.Name,MARKS.Mark FROM STUDENT,MARKS WHERE
STUDENT.Roll_no=2 AND MARKS.Roll_no=2;
SELECT STUDENT.Roll_no,STUDENT.Name,SUM(MARKS.Mark) AS TotalMarks FROM
STUDENT,MARKS GROUP BY STUDENT.Roll_no;
```

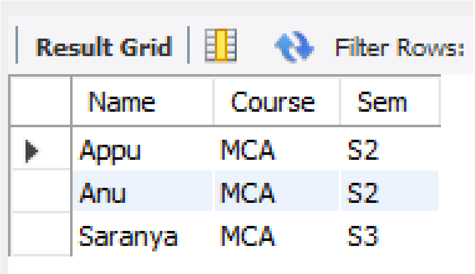
OUTPUT



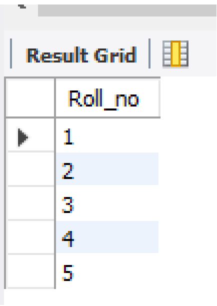
Roll_no	Name	Gender	DOB	Course	Sem
1	Appu	M	2004-10-24	MCA	S2
2	Anu	F	2004-08-14	MCA	S2
3	Maya	F	2007-11-07	INMCA	S3
4	Sachin	M	2008-12-18	INMCA	S2
5	Saranya	F	2003-06-03	MCA	S3
NULL	NULL	NULL	NULL	NULL	NULL



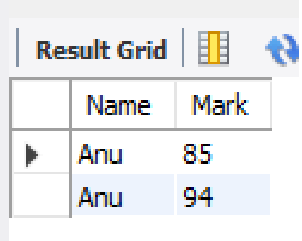
Sid	Roll_no	Sub_code	Mark
1	2	C01	85
2	2	C02	94
3	3	C01	82
4	4	C03	83
5	5	C02	81
NULL	NULL	NULL	NULL



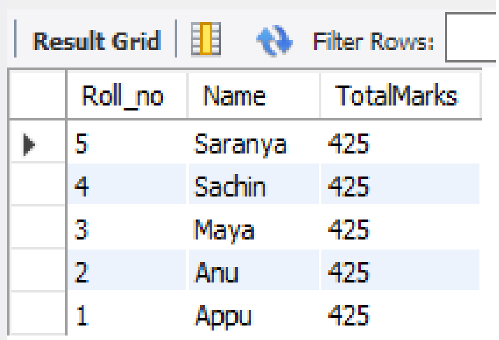
Name	Course	Sem
Appu	MCA	S2
Anu	MCA	S2
Saranya	MCA	S3



Roll_no
1
2
3
4
5



Name	Mark
Anu	85
Anu	94



Roll_no	Name	TotalMarks
5	Saranya	425
4	Sachin	425
3	Maya	425
2	Anu	425
1	Appu	425

EXPERIMENT NO: 7

AIM

Create following tables in the SETOPR DB:

1) MCA1(s1_Rollno int, s1_Name char(20), Subject char(20))

2) MCA2(s2_Rollno int, s2_Name char(20), Subject char(20))

3) MCA3(s3_Rollno int, s3_Name char(20), Subject char(20))

Insert 5 records in each table with duplicate names in same table as well as in different tables

Questions

1) Find Names of all students from MCA1, MCA2 and MCA3 table
2) Find unique name of all students from MCA1, MCA2 and MCA3 table
3) Find common name of from MCA1 and MCA2 tables
4) Find common name of from MCA1 and MCA3 tables (no duplicate)

PROCEDURE

CREATE DATABASE SETOPR;

USE SETOPR;

CREATE TABLE MCA1(S1_Rollno INT,S1_Name CHAR(20),Subject CHAR(20));

CREATE TABLE MCA2(S2_Rollno INT,S2_Name CHAR(20),Subject CHAR(20));

CREATE TABLE MCA3(S3_Rollno INT,S3_Name CHAR(20),Subject CHAR(20));

INSERT INTO MCA1 VALUES(1,'ACHu','PYTHON'),(2,'Appu','ADS'),(3,'Lukka','ADS'),(4,'Seban','SE'),(5,'Vijay','PYTHON');

SELECT * FROM MCA1;

INSERT INTO MCA2 VALUES(1,'Achu','ACN'), (2,'Appu','ADBMS'),(3,'Vijay','IPR'),(4,'Sura','IPR'),(5,'Tinu','IPR');

SELECT * FROM MCA2;

INSERT INTO MCA3 VALUES(1,'Appu','JAVA'),(2,'Achu','MATHS'),(3,'Surya','JAVA'),(4,'Viku','MATHS'),(5,'Vijay','JAVA');

SELECT * FROM MCA3;

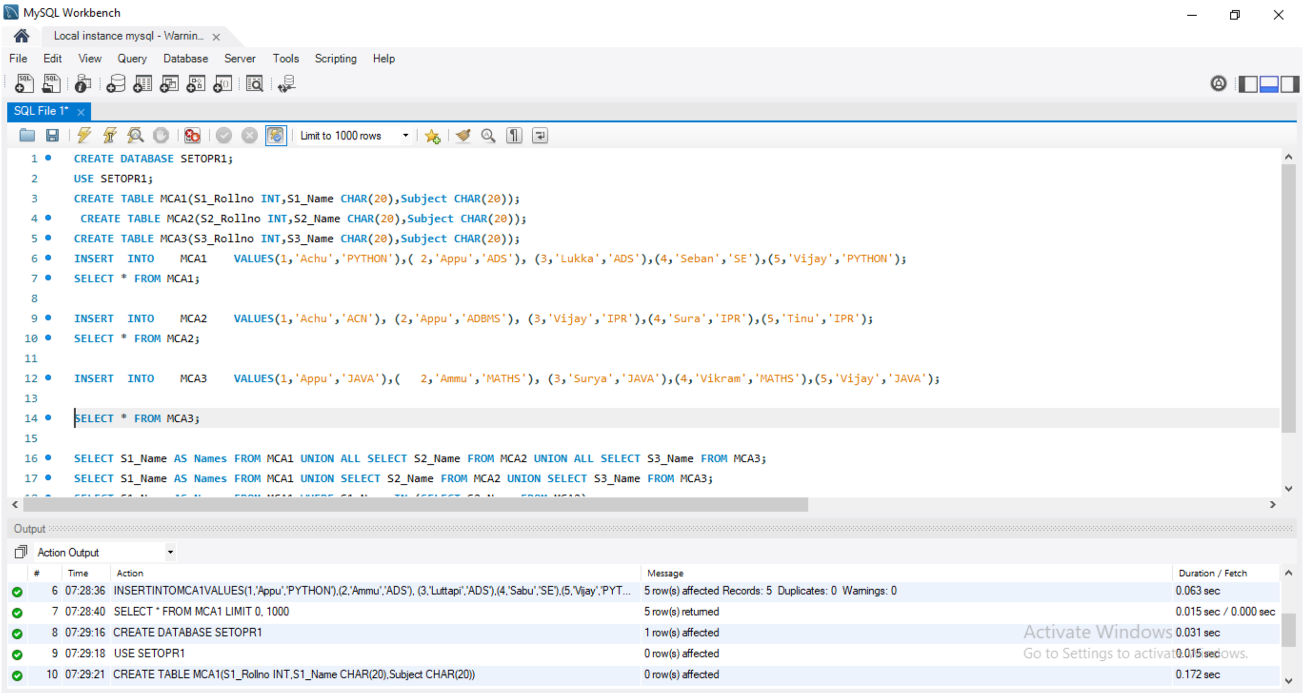
SELECT S1_Name AS Names FROM MCA1 UNION ALL SELECT S2_Name FROM MCA2 UNION ALL SELECT S3_Name FROM MCA3;

SELECT S1_Name AS Names FROM MCA1 UNION SELECT S2_Name FROM MCA2 UNION SELECT S3_Name FROM MCA3;

SELECT S1_Name AS Names FROM MCA1 WHERE S1_Name IN (SELECT S2_Name FROM MCA2);

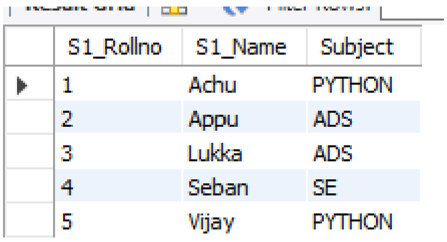
SELECT DISTINCT S1_Name AS Names FROM MCA1 WHERE S1_Name IN (SELECT S3_Name FROM MCA3);

OUTPUT

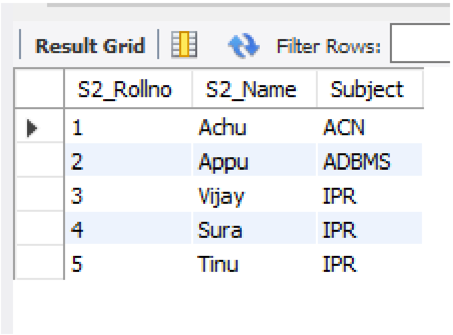

MySQL Workbench
Local instance mysql - Warnin...
File Edit View Query Database Server Tools Scripting Help
SQL File 1*
Limit to 1000 rows
Output
Action Output

```
CREATE DATABASE SETOPR1;
USE SETOPR1;
CREATE TABLE MCA1(S1_Rollno INT,S1_Name CHAR(20),Subject CHAR(20));
 CREATE TABLE MCA2(S2_Rollno INT,S2_Name CHAR(20),Subject CHAR(20));
CREATE TABLE MCA3(S3_Rollno INT,S3_Name CHAR(20),Subject CHAR(20));
INSERT  INTO    MCA1    VALUES(1,'Achu','PYTHON'),( 2,'Appu','ADS'), (3,'Lukka','ADS'),(4,'Seban','SE'),(5,'Vijay','PYTHON');
SELECT * FROM MCA1;

INSERT  INTO    MCA2    VALUES(1,'Achu','ACN'), (2,'Appu','ADBMS'), (3,'Vijay','IPR'),(4,'Sura','IPR'),(5,'Tinu','IPR');
SELECT * FROM MCA2;

INSERT  INTO    MCA3    VALUES(1,'Appu','JAVA'),(   2,'Ammu','MATHS'), (3,'Surya','JAVA'),(4,'Vikram','MATHS'),(5,'Vijay','JAVA');

SELECT * FROM MCA3;

SELECT S1_Name AS Names FROM MCA1 UNION ALL SELECT S2_Name FROM MCA2 UNION ALL SELECT S3_Name FROM MCA3;
SELECT S1_Name AS Names FROM MCA1 UNION SELECT S2_Name FROM MCA2 UNION SELECT S3_Name FROM MCA3;
```

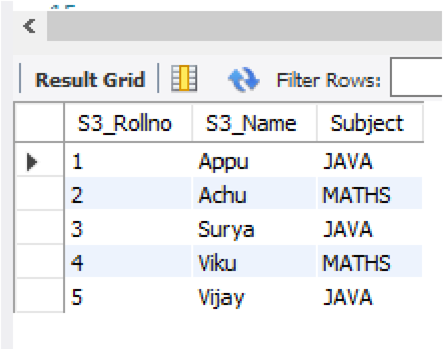
#	Time	Action	Message	Duration / Fetch
6	07:28:36	INSERTINTOMCA1VALUES(1,'Appu','PYTHON'),(2,'Ammu','ADS'), (3,'Luttapi','ADS'),(4,'Sabu','SE'),(5,'Vijay','PYT...	5 row(s) affected Records: 5 Duplicates: 0 Warnings: 0	0.063 sec
7	07:28:40	SELECT * FROM MCA1 LIMIT 0, 1000	5 row(s) returned	0.015 sec / 0.000 sec
8	07:29:16	CREATE DATABASE SETOPR1	1 row(s) affected	0.031 sec
9	07:29:18	USE SETOPR1	0 row(s) affected	0.015 sec
10	07:29:21	CREATE TABLE MCA1(S1_Rollno INT,S1_Name CHAR(20),Subject CHAR(20))	0 row(s) affected	0.172 sec



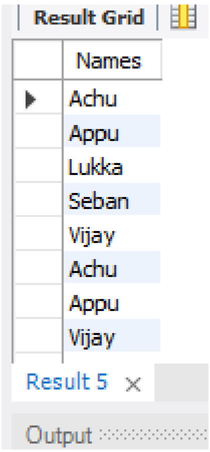
	S1_Rollno	S1_Name	Subject
▶	1	Achu	PYTHON
	2	Appu	ADS
	3	Lukka	ADS
	4	Seban	SE
	5	Vijay	PYTHON



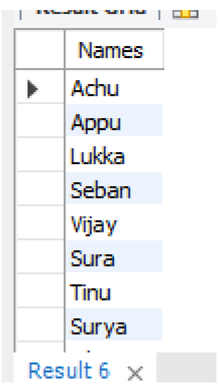
S2_Rollno	S2_Name	Subject
1	Achu	ACN
2	Appu	ADBMS
3	Vijay	IPR
4	Sura	IPR
5	Tinu	IPR



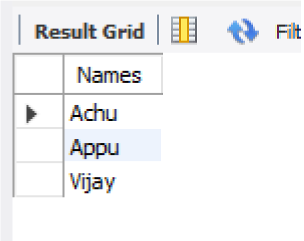
S3_Rollno	S3_Name	Subject
1	Appu	JAVA
2	Achu	MATHS
3	Surya	JAVA
4	Viku	MATHS
5	Vijay	JAVA



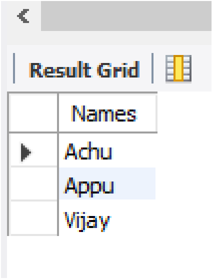
Names
Achu
Appu
Lukka
Seban
Vijay
Achu
Appu
Vijay



Names
Achu
Appu
Lukka
Seban
Vijay
Sura
Tinu
Surya



Names
Achu
Appu
Vijay



Names
Achu
Appu
Vijay

EXPERIMENT NO: 8

AIM:

Create following tables in NDB Database:

1) teacher(id int,name char(20),place int, dept, int, salary int);
2) dept(id int, dept char(50));
3) place(id int, place char(20));
4) salary(id int, salary char(20));

Insert 5 teachers details (sunil, popo, appu, nandu, ammu)

Insert 5 dept

Insert 5 places

Insert salary table as (1,50000), (2,60000)

Questions

1) List Name, Place, dept and salary of the faculty sunil
2) List of faculty who works in appu’s dept
3) List name and salary of highest salary faculty
4) List Name and place who is coming from nandu’s place

PROCEDURE

CREATE DATABASE NDB;

USE NDB;

CREATE TABLE TEACHER(THID INT, TNAME CHAR(20),PLACE_ID INT, DEPT_ID INT, SALARY_ID INT);

CREATE TABLE DEPT(DEPT_ID INT, DEPT CHAR(20));

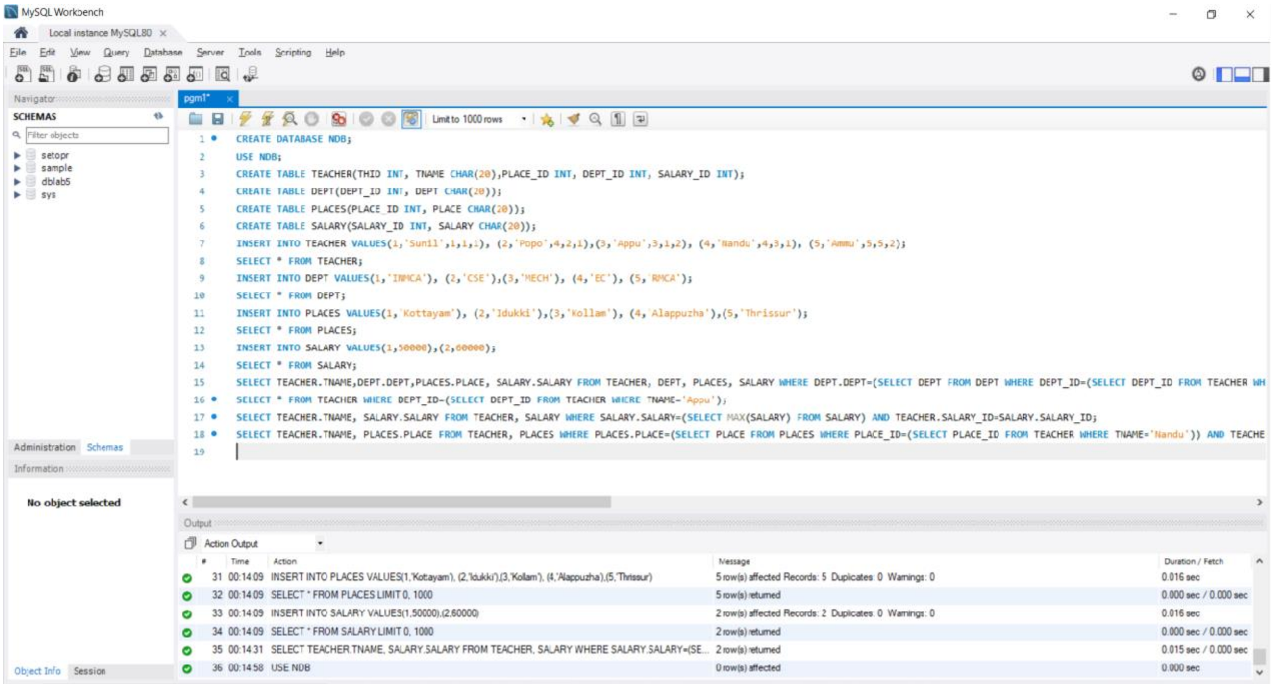
CREATE TABLE PLACES(PLACE_ID INT, PLACE CHAR(20));

CREATE TABLE SALARY(SALARY_ID INT, SALARY CHAR(20));

INSERT INTO TEACHER VALUES(1,'Sunil',1,1,1), (2,'Popo',4,2,1),(3,'Appu',3,1,2), (4,'Nandu',4,3,1), (5,'Ammu',5,5,2);

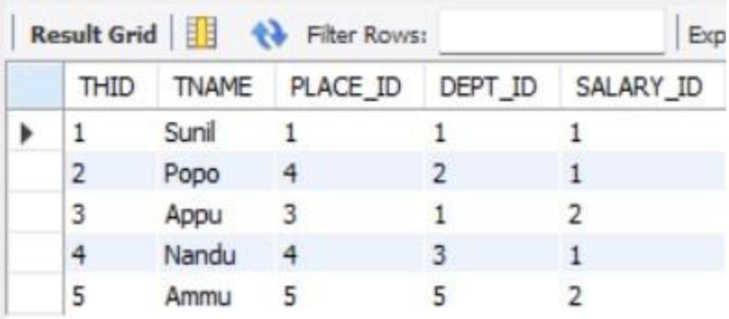
```
SELECT * FROM TEACHER;

INSERT INTO DEPT VALUES(1,'INMCA'), (2,'CSE'),(3,'MECH'), (4,'EC'), (5,'RMCA');

SELECT * FROM DEPT;

INSERT INTO PLACES VALUES(1,'Kottayam'), (2,'Idukki'),(3,'Kollam'),
(4,'Alappuzha'),(5,'Thrissur');

SELECT * FROM PLACES;

INSERT INTO SALARY VALUES(1,50000),(2,60000);

SELECT * FROM SALARY;


SELECT TEACHER.TNAME,DEPT.DEPT,PLACES.PLACE, SALARY.SALARY FROM
TEACHER, DEPT, PLACES, SALARY WHERE DEPT.DEPT=(SELECT DEPT FROM DEPT
WHERE DEPT_ID=(SELECT DEPT_ID FROM TEACHER WHERE TNAME='Sunil')) AND
PLACES.PLACE=(SELECT PLACE FROM PLACES WHERE PLACE_ID=(SELECT
PLACE_ID FROM TEACHER WHERE TNAME='Sunil')) AND SALARY.SALARY=(SELECT
SALARY FROM SALARY WHERE SALARY_ID=(SELECT SALARY_ID FROM TEACHER
WHERE TNAME='Sunil')) AND TEACHER.TNAME="Sunil";


SELECT * FROM TEACHER WHERE DEPT_ID=(SELECT DEPT_ID FROM TEACHER
WHERE TNAME='Appu');


SELECT TEACHER.TNAME, SALARY.SALARY FROM TEACHER, SALARY WHERE
SALARY.SALARY=(SELECT MAX(SALARY) FROM SALARY) AND
TEACHER.SALARY_ID=SALARY.SALARY_ID;


SELECT TEACHER.TNAME, PLACES.PLACE FROM TEACHER, PLACES WHERE
PLACES.PLACE=(SELECT PLACE FROM PLACES WHERE PLACE_ID=(SELECT
PLACE_ID FROM TEACHER WHERE TNAME='Nandu')) AND
TEACHER.PLACE_ID=PLACES.PLACE_ID;
```

OUTPUT

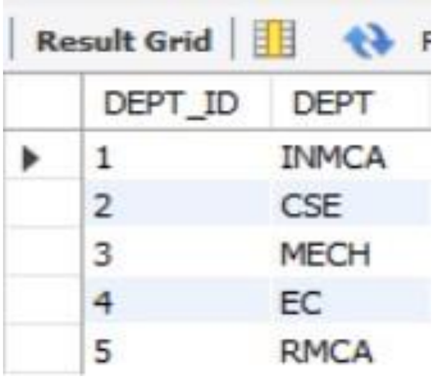


```
CREATE DATABASE NDB;
USE NDB;
CREATE TABLE TEACHER(THID INT, TNAME CHAR(20),PLACE_ID INT, DEPT_ID INT, SALARY_ID INT);
CREATE TABLE DEPT(DEPT_ID INT, DEPT CHAR(20));
CREATE TABLE PLACES(PLACE_ID INT, PLACE CHAR(20));
CREATE TABLE SALARY(SALARY_ID INT, SALARY CHAR(20));
INSERT INTO TEACHER VALUES(1,'Sunil',1,1,1), (2,'Popo',4,2,1),(3,'Appu',3,1,2), (4,'Nandu',4,3,1), (5,'Ammu',5,5,2);
SELECT * FROM TEACHER;
INSERT INTO DEPT VALUES(1,'INMCA'), (2,'CSE'),(3,'MECH'), (4,'EC'), (5,'RMCA');
SELECT * FROM DEPT;
INSERT INTO PLACES VALUES(1,'Kottayam'), (2,'Idukki'),(3,'Kollam'), (4,'Alappuzha'),(5,'Thrissur');
SELECT * FROM PLACES;
INSERT INTO SALARY VALUES(1,50000),(2,60000);
SELECT * FROM SALARY;
SELECT TEACHER.TNAME,DEPT.DEPT,PLACES.PLACE, SALARY.SALARY FROM TEACHER, DEPT, PLACES, SALARY WHERE DEPT.DEPT=(SELECT DEPT FROM DEPT WHERE DEPT_ID=(SELECT DEPT_ID FROM TEACHER WH
SELECT * FROM TEACHER WHERE DEPT_ID=(SELECT DEPT_ID FROM TEACHER WHERE TNAME='Appu');
SELECT TEACHER.TNAME, SALARY.SALARY FROM TEACHER, SALARY WHERE SALARY.SALARY=(SELECT MAX(SALARY) FROM SALARY) AND TEACHER.SALARY_ID=SALARY.SALARY_ID;
SELECT TEACHER.TNAME, PLACES.PLACE FROM TEACHER, PLACES WHERE PLACES.PLACE=(SELECT PLACE FROM PLACES WHERE PLACE_ID=(SELECT PLACE_ID FROM TEACHER WHERE TNAME='Nandu')) AND TEACHE
```

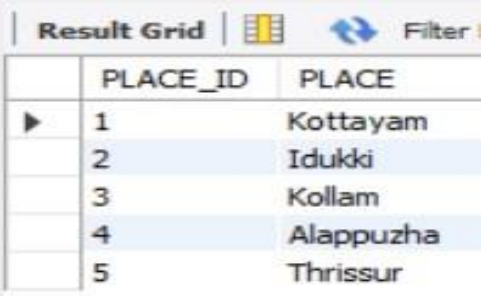
```
#   Time      Action                                                                                   Message                                                  Duration / Fetch
31  00:14:09  INSERT INTO PLACES VALUES(1,'Kottayam'), (2,'Idukki'),(3,'Kollam'), (4,'Alappuzha'),(5,'Thrissur')  5 row(s) affected Records: 5  Duplicates: 0  Warnings: 0  0.016 sec
32  00:14:09  SELECT * FROM PLACES LIMIT 0, 1000                                                       5 row(s) returned                                        0.000 sec / 0.000 sec
33  00:14:09  INSERT INTO SALARY VALUES(1,50000),(2,60000)                                             2 row(s) affected Records: 2  Duplicates: 0  Warnings: 0  0.016 sec
34  00:14:09  SELECT * FROM SALARY LIMIT 0, 1000                                                       2 row(s) returned                                        0.000 sec / 0.000 sec
35  00:14:31  SELECT TEACHER.TNAME, SALARY.SALARY FROM TEACHER, SALARY WHERE SALARY.SALARY=(SE...      2 row(s) returned                                        0.015 sec / 0.000 sec
36  00:14:58  USE NDB                                                                                  0 row(s) affected                                        0.000 sec
```



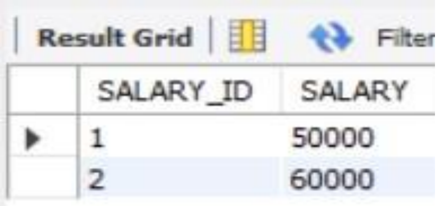
THID	TNAME	PLACE_ID	DEPT_ID	SALARY_ID
1	Sunil	1	1	1
2	Popo	4	2	1
3	Appu	3	1	2
4	Nandu	4	3	1
5	Ammu	5	5	2



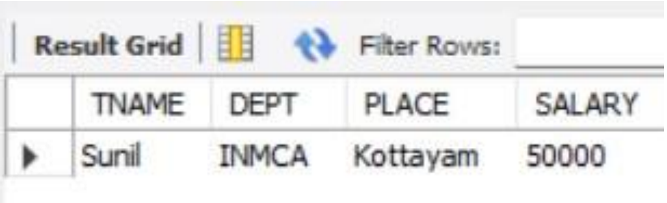
DEPT_ID	DEPT
1	INMCA
2	CSE
3	MECH
4	EC
5	RMCA



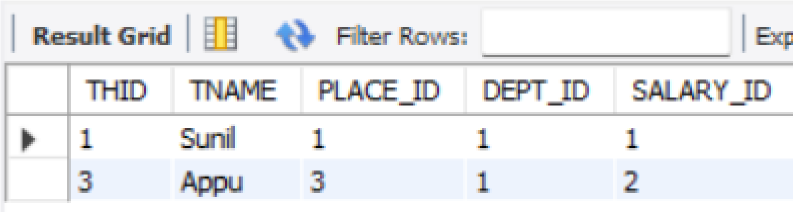
PLACE_ID	PLACE
1	Kottayam
2	Idukki
3	Kollam
4	Alappuzha
5	Thrissur



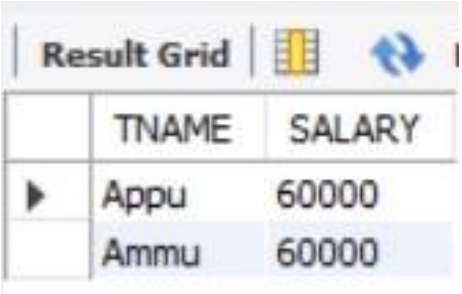
SALARY_ID	SALARY
1	50000
2	60000



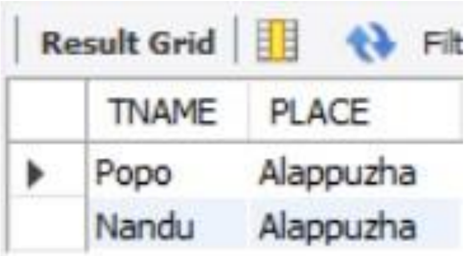
TNAME	DEPT	PLACE	SALARY
Sunil	INMCA	Kottayam	50000



THID	TNAME	PLACE_ID	DEPT_ID	SALARY_ID
1	Sunil	1	1	1
3	Appu	3	1	2



TNAME	SALARY
Appu	60000
Ammu	60000



TNAME	PLACE
Popo	Alappuzha
Nandu	Alappuzha

EXPERIMENT NO: 9

AIM

Create following table:

MCA(Roll, Name, Age, Phone, Mark1, Mark2, Mark3) Rollno-PK

House(hid, Rollno, House_Name, Place, Pin) Rollno- FK references(RollNo in MCA), hid-PK

Questions

1) Insert 5 rows of data in two tables
2) Create a view View1 from MCA with (Rollno, Name, Phone)
3) Describe View1
4) Insert one row of date in View1
5) Create a view View2 from MCA where Age>=25
6) Create view View3 from MCA & House with same Rollno

PROCEDURE

CREATE DATABASE STUD;

USE STUD;

CREATE TABLE MCA(Roll_no INT PRIMARY KEY AUTO_INCREMENT, Name CHAR(20), Age INT, Phone varchar(15), Mark1 INT, Mark2 INT, Mark3 INT);

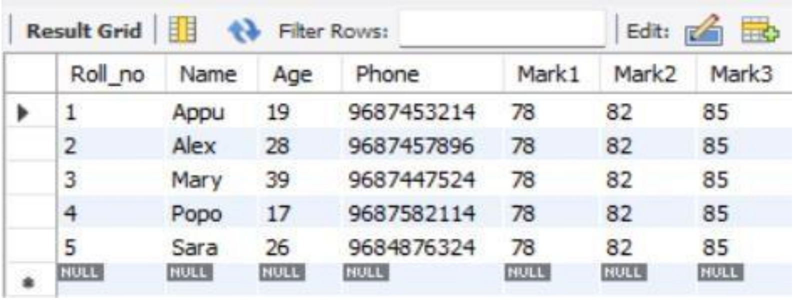
INSERT INTO MCA(Name,Age,Phone,Mark1,Mark2,Mark3) VALUES('Appu',19,9687453214,78,82,85),('Alex',28,9687457896,78,82,85), ('Mary',39,9687447524,78,82,85),('Popo',17,9687582114,78,82,85),('Sara',26,9684876324,78,82,85);

SELECT * FROM MCA;

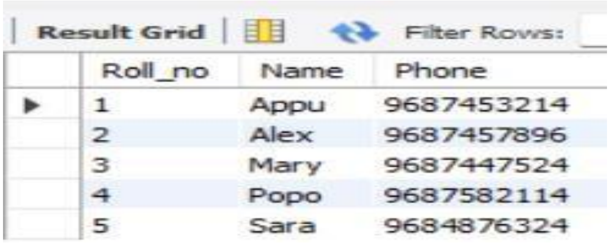
CREATE TABLE HOUSE(hid INT PRIMARY KEY AUTO_INCREMENT,Rollno INT REFERENCES MCA(Roll_no),House_Name CHAR(20),Place CHAR(20), Pin INT);

```
INSERT INTO  HOUSE(Rollno,House_Name,Place,Pin)
VALUES(2,'Konattu','Kottayam',688796),(2,'Palace','Ernakulam',658987),(3,'Malika','Kottayam',628965),(5,'Valiyathara','Kollam',617468),(5,'Palace','Pala',658974);

SELECT * FROM HOUSE;

CREATE VIEW View1 AS SELECT Roll_no,Name,Phone FROM MCA;

SELECT * FROM View1;

DESC View1;

INSERT INTO View1(Name,Phone) VALUES('Vijay',9875412368);

SELECT * FROM View1;

CREATE VIEW View2 AS SELECT * FROM MCA WHERE Age>=25;

SELECT * FROM View2;

CREATE VIEW View3 AS SELECT * FROM MCA, HOUSE WHERE MCA. Roll_no
=HOUSE.Rollno
;
SELECT * FROM View3;
```

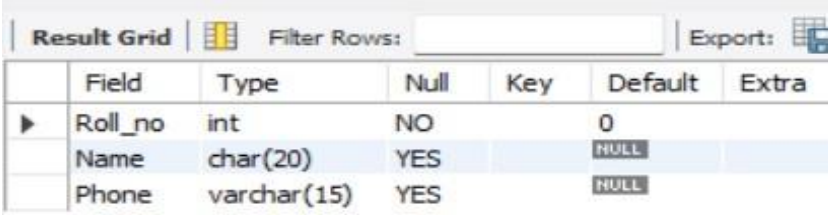
OUTPUT



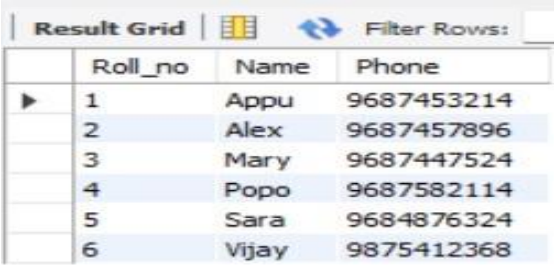
	Roll_no	Name	Age	Phone	Mark1	Mark2	Mark3
▶	1	Appu	19	9687453214	78	82	85
	2	Alex	28	9687457896	78	82	85
	3	Mary	39	9687447524	78	82	85
	4	Popo	17	9687582114	78	82	85
	5	Sara	26	9684876324	78	82	85
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL



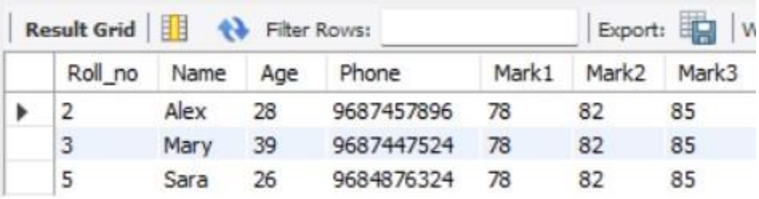
	Roll_no	Name	Phone
▶	1	Appu	9687453214
	2	Alex	9687457896
	3	Mary	9687447524
	4	Popo	9687582114
	5	Sara	9684876324



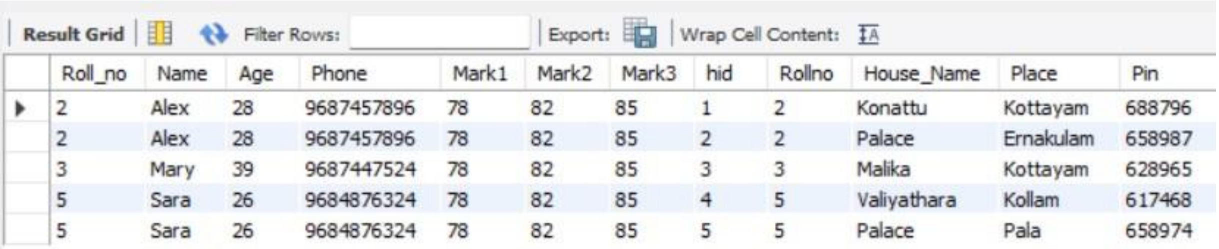
Field	Type	Null	Key	Default	Extra
Roll_no	int	NO		0	
Name	char(20)	YES		NULL	
Phone	varchar(15)	YES		NULL	



Roll_no	Name	Phone
1	Appu	9687453214
2	Alex	9687457896
3	Mary	9687447524
4	Popo	9687582114
5	Sara	9684876324
6	Vijay	9875412368



Roll_no	Name	Age	Phone	Mark1	Mark2	Mark3
2	Alex	28	9687457896	78	82	85
3	Mary	39	9687447524	78	82	85
5	Sara	26	9684876324	78	82	85



Roll_no	Name	Age	Phone	Mark1	Mark2	Mark3	hid	Rollno	House_Name	Place	Pin
2	Alex	28	9687457896	78	82	85	1	2	Konattu	Kottayam	688796
2	Alex	28	9687457896	78	82	85	2	2	Palace	Ernakulam	658987
3	Mary	39	9687447524	78	82	85	3	3	Malika	Kottayam	628965
5	Sara	26	9684876324	78	82	85	4	5	Valiyathara	Kollam	617468
5	Sara	26	9684876324	78	82	85	5	5	Palace	Pala	658974

;

EXPERIMENT NO: 10

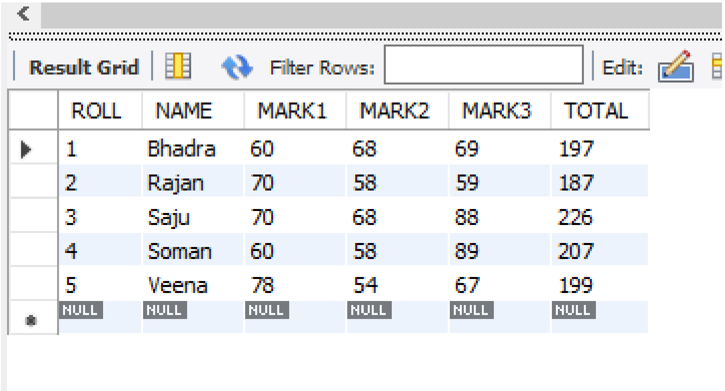
AIM:

Create a table student info and insert data. Apply a trigger to this table.

PROCEDURE

```
CREATE DATABASE PG_MCA;

USE PG_MCA;

CREATE TABLE STUD_INFO(ROLL INT,NAME CHAR(20),MARK1 INT,MARK2 INT,MARK3 INT,TOTAL INT,PRIMARY KEY(ROLL));

CREATE TRIGGER MARKS BEFORE INSERT ON STUD_INFO FOR EACH ROW SET NEW.TOTAL=NEW.MARK1+NEW.MARK2+NEW.MARK3;

INSERT INTO STUD_INFO VALUES

(1,"Bhadra",60,68,69,0),

(2,"Rajan",70,58,59,0),

(3,"Saju",70,68,88,0),

(4,"Soman",60,58,89,0),

(5,"Veena",78,54,67,0);

select * from STUD_INFO;
```

OUTPUT



ROLL	NAME	MARK1	MARK2	MARK3	TOTAL
1	Bhadra	60	68	69	197
2	Rajan	70	58	59	187
3	Saju	70	68	88	226
4	Soman	60	58	89	207
5	Veena	78	54	67	199
NULL	NULL	NULL	NULL	NULL	NULL

EXPERIMENT NO: 11

AIM

Installation and configuration of Mongodb, Downloading installation, Design of mongodb database, documents.

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.

Step2:

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.

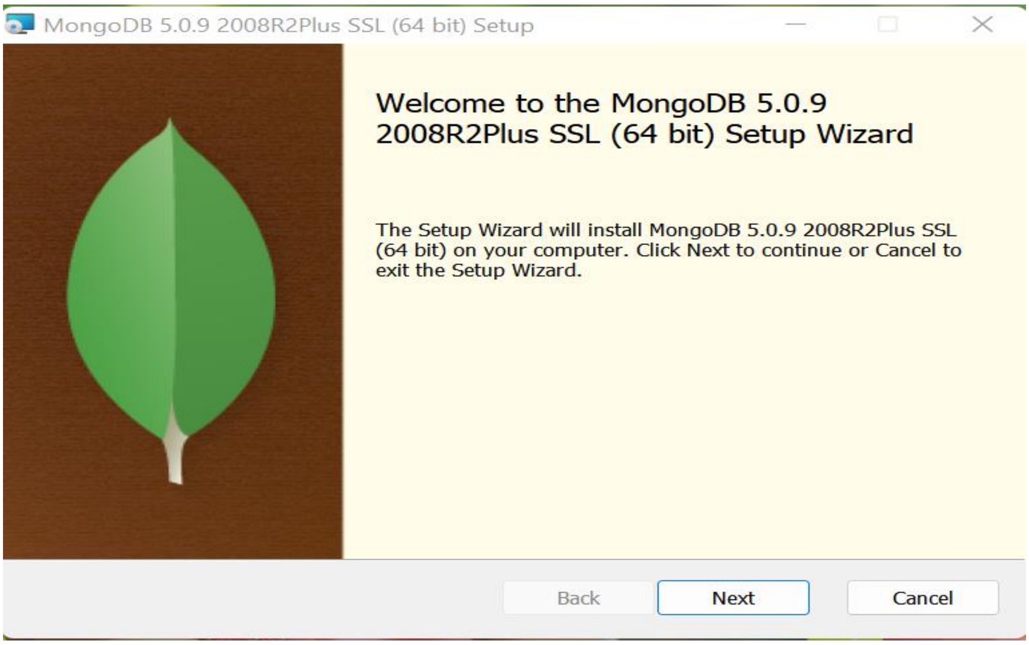
1. Select “Run service as Network Service user”. Make a note of the data directory, we’ll need this later.

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.

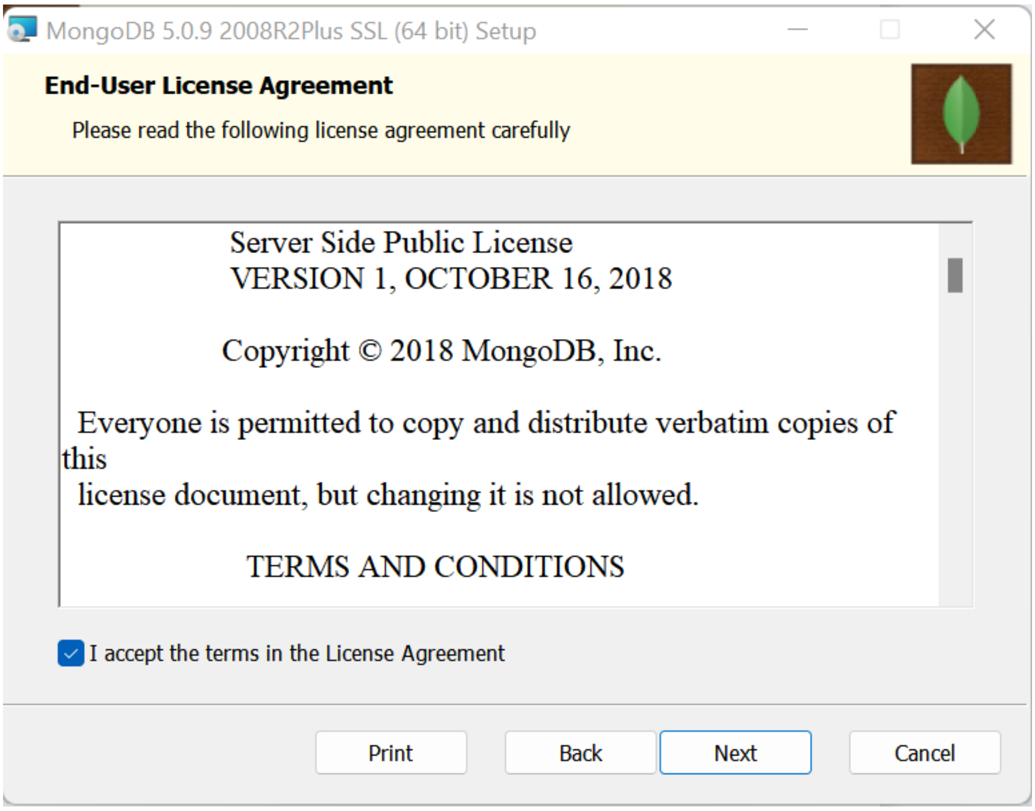
OUTPUT



MongoDB 5.0.9 2008R2Plus SSL (64 bit) Setup

Welcome to the MongoDB 5.0.9 2008R2Plus SSL (64 bit) Setup Wizard

The Setup Wizard will install MongoDB 5.0.9 2008R2Plus SSL (64 bit) on your computer. Click Next to continue or Cancel to exit the Setup Wizard.



MongoDB 5.0.9 2008R2Plus SSL (64 bit) Setup

End-User License Agreement

Please read the following license agreement carefully

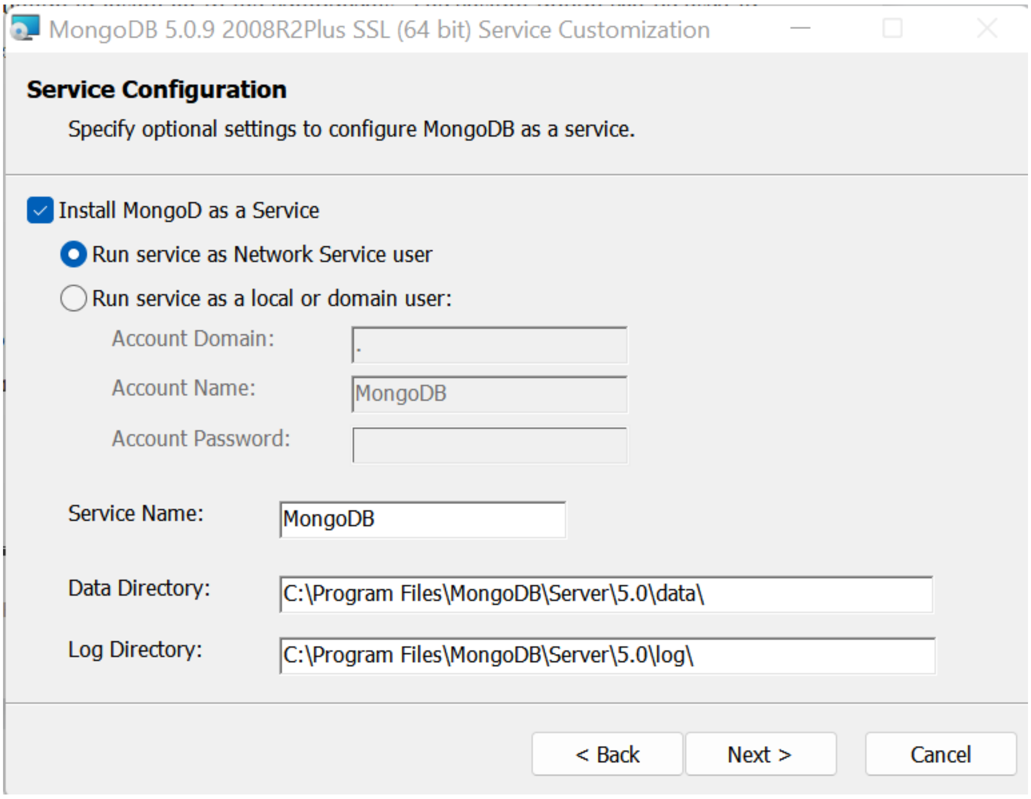
Server Side Public License
VERSION 1, OCTOBER 16, 2018

Copyright © 2018 MongoDB, Inc.

Everyone is permitted to copy and distribute verbatim copies of this
license document, but changing it is not allowed.

TERMS AND CONDITIONS

☑ I accept the terms in the License Agreement



MongoDB 5.0.9 2008R2Plus SSL (64 bit) Service Customization

Service Configuration

Specify optional settings to configure MongoDB as a service.

☑ Install MongoD as a Service

● Run service as Network Service user

○ Run service as a local or domain user:

Account Domain: .

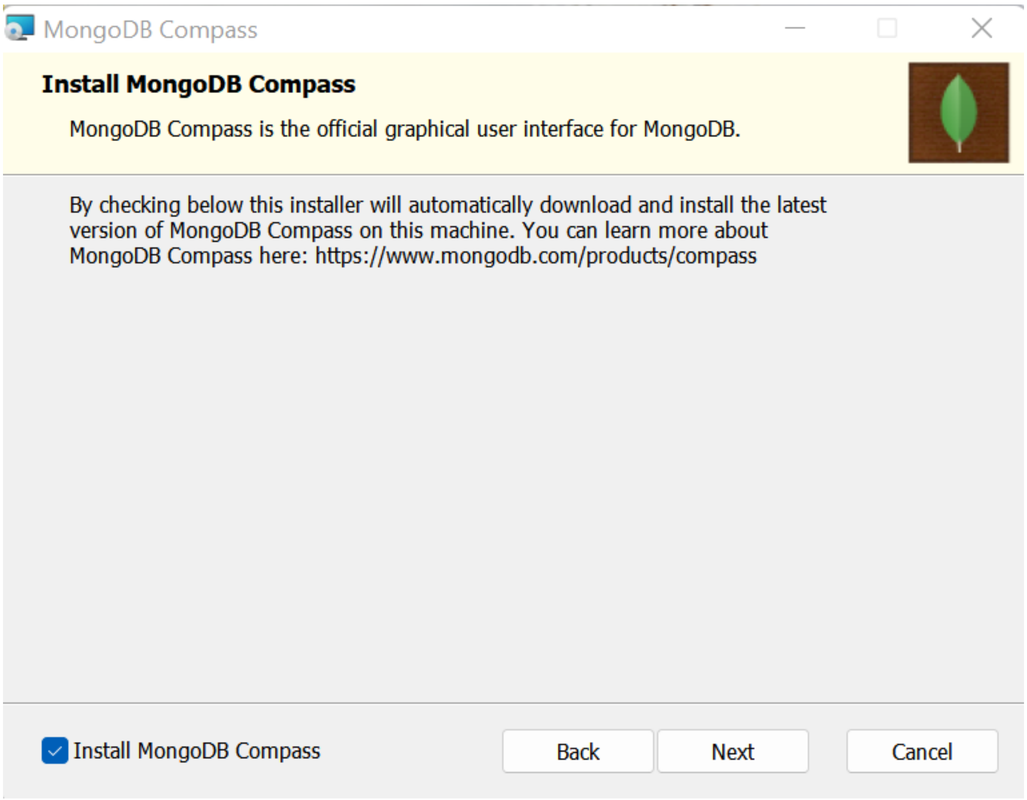
Account Name: MongoDB

Account Password:

Service Name: MongoDB

Data Directory: C:\Program Files\MongoDB\Server\5.0\data\

Log Directory: C:\Program Files\MongoDB\Server\5.0\log\



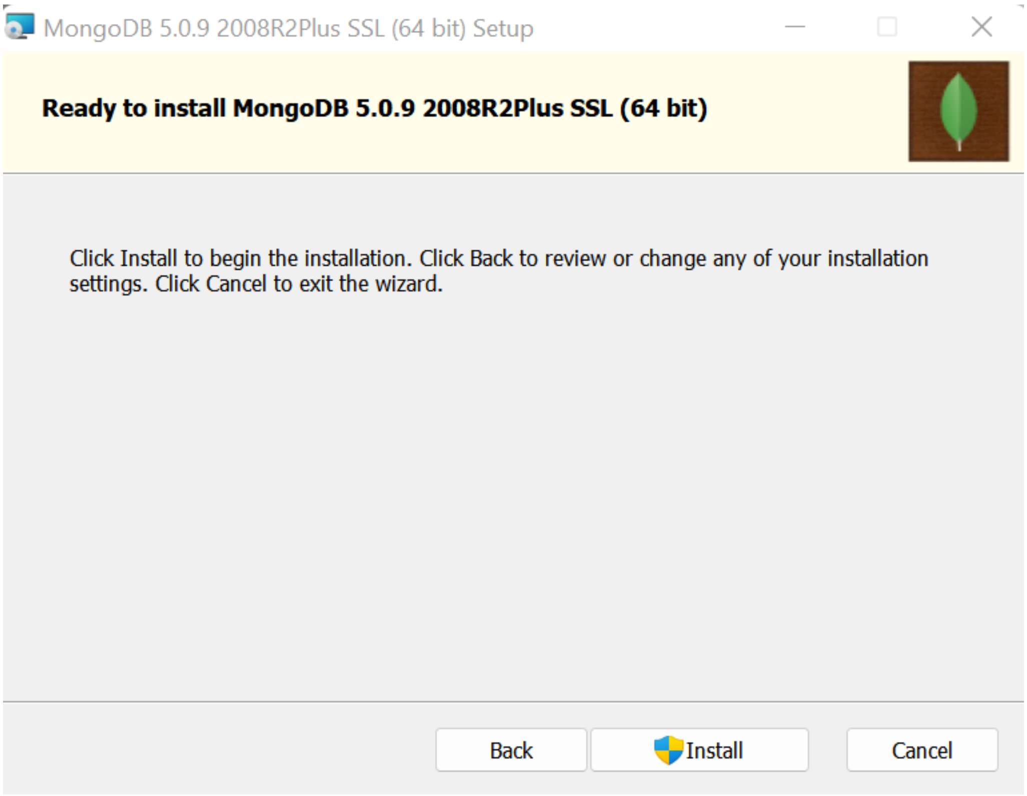
MongoDB Compass

Install MongoDB Compass

MongoDB Compass is the official graphical user interface for MongoDB.

By checking below this installer will automatically download and install the latest version of MongoDB Compass on this machine. You can learn more about MongoDB Compass here: https://www.mongodb.com/products/compass

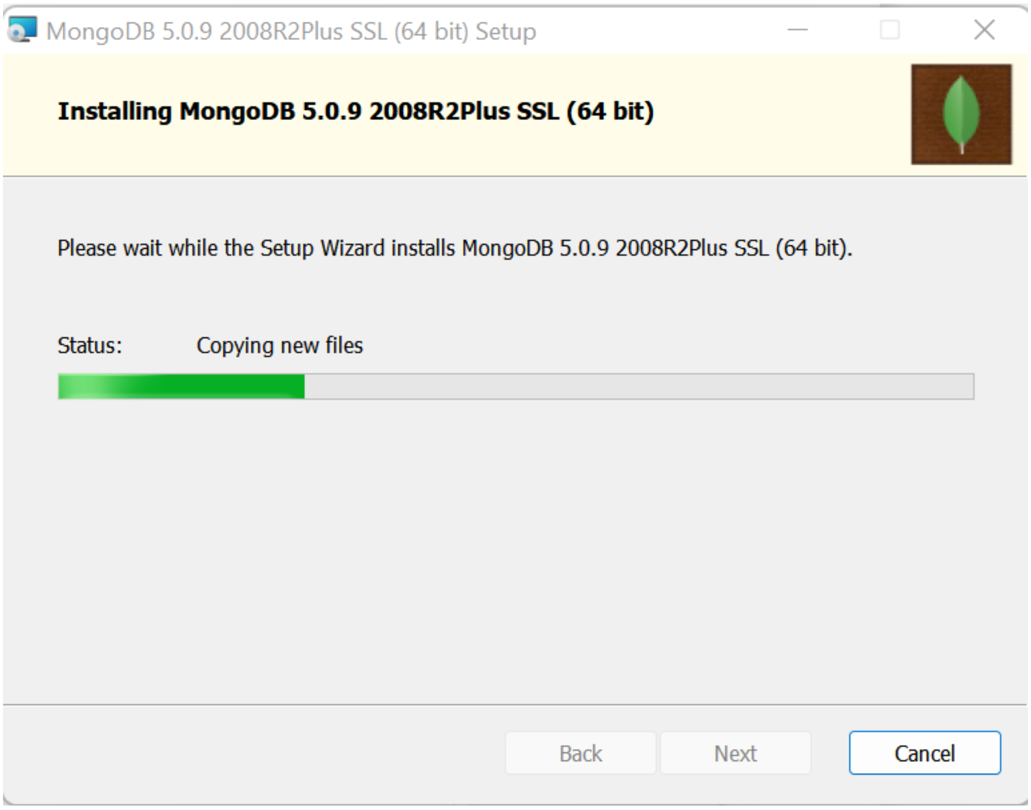
☑ Install MongoDB Compass



MongoDB 5.0.9 2008R2Plus SSL (64 bit) Setup

Ready to install MongoDB 5.0.9 2008R2Plus SSL (64 bit)

Click Install to begin the installation. Click Back to review or change any of your installation settings. Click Cancel to exit the wizard.

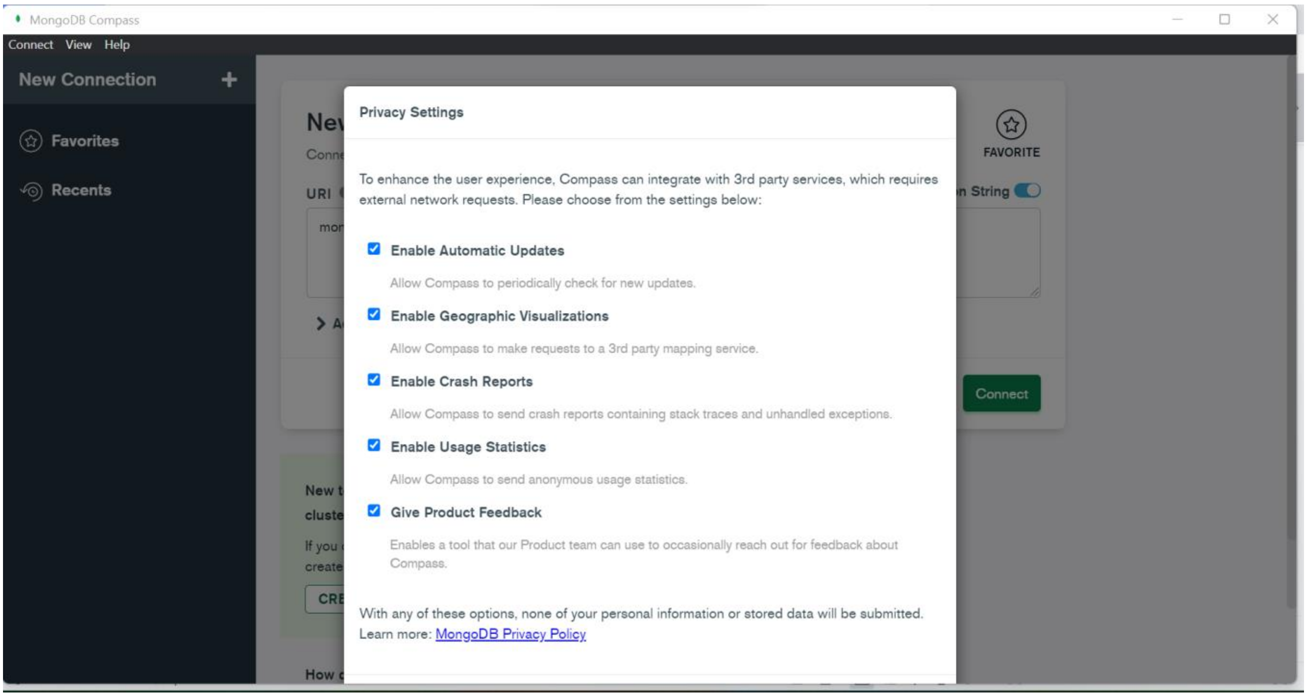


MongoDB 5.0.9 2008R2Plus SSL (64 bit) Setup

Installing MongoDB 5.0.9 2008R2Plus SSL (64 bit)

Please wait while the Setup Wizard installs MongoDB 5.0.9 2008R2Plus SSL (64 bit).

Status: Copying new files



Privacy Settings

To enhance the user experience, Compass can integrate with 3rd party services, which requires external network requests. Please choose from the settings below:

☑ Enable Automatic Updates

Allow Compass to periodically check for new updates.

☑ Enable Geographic Visualizations

Allow Compass to make requests to a 3rd party mapping service.

☑ Enable Crash Reports

Allow Compass to send crash reports containing stack traces and unhandled exceptions.

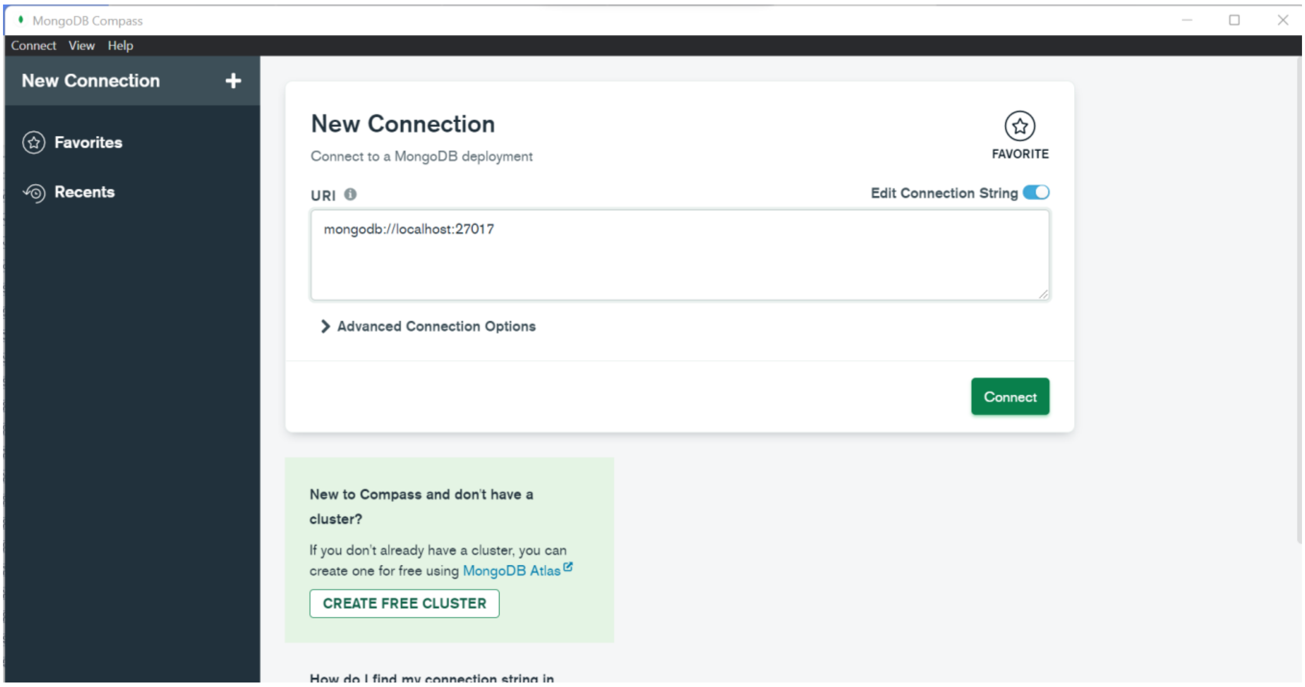
☑ Enable Usage Statistics

Allow Compass to send anonymous usage statistics.

☑ Give Product Feedback

Enables a tool that our Product team can use to occasionally reach out for feedback about Compass.

With any of these options, none of your personal information or stored data will be submitted. Learn more: MongoDB Privacy Policy



New Connection

Connect to a MongoDB deployment

URI

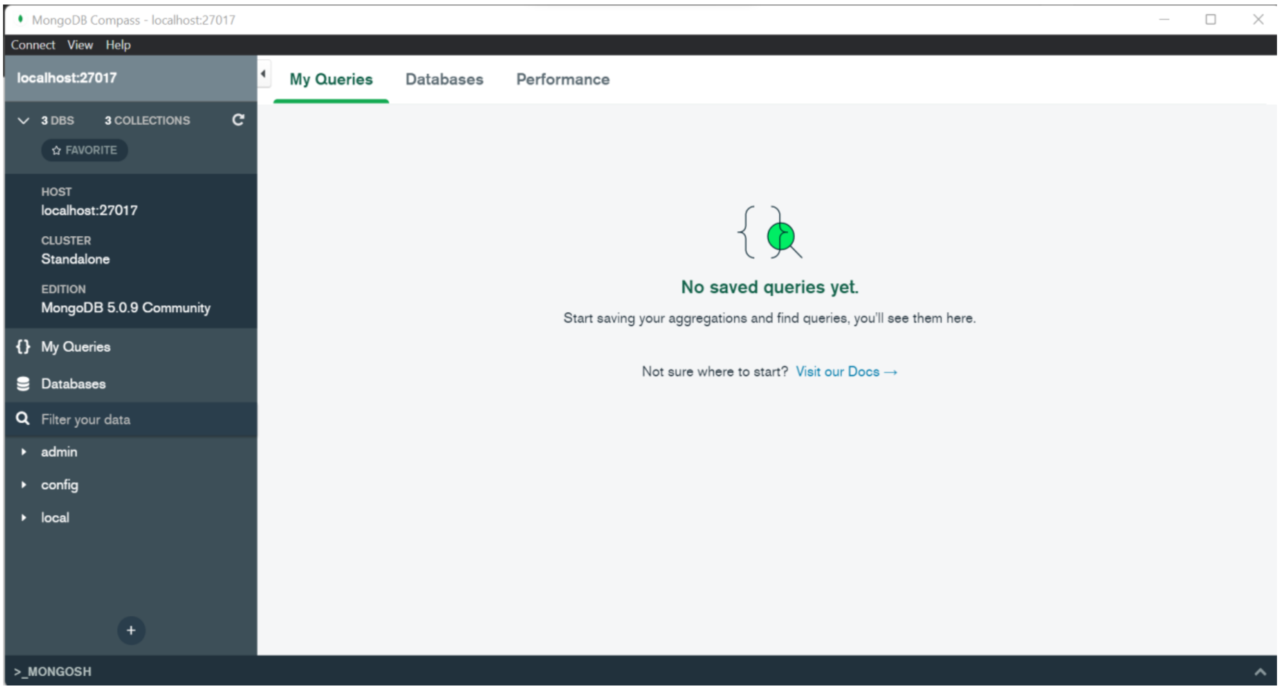
Edit Connection String

mongodb://localhost:27017

New to Compass and don't have a cluster?

If you don't already have a cluster, you can create one for free using MongoDB Atlas

How do I find my connection string in



No saved queries yet.

Start saving your aggregations and find queries, you'll see them here.

Not sure where to start? Visit our Docs →

EXPERIMENT NO: 12

AIM

Configuration of mongodb in php localhost, Driver configuration, CRUD operations with php.

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.

Step 1:

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

Step 2:

Extract the archive File.

Step 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.

Step 4:

Open the php.ini file inside your PHP installation (C:\xampp\php) and add the following line:

extension=php_mongodb.dll

Step 5:

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

Test MongoDB Connection From PHP Script

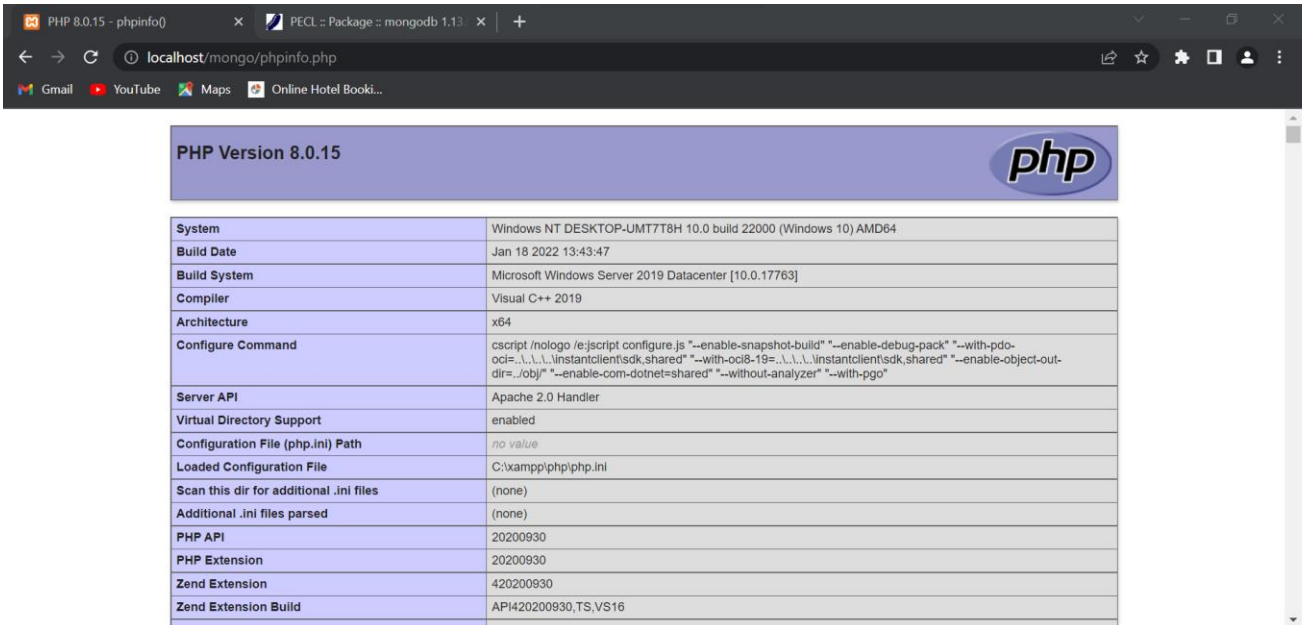
CRUD OPERATIONS

Ind.php

```
<?php
$con = new MongoDB\Driver\Manager('mongodb://localhost:27017');
```

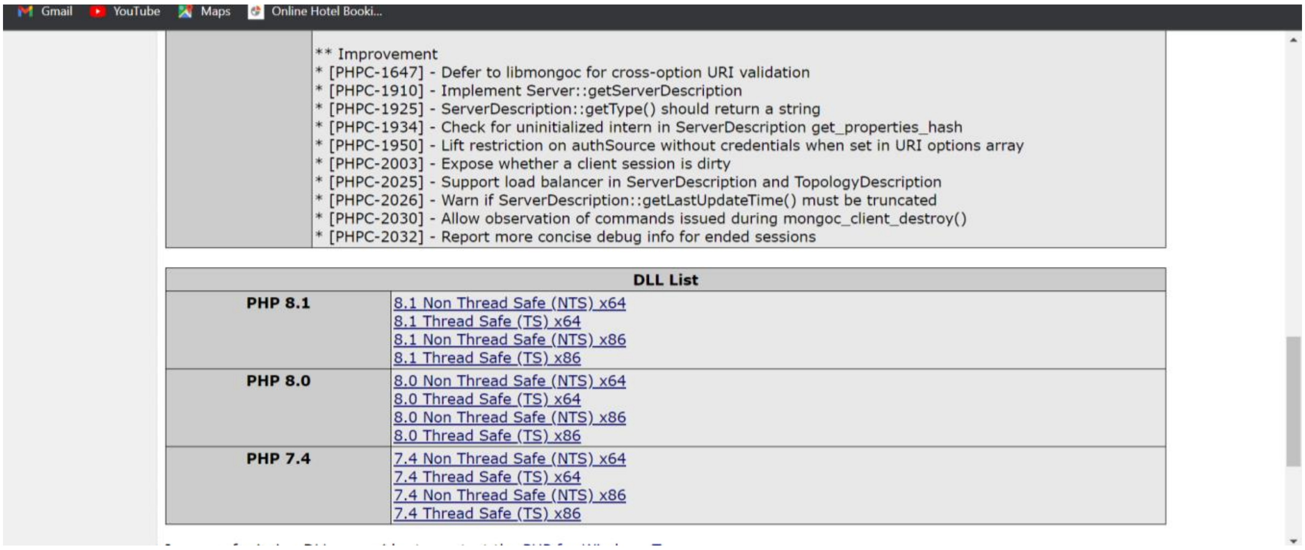
```
function insert()
{
global $con;
$writer =  new MongoDB\Driver\BulkWrite;
$writer->insert(["name"=>"Student1","rollno"=>20]);
$writer->insert(["name"=>"Student2"]);
$con->executeBulkWrite('MCADB.RMCA',$writer);
}
function show()
{
global $con;
$query=new MongoDB\Driver\Query([],[]);
$documents = $con->executeQuery('MCADB.RMCA',$query);
foreach($documents as $doc)
{
print_r($doc);
echo"<br>";
}
}
insert();
show();
?>
```

OUTPUT



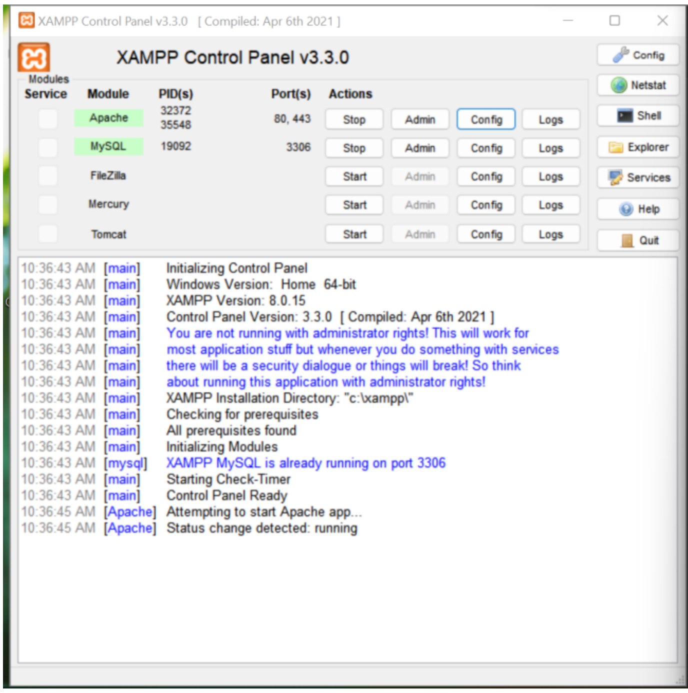
PHP Version 8.0.15

System	Windows NT DESKTOP-UMT7T8H 10.0 build 22000 (Windows 10) AMD64
Build Date	Jan 18 2022 13:43:47
Build System	Microsoft Windows Server 2019 Datacenter [10.0.17763]
Compiler	Visual C++ 2019
Architecture	x64
Configure Command	cscript /nologo /e:jscript configure.js "--enable-snapshot-build" "--enable-debug-pack" "--with-pdo-oci=..\..\..\..\instantclient\sdk,shared" "--with-oci8-19=..\..\..\..\instantclient\sdk,shared" "--enable-object-out-dir=../obj/" "--enable-com-dotnet=shared" "--without-analyzer" "--with-pgo"
Server API	Apache 2.0 Handler
Virtual Directory Support	enabled
Configuration File (php.ini) Path	no value
Loaded Configuration File	C:\xampp\php\php.ini
Scan this dir for additional .ini files	(none)
Additional .ini files parsed	(none)
PHP API	20200930
PHP Extension	20200930
Zend Extension	420200930
Zend Extension Build	API420200930,TS,VS16



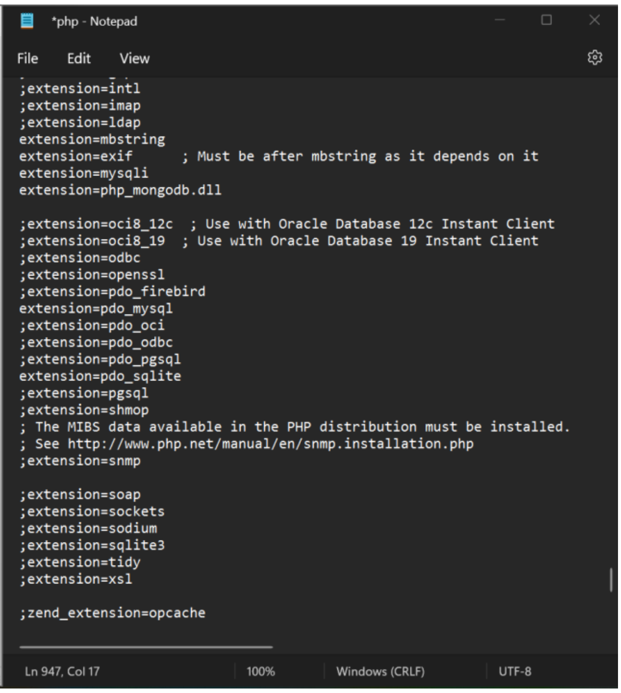
```
** Improvement
* [PHPC-1647] - Defer to libmongoc for cross-option URI validation
* [PHPC-1910] - Implement Server::getServerDescription
* [PHPC-1925] - ServerDescription::getType() should return a string
* [PHPC-1934] - Check for uninitialized intern in ServerDescription get_properties_hash
* [PHPC-1950] - Lift restriction on authSource without credentials when set in URI options array
* [PHPC-2003] - Expose whether a client session is dirty
* [PHPC-2025] - Support load balancer in ServerDescription and TopologyDescription
* [PHPC-2026] - Warn if ServerDescription::getLastUpdateTime() must be truncated
* [PHPC-2030] - Allow observation of commands issued during mongoc_client_destroy()
* [PHPC-2032] - Report more concise debug info for ended sessions
```

DLL List	
PHP 8.1	8.1 Non Thread Safe (NTS) x64 8.1 Thread Safe (TS) x64 8.1 Non Thread Safe (NTS) x86 8.1 Thread Safe (TS) x86
PHP 8.0	8.0 Non Thread Safe (NTS) x64 8.0 Thread Safe (TS) x64 8.0 Non Thread Safe (NTS) x86 8.0 Thread Safe (TS) x86
PHP 7.4	7.4 Non Thread Safe (NTS) x64 7.4 Thread Safe (TS) x64 7.4 Non Thread Safe (NTS) x86 7.4 Thread Safe (TS) x86

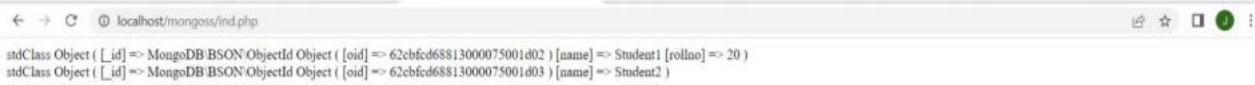

XAMPP Control Panel v3.3.0 [Compiled: Apr 6th 2021]
XAMPP Control Panel v3.3.0
Config
Netstat
Shell
Explorer
Services
Help
Quit

Service	Module	PID(s)	Port(s)	Actions			
	Apache	32372 35548	80, 443	Stop	Admin	Config	Logs
	MySQL	19092	3306	Stop	Admin	Config	Logs
	FileZilla			Start	Admin	Config	Logs
	Mercury			Start	Admin	Config	Logs
	Tomcat			Start	Admin	Config	Logs

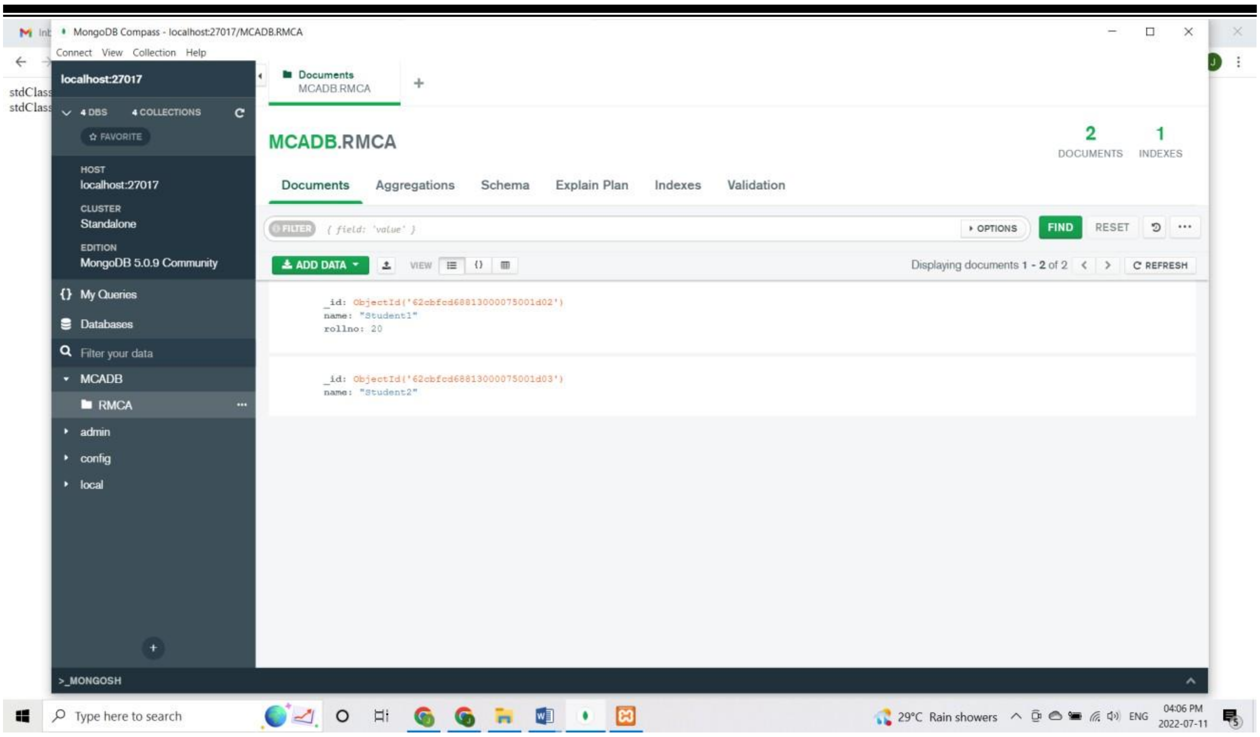
```
10:36:43 AM  [main]    Initializing Control Panel
10:36:43 AM  [main]    Windows Version:  Home  64-bit
10:36:43 AM  [main]    XAMPP Version: 8.0.15
10:36:43 AM  [main]    Control Panel Version: 3.3.0  [ Compiled: Apr 6th 2021 ]
10:36:43 AM  [main]    You are not running with administrator rights! This will work for
10:36:43 AM  [main]    most application stuff but whenever you do something with services
10:36:43 AM  [main]    there will be a security dialogue or things will break! So think
10:36:43 AM  [main]    about running this application with administrator rights!
10:36:43 AM  [main]    XAMPP Installation Directory: "c:\xampp\"
10:36:43 AM  [main]    Checking for prerequisites
10:36:43 AM  [main]    All prerequisites found
10:36:43 AM  [main]    Initializing Modules
10:36:43 AM  [mysql]   XAMPP MySQL is already running on port 3306
10:36:43 AM  [main]    Starting Check-Timer
10:36:43 AM  [main]    Control Panel Ready
10:36:45 AM  [Apache]  Attempting to start Apache app...
10:36:45 AM  [Apache]  Status change detected: running
```



```
;extension=intl
;extension=imap
;extension=ldap
extension=mbstring
extension=exif      ; Must be after mbstring as it depends on it
extension=mysqli
extension=php_mongodb.dll

;extension=oci8_12c  ; Use with Oracle Database 12c Instant Client
;extension=oci8_19  ; Use with Oracle Database 19 Instant Client
;extension=odbc
;extension=openssl
;extension=pdo_firebird
extension=pdo_mysql
;extension=pdo_oci
;extension=pdo_odbc
;extension=pdo_pgsql
extension=pdo_sqlite
;extension=pgsql
;extension=shmop
; The MIBS data available in the PHP distribution must be installed.
; See http://www.php.net/manual/en/snmp.installation.php
;extension=snmp

;extension=soap
;extension=sockets
;extension=sodium
;extension=sqlite3
;extension=tidy
;extension=xsl

;zend_extension=opcache
```



```
stdClass Object ( [_id] => MongoDB\BSON\ObjectId Object ( [oid] => 62cbfcd68813000075001d02 ) [name] => Student1 [rollno] => 20 )
stdClass Object ( [_id] => MongoDB\BSON\ObjectId Object ( [oid] => 62cbfcd68813000075001d03 ) [name] => Student2 )
```



MongoDB Compass - localhost:27017/MCADB.RMCA

localhost:27017

HOST
localhost:27017

CLUSTER
Standalone

EDITION
MongoDB 5.0.9 Community

MCADB.RMCA

2 DOCUMENTS 1 INDEXES

Displaying documents 1 - 2 of 2

```
_id: ObjectId('62cbfcd68813000075001d02')
name: "Student1"
rollno: 20
```

```
_id: ObjectId('62cbfcd68813000075001d03')
name: "Student2"
```

EXPERIMENT NO: 13

AIM

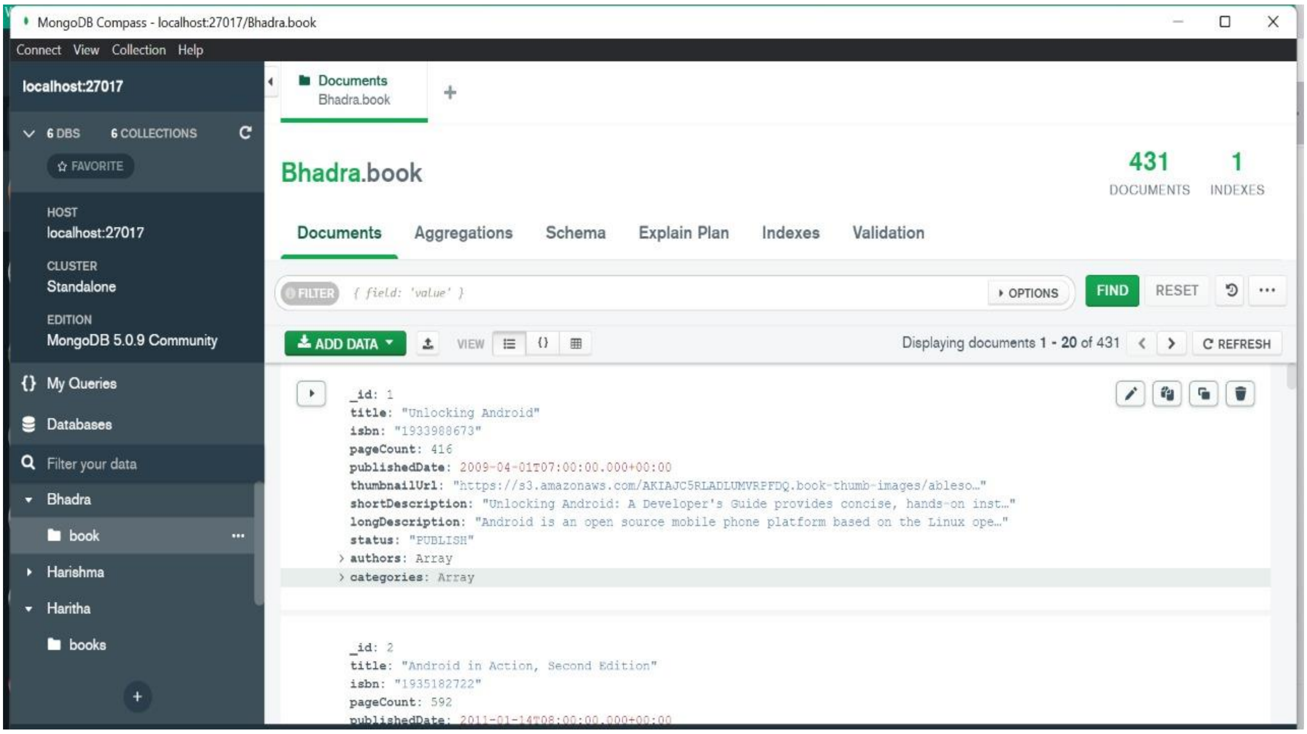
Implementation of indexing in mongodb database, Configuration of indexing, Identifying difference with and without indexed search.

PROCEDURE

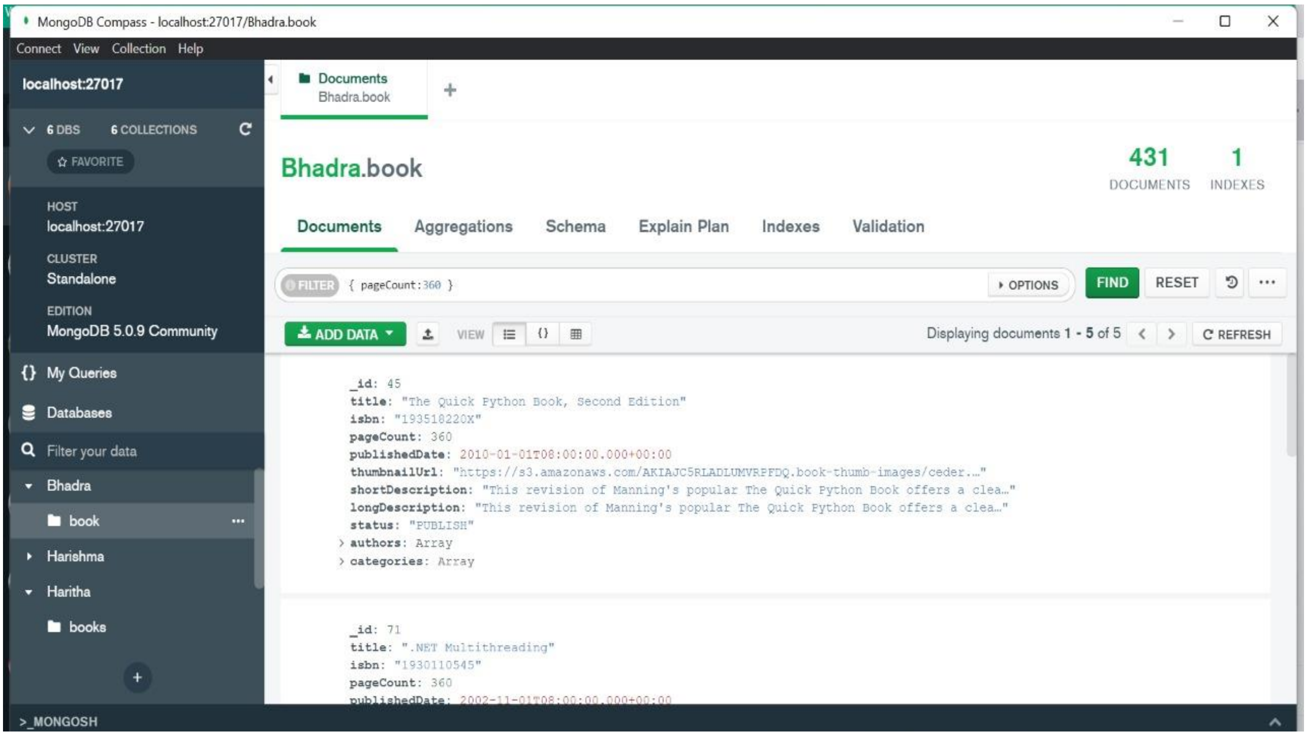
Indexes support the efficient execution of queries in MongoDB. Without indexes, MongoDB must perform a collection scan, i.e., scan every document in a collection, to select those documents that match the query statement. If an appropriate index exists for a query, MongoDB can use the index to limit the number of documents it must inspect.

Indexes are special data structures that store a small portion of the collection's data set in an easy to traverse form. The index stores the value of a specific field or set of fields, ordered by the value of the field. The ordering of the index entries supports efficient equality matches and range-based query operations. In addition, MongoDB can return sorted results by using the ordering in the index.

OUTPUT

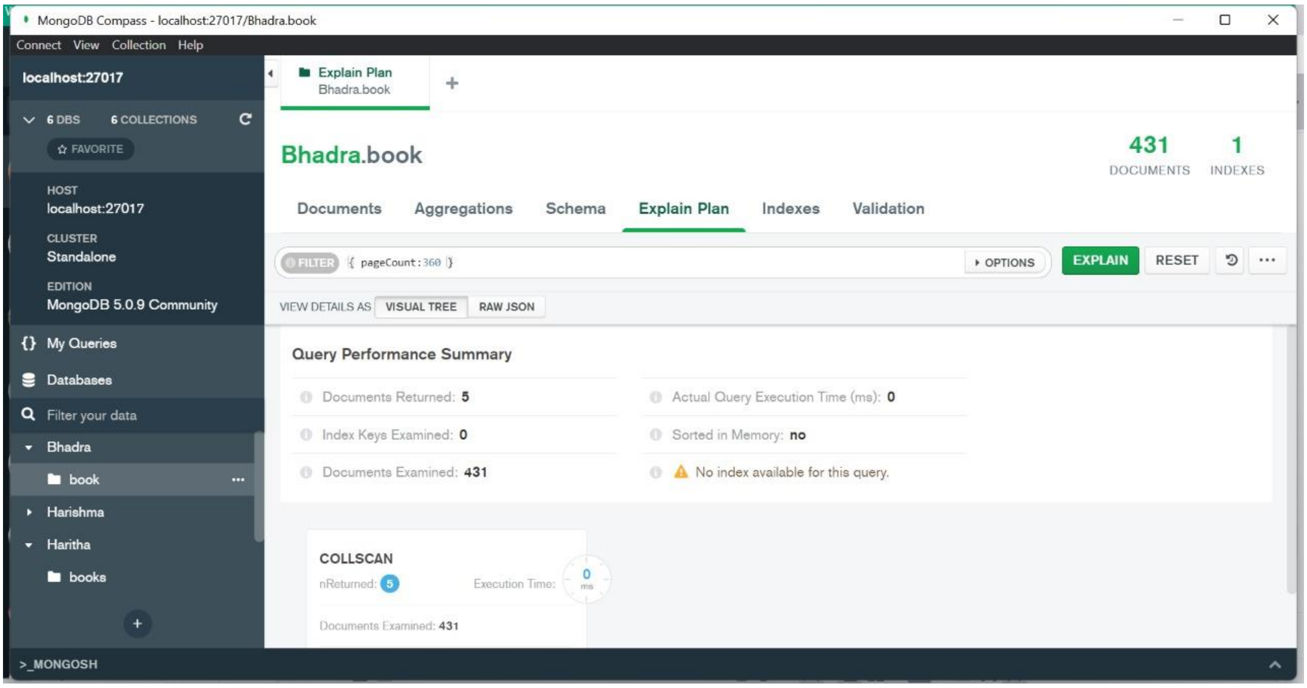


```
_id: 1
title: "Unlocking Android"
isbn: "1933988673"
pageCount: 416
publishedDate: 2009-04-01T07:00:00.000+00:00
thumbnailUrl: "https://s3.amazonaws.com/AKIAJC5RLADLUMVRPFDQ.book-thumb-images/ableso…"
shortDescription: "Unlocking Android: A Developer's Guide provides concise, hands-on inst…"
longDescription: "Android is an open source mobile phone platform based on the Linux ope…"
status: "PUBLISH"
> authors: Array
> categories: Array

_id: 2
title: "Android in Action, Second Edition"
isbn: "1935182722"
pageCount: 592
publishedDate: 2011-01-14T08:00:00.000+00:00
```



```
{ pageCount:360 }
```

```
_id: 45
title: "The Quick Python Book, Second Edition"
isbn: "193518220X"
pageCount: 360
publishedDate: 2010-01-01T08:00:00.000+00:00
thumbnailUrl: "https://s3.amazonaws.com/AKIAJC5RLADLUMVRPFDQ.book-thumb-images/ceder.…"
shortDescription: "This revision of Manning's popular The Quick Python Book offers a clea…"
longDescription: "This revision of Manning's popular The Quick Python Book offers a clea…"
status: "PUBLISH"
> authors: Array
> categories: Array

_id: 71
title: ".NET Multithreading"
isbn: "1930110545"
pageCount: 360
publishedDate: 2002-11-01T08:00:00.000+00:00
```



```
{ pageCount:360 }
```

Query Performance Summary

Documents Returned: 5

Index Keys Examined: 0

Documents Examined: 431

Actual Query Execution Time (ms): 0

Sorted in Memory: no

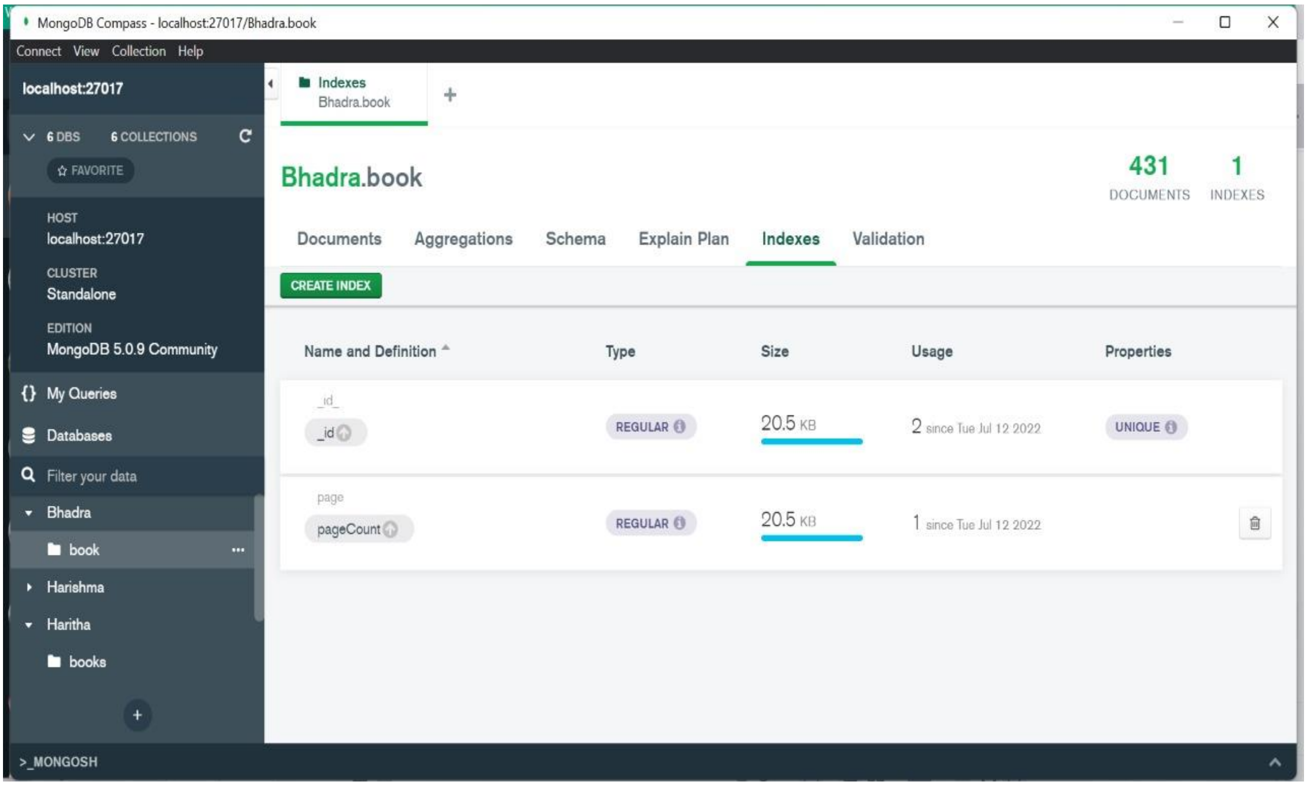
⚠ No index available for this query.

COLLSCAN

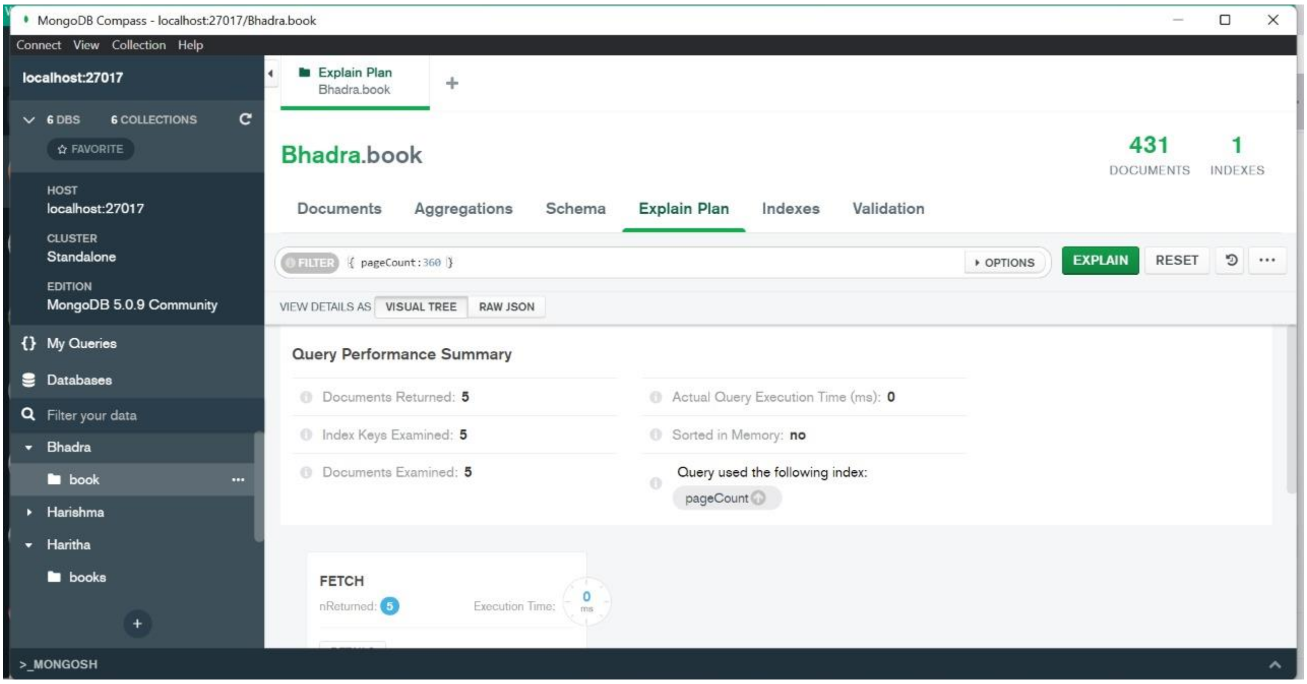
nReturned: 5

Execution Time: 0 ms

Documents Examined: 431



Name and Definition	Type	Size	Usage	Properties
_id_ _id	REGULAR	20.5 KB	2 since Tue Jul 12 2022	UNIQUE
page pageCount	REGULAR	20.5 KB	1 since Tue Jul 12 2022	



FILTER { pageCount : 360 }

Query Performance Summary

Documents Returned: 5

Index Keys Examined: 5

Documents Examined: 5

Actual Query Execution Time (ms): 0

Sorted in Memory: no

Query used the following index:
pageCount

FETCH
nReturned: 5 Execution Time: 0 ms

EXPERIMENT NO: 14

AIM

Develop a PHP form with fields Name, Email and Mobile. Perform listing, insertion, deletion and updation with MongoDB in User database.

PROCEDURE

Insert.php

```
$email=$_POST['email'];

$mobile=$_POST['mobile'];

global $con;

$writer = new MongoDB\Driver\BulkWrite;

$writer->insert(["id"=>$id,"name"=>$name,"email"=>$email,"mobile"=>$mobile]);

$con->executeBulkWrite('Hari.reg',$writer);

}

?>

<html>

<head>

<title>registration</title>

</head>

<body >

   <h2>please enter your details</h2>

<form method="POST" action="">

<label>ID:</label><br>

<input type="text" name="id" id="id1" require><br><br>

<label>Name:</label><br>
```

```
<input type="text" name="name" id="id2" require><br><br>
<label>Email:</label><br>
<input type="text" name="email" id="id3" require><br><br>
<label>Mobile No</label><br>
<input type="text" name="mobile" id="id4" require><br><br>
<input type="submit" name="sub">
<input type="reset" name="res"><br><br>
<a href=view.php>Registered Peple</a>
</form>
</body>
</html>
```

View.php

```
<?php
$con=new MongoDB\Driver\Manager('mongodb://localhost:27017');
$query = new MongoDB\Driver\Query([],[]);
$documents = $con ->executeQuery('Hari.reg',$query);
?>
<table border="1">
<tr>
<th>id</th>
<th>name</th>
<th>email</th>
<th>mobile no</th>
<th>delete</th>
<th>update</th>
```

```
</tr>
<?php
foreach ($documents as $doc){
?>
<tr>
<td><?php echo $doc->id;?></td>
<td><?php echo $doc->name;?></td>
<td><?php echo $doc->email;?></td>
<td><?php echo $doc->mobile;?></td>
<td> <a href="delete.php?id=<?php echo $doc->id; ?>">delete</a></td>
<td> <a href="update.php?id=<?php echo $doc->id; ?>">update</a></td>
</tr>
<?php
}
?>
</table>
```

Update.php

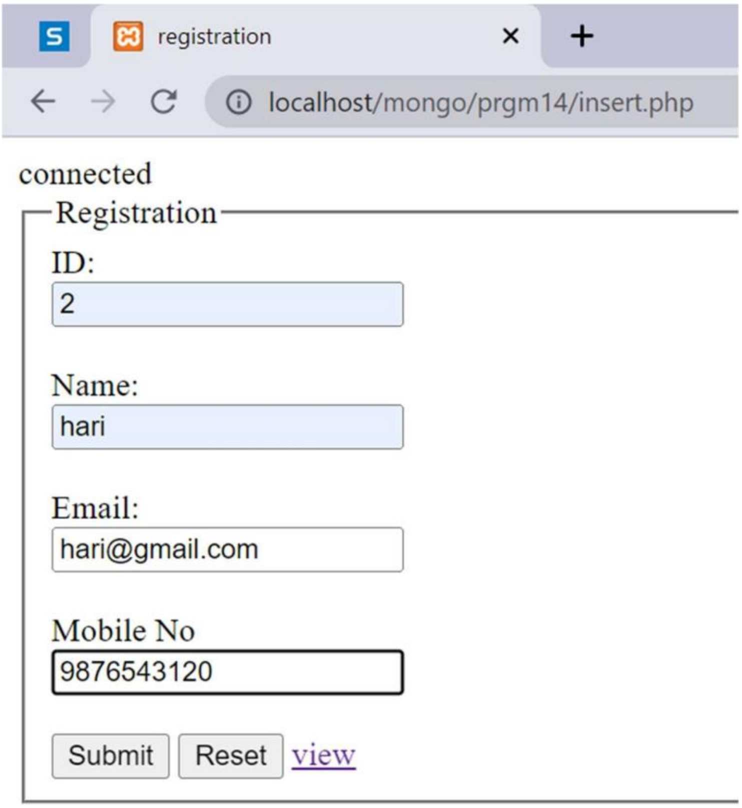
```
<?php
$con = new MongoDB\Driver\Manager("mongodb://localhost:27017");
if(isset($_POST['sub']))
{
$id=$_POST['id'];
$name=$_POST['name'];
$email=$_POST['email'];
$mobile=$_POST['mobile'];
```

```
$upda=new MongoDB\Driver\BulkWrite;
$upda->update(array('id'=>
$id),(array('id'=>$id,'name'=>$name,'email'=>$email,'mobile'=>$mobile)));
$con->executeBulkWrite(‘Hari.reg',$upda);
die(header("location:view.php"));
}
if(isset($_GET['id']))
{         $id=$_GET['id'];
$view=new MongoDB\Driver\Query(['id'=> $id],[]);
$document=$con->executeQuery(‘Hari.reg', $view);
foreach($document as $doc)
{
?>
<html>
<body>
<form method="POST" action="">
<fieldset><legend>updation</legend>
<label>enter id</label>
<input type="text" name="id" value="<?php echo $doc->id; ?>"><br>
<label>enter name</label>
<input type="text" name="name" value="<?php echo $doc->name; ?>"><br>
<label>enter email</label>
<input type="text" name="email" value="<?php echo $doc->email; ?>"><br>
<label>enter mobile</label>
<input type="text" name="mobile" value="<?php echo $doc->mobile; ?>"><br>
<input type="submit" name="sub" value ="update">
</fieldset>
</form>
</body>
</html>
<?php
}
}
?>
```

Delete.php

```
<?php
$con = new MongoDB\Driver\Manager("mongodb://localhost:27017");
if(isset($_GET['id']))
{       $id=$_GET['id'];
        $del = new MongoDB\Driver\BulkWrite;
        $del->delete(array('id'=> $id));
        $con->executeBulkWrite(‘Hari.reg', $del);
        echo "record deleted click the below link to view the balanced documents";
        ?><br><a href="view.php">view</a><?php
}
?>
```

OUTPUT



connected

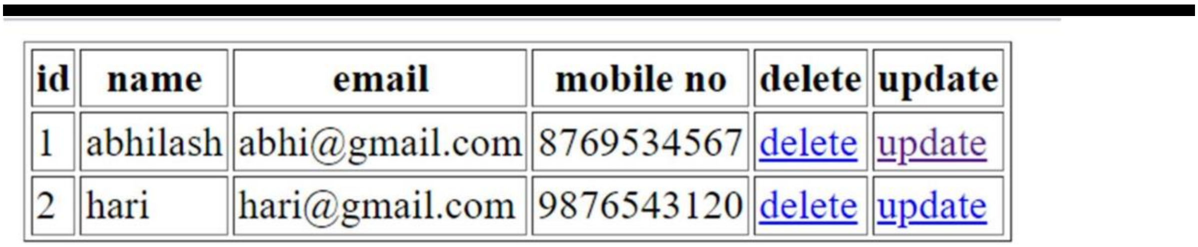
Registration

ID:
2

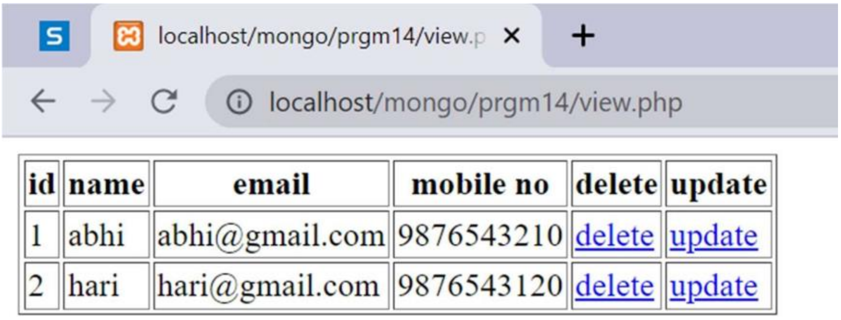
Name:
hari

Email:
hari@gmail.com

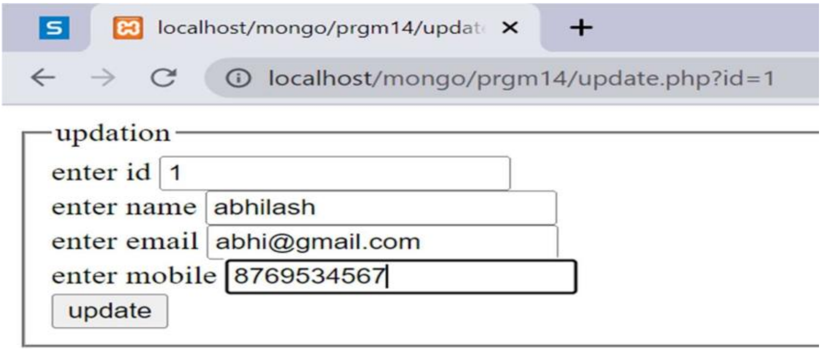
Mobile No
9876543120



id	name	email	mobile no	delete	update
1	abhilash	abhi@gmail.com	8769534567	delete	update
2	hari	hari@gmail.com	9876543120	delete	update


localhost/mongo/prgm14/view.p
localhost/mongo/prgm14/view.php

id	name	email	mobile no	delete	update
1	abhi	abhi@gmail.com	9876543210	delete	update
2	hari	hari@gmail.com	9876543120	delete	update


localhost/mongo/prgm14/updat
localhost/mongo/prgm14/update.php?id=1

updation

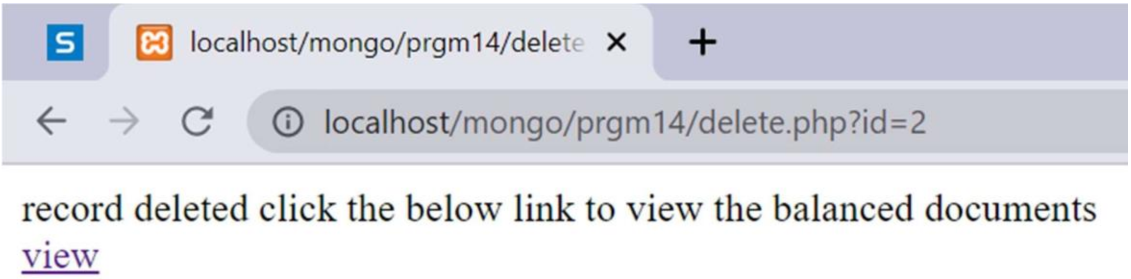
enter id 1

enter name abhilash

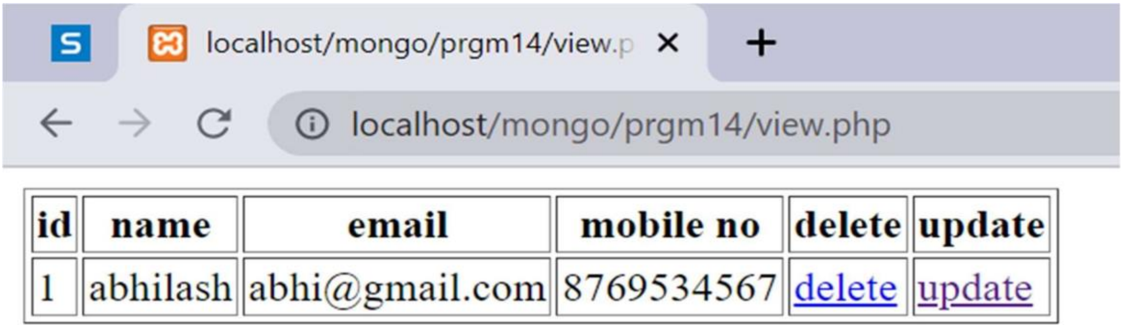
enter email abhi@gmail.com

enter mobile 8769534567

update


localhost/mongo/prgm14/delete
localhost/mongo/prgm14/delete.php?id=2

record deleted click the below link to view the balanced documents
view


localhost/mongo/prgm14/view.p
localhost/mongo/prgm14/view.php

id	name	email	mobile no	delete	update
1	abhilash	abhi@gmail.com	8769534567	delete	update