

**TY B.Tech. (CSE) – II [ 2022-23 ]**  
**5CS372 : Advanced Database System Lab.**  
**Assignment No. 2**

**PRN: 2020BTECS00033**

**Name: Prathamesh Raje**

**Title: Installation, configuration and testing of Oracle 18c XE & MySQL.**

**Aim: To study the configuration of Oracle 18c XE & MySQL& build Python GUI Application.**

**Introduction:**

**Oracle 18c XE:**

- Connect Oracle Database to your favourite programming languages and dev environments including Java, .NET, Python, Node.js, Go, PHP, C/C++ and more.
- Learn SQL on the world's leading relational database, or experiment with Oracle's native support for JSON documents and spatial & graph data.
- Use free dev tools and IDEs from Oracle including SQL Developer, SQLcl and SQL Developer Data Modeler.
- Install free Oracle REST Data Services (ORDS) to REST-enable your database.
- For low-code app development, run Oracle APEX on top of ORDS and XE at no extra cost to rapidly build data-centric web apps that look beautiful in mobile and desktop browsers.

**MySQL:**

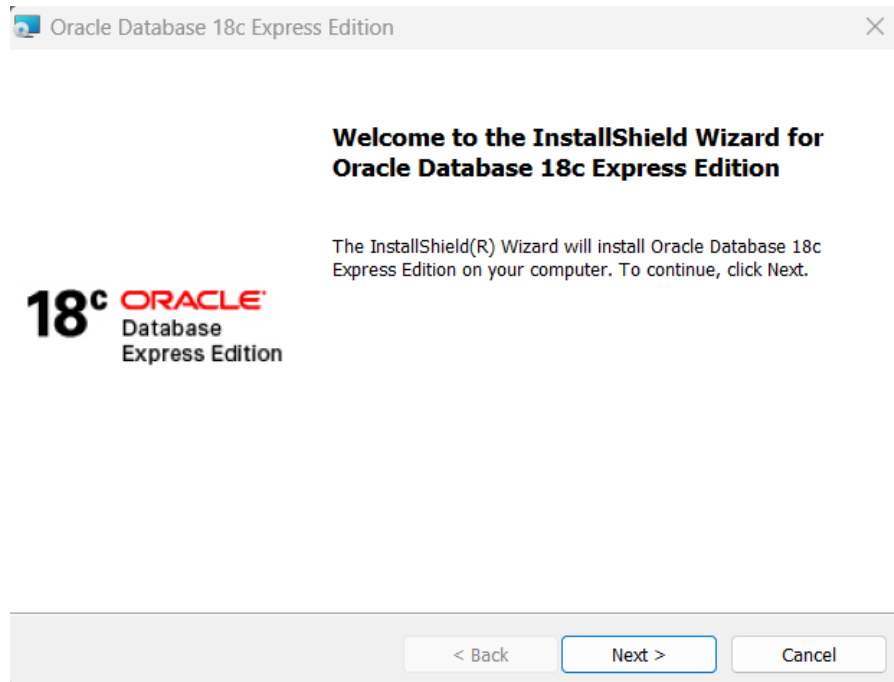
- MySQL is an open-source relational database management system (RDBMS).
- Its name is a combination of "My", the name of co-founder Michael Widenius's daughter My, and "SQL", the acronym for Structured Query Language.
- A relational database organises data into one or more data tables in which data may be related to each other; these relations help structure the data.
- SQL is a language programmers use to create, modify and extract data from the relational database, as well as control user access to the database.
- In addition to relational databases and SQL, an RDBMS like MySQL works with an operating system to implement a relational database in a computer's storage system, manages users, allows for network access and facilitates testing database integrity and creation of backups.

## Procedure:

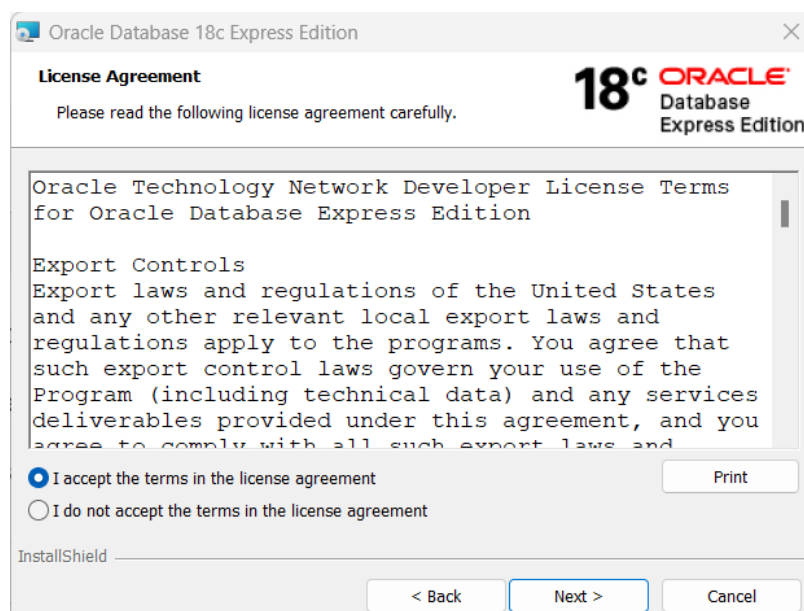
### Installation, configuration & testing of Oracle 12c EE / 18c XE

#### Oracle Server Installation:

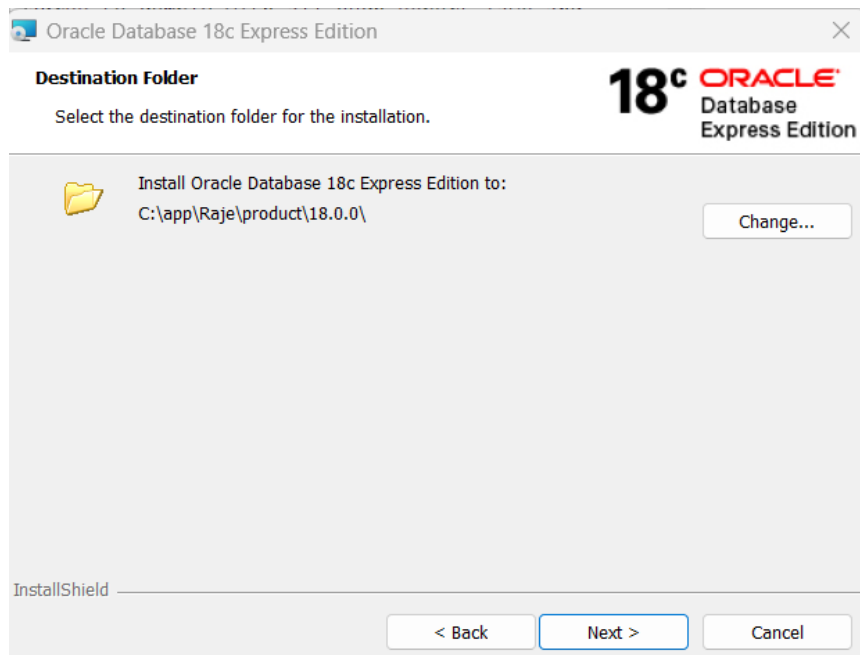
1) Download the Oracle 18c XE file from oracle website for your OS. Extract the zip file and open the setup.exe file.



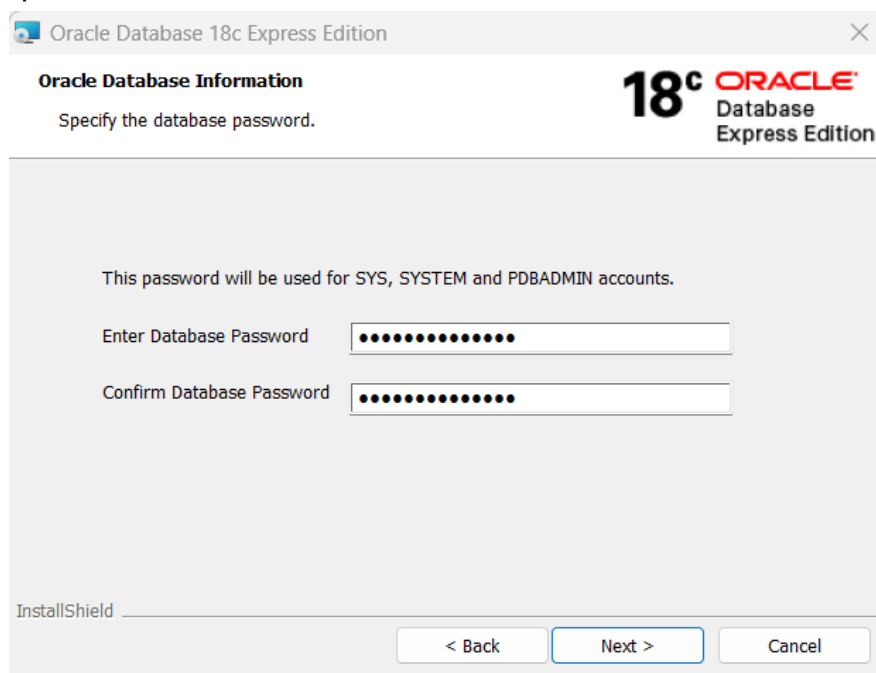
2) Read & accept the License Agreement.



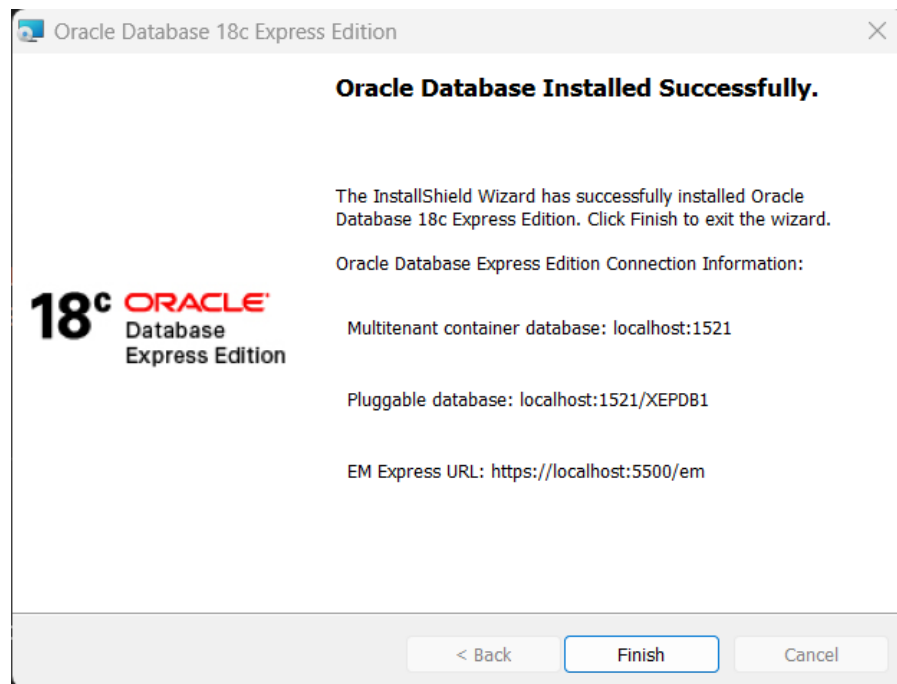
3) Choose the destination to install the Oracle 18c Database.



4) Enter the password for the database.



5) When the installation is completed, note down the connection information.



6) Hence, the Oracle Server (18c Express Edition) is installed successfully.

### Testing the connectivity:

```
Command Prompt - sqlplus sys as sysdba
Microsoft Windows [Version 10.0.22621.1194]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Raje>sqlplus sys as sysdba

SQL*Plus: Release 18.0.0.0.0 - Production on Sun Feb 5 17:17:19 2023
Version 18.4.0.0.0

Copyright (c) 1982, 2018, Oracle. All rights reserved.

Enter password:

Connected to:
Oracle Database 18c Express Edition Release 18.0.0.0.0 - Production
Version 18.4.0.0.0

SQL> connect sys/oracle@localhost:1521/XEPDB1 as sysdba;
Connected.
SQL> alter user hr identified by hr;

User altered.

SQL> alter user hr account unlock;

User altered.
```

```
SQL> connect hr/hr@localhost:1521/XEPDB1;  
Connected.  
SQL> select * from tab;
```

```
TNAME  
-----  
TABTYPE          CLUSTERID  
-----  
REGIONS  
TABLE  
  
COUNTRIES  
TABLE  
  
LOCATIONS  
TABLE  
  
TNAME  
-----  
TABTYPE          CLUSTERID  
-----  
DEPARTMENTS  
TABLE  
  
JOBS  
TABLE  
  
EMPLOYEES  
TABLE  
  
TNAME  
-----  
TABTYPE          CLUSTERID  
-----  
JOB_HISTORY  
TABLE  
  
EMP_DETAILS_VIEW  
VIEW
```

## Creating User:

```
SQL> create user c##2020BTECS00033 identified by "2020BTECS00033";  
User created.  
  
SQL> grant all privileges to c##2020BTECS00033;  
Grant succeeded.  
  
SQL>
```

## Connecting to created user:

```
SQL> conn  
Enter user-name: c##2020BTECS00033  
Enter password:  
Connected.  
SQL>
```

## Creating Sample Tables:

```
D:\instantclient-sqlplus-windows.x64-19.17.0.0\instantclient_19_17\sqlplus.exe

SQL*Plus: Release 18.0.0.0.0 - Production on Mon Feb 6 09:09:39 2023
Version 18.4.0.0.0

Copyright (c) 1982, 2022, Oracle. All rights reserved.

Enter user-name: c##2020BTECS00033
Enter password:
Last Successful login time: Mon Feb 06 2023 09:00:55 +05:30

Connected to:
Oracle Database 18c Express Edition Release 18.0.0.0.0 - Production
Version 18.4.0.0.0

SQL>
```

New / Select Database Connection

Connection Na...	Connection De...
2020BTECS00...	c#2020@//loc...
Employee	2020BTECS00...
P Raje	2020BTECS00...
XEPDB1	XEPDB1@//DE...

Name: 2020BTECS00033 Color

Database Type: Oracle

**User Info** Proxy User

Authentication Type: Default

Username: c#2020 Role: default

Password: ..... ☐ Save Password

Connection Type: Basic

**Details** Advanced

Hostname: localhost

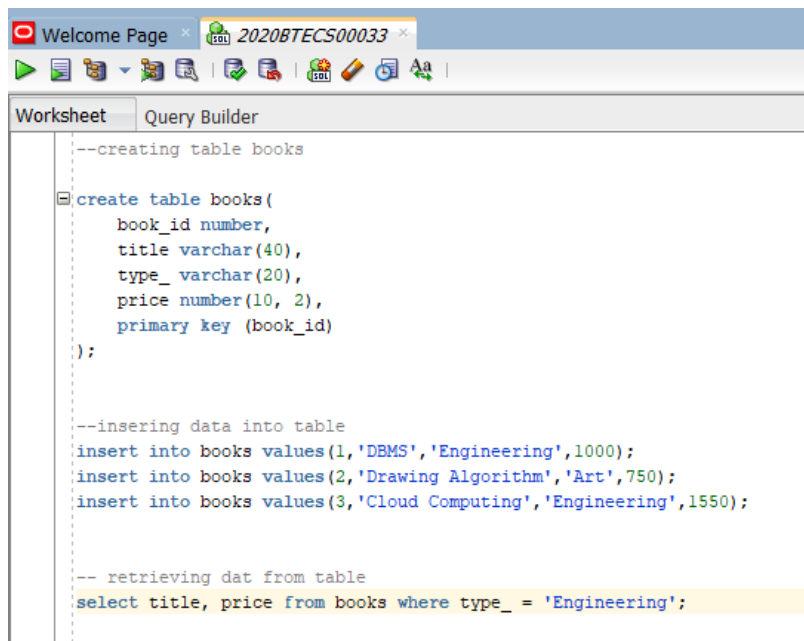
Port: 1521

☐ SID

☒ Service name: XEPDB1

Status: Success

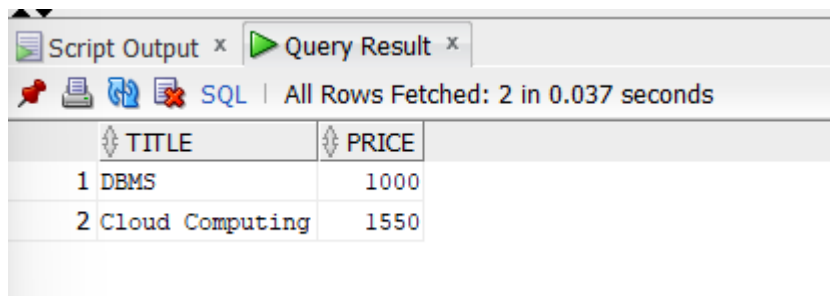
Help Save Clear Test Connect Cancel



```
--creating table books
create table books(
    book_id number,
    title varchar(40),
    type_ varchar(20),
    price number(10, 2),
    primary key (book_id)
);

--inserting data into table
insert into books values(1,'DBMS','Engineering',1000);
insert into books values(2,'Drawing Algorithm','Art',750);
insert into books values(3,'Cloud Computing','Engineering',1550);

-- retrieveing dat from table
select title, price from books where type_ = 'Engineering';
```



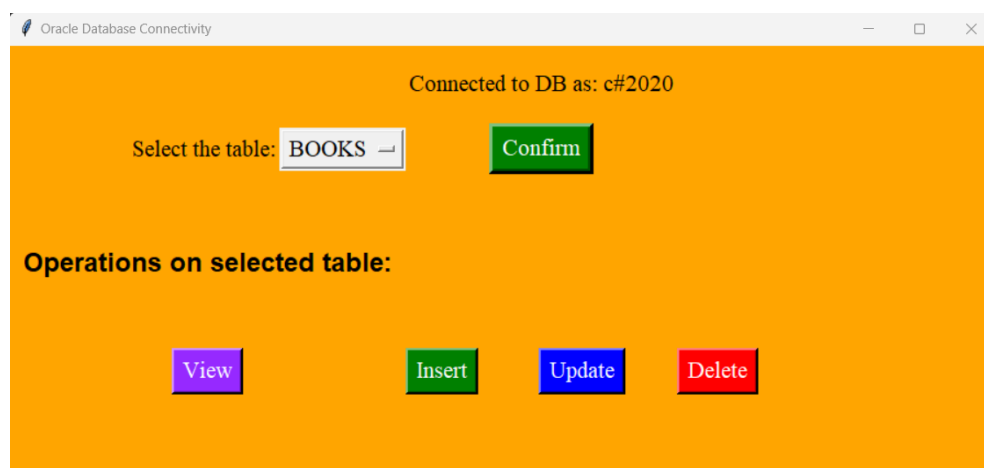
TITLE	PRICE
1 DBMS	1000
2 Cloud Computing	1550

**Python GUI:**


**Link of Code:**

<https://github.com/prathameshraje23/ADSL-Assignment-2>

**Result:**



## Insert:

 INSERT into Table

Insert values in table: BOOKS

BOOK_ID	<input type="text" value="4"/>
TITLE	<input type="text" value="Indian History"/>
TYPE_	<input type="text" value="History"/>
PRICE	<input type="text" value="2000"/>

Insert Values

## Update:

View

Insert

Update

Delete

UPDATE

Enter the ID to be updated:

OKCancel



UPDATE Table

Update values in table:


BOOK_ID	<input type="text" value="4"/>
TITLE	<input type="text" value="Ancient Indian History"/>
TYPE_	<input type="text" value="History"/>
PRICE	<input type="text" value="2500.0"/>

Delete:

DELETE

Enter the ID to be deleted:

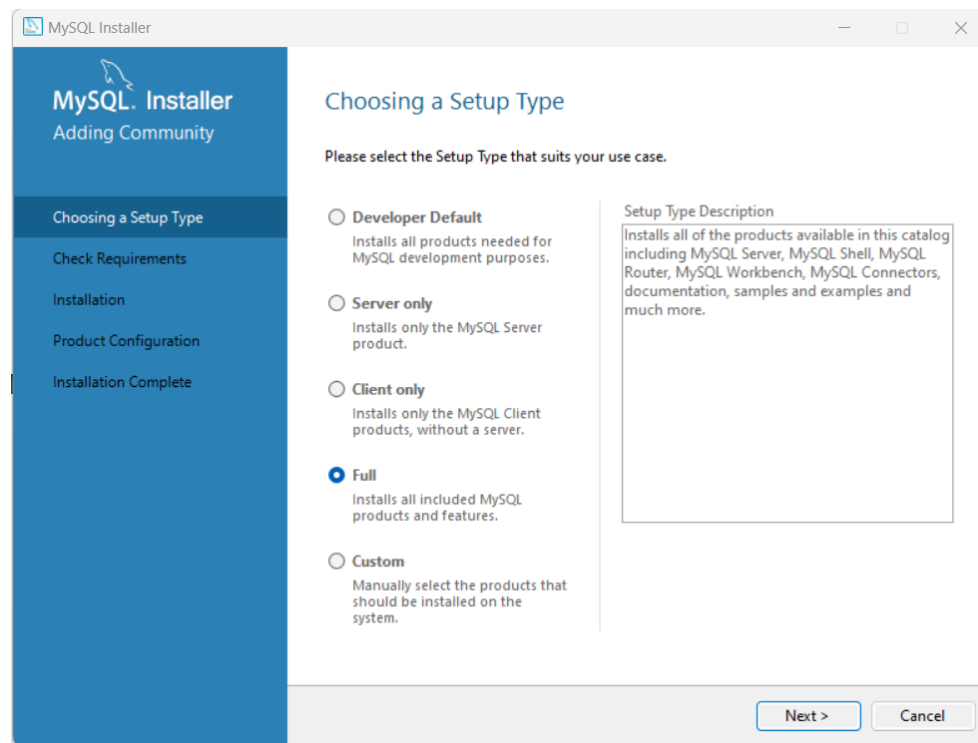
SUCCESS

 Deleted record from table successfully!

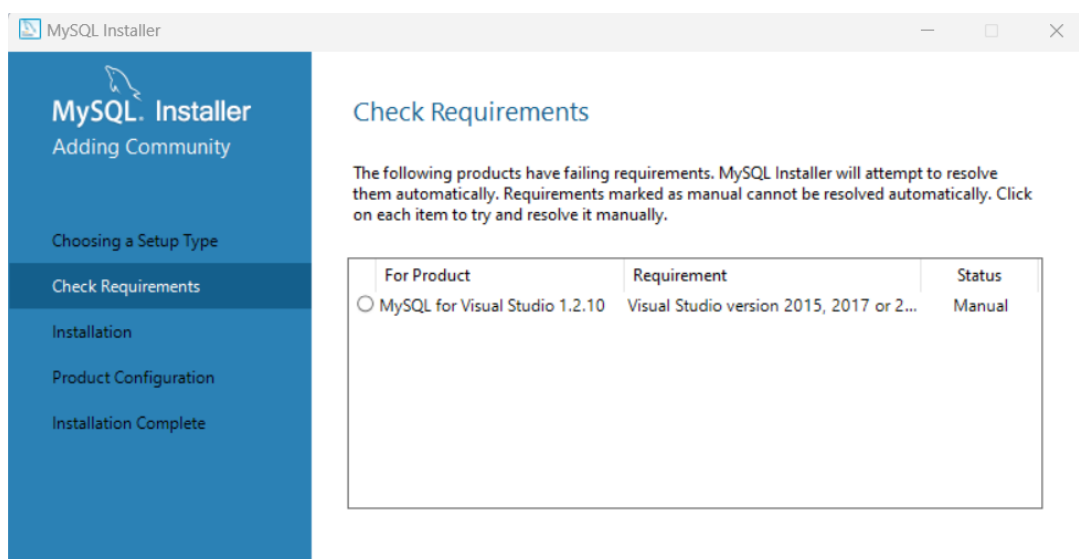
# MySQL

## MySQL installation:

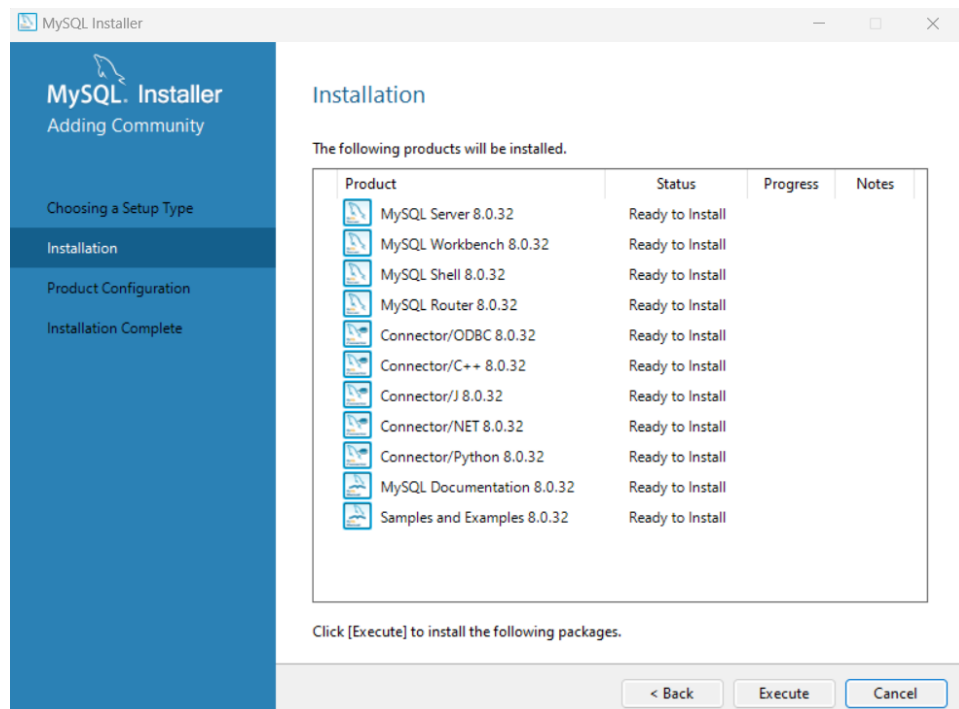
- 1) Install the setup for MySQL from MySQL website.
- 2) Run the setup.exe. Choose installation type as 'Full'.



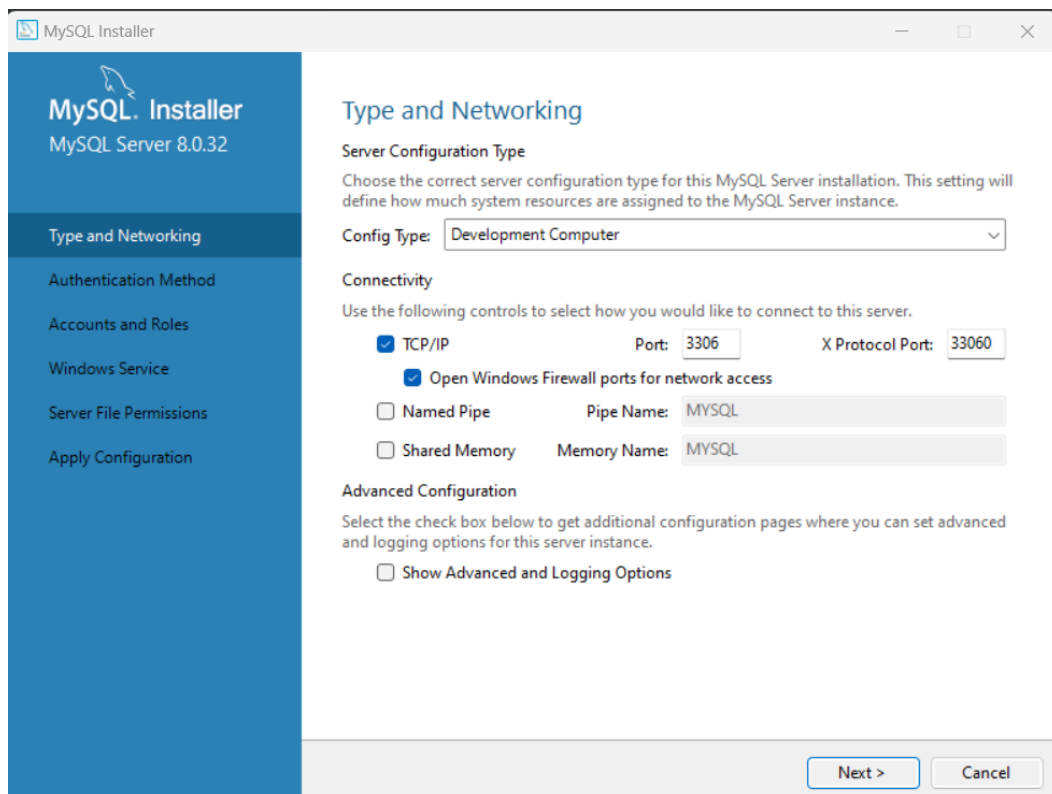
- 3) It will check whether your computer satisfies the necessary requirements.



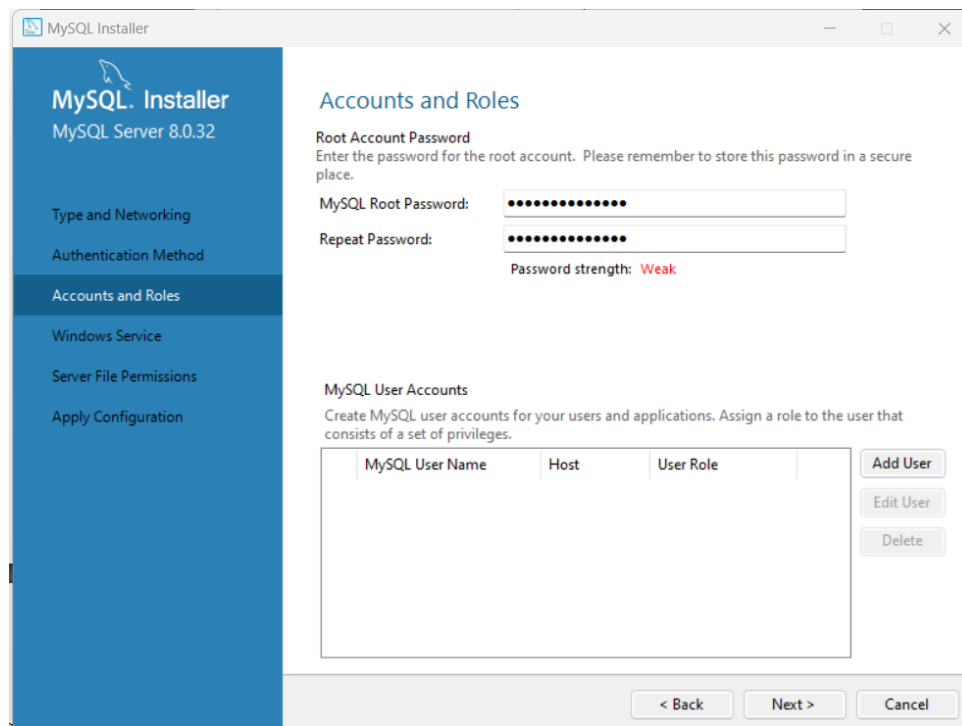
4) Install the necessary requirements (select requirements and click Execute) and click next



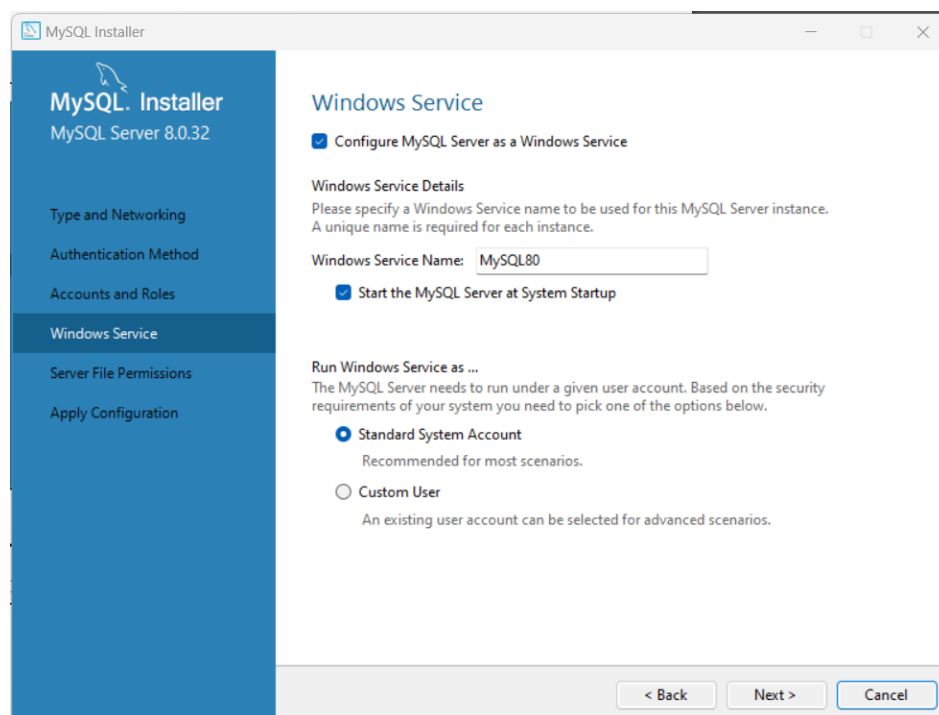
5) Configure the network and click next.



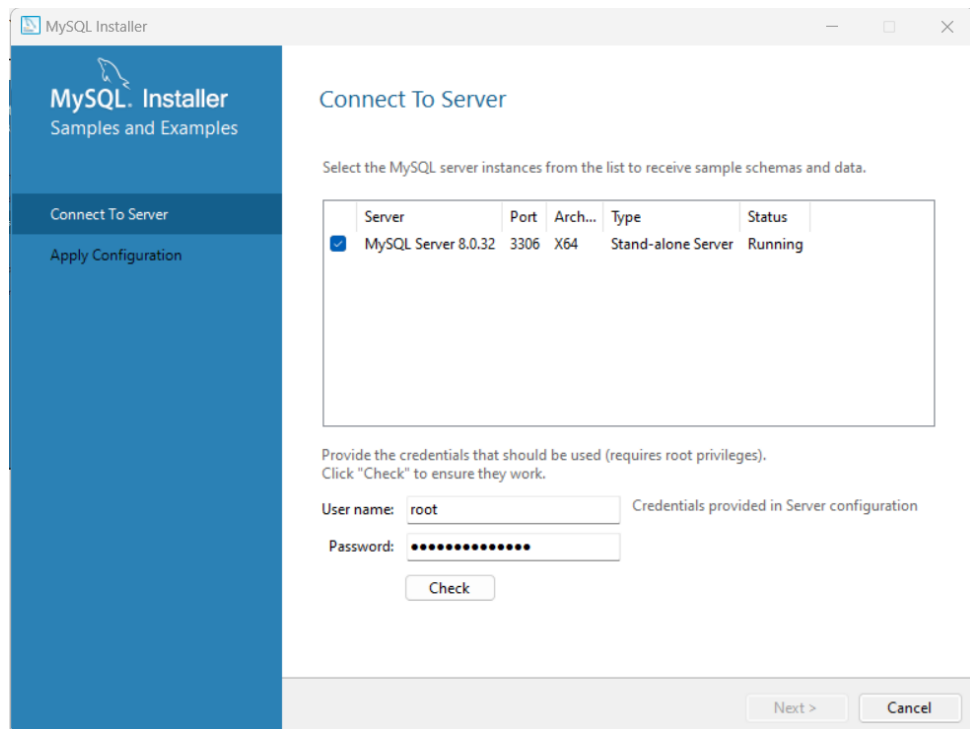
6) Set the password for 'root' (admin) and click next



7) Configure the windows service to start. Click next



8) Connect to server by logging in with the created credentials. Check the connectivity.



## Creating User:

```
MySQL 8.0 Command Line Client
Enter password: *****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 18
Server version: 8.0.32 MySQL Community Server - GPL

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Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> create user '2020BTECS00033'@'localhost' identified by '2020BTECS00033';
Query OK, 0 rows affected (0.01 sec)

mysql> grant all privileges on *.* to '2020BTECS00033'@'localhost';
Query OK, 0 rows affected (0.01 sec)

mysql>
```

## Connecting to created user:

```
C:\Program Files\MySQL\MySQL Shell 8.0\bin\mysqlsh.exe
MySQL Shell 8.0.32




Copyright (c) 2016, 2023, Oracle and/or its affiliates.
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Other names may be trademarks of their respective owners.

Type '\help' or '? for help; \quit' to exit.
MySQL JS > \sql
Switching to SQL mode... Commands end with ;
MySQL SQL > \connect 2020BTECS00033@localhost
Creating a session to '2020BTECS00033@localhost'
Please provide the password for '2020BTECS00033@localhost': *****
Save password for '2020BTECS00033@localhost'? [Y]es/[N]o/[v]er (default No): v
Fetching global names for auto-completion... Press ^C to stop.
Your MySQL connection id is 19 (X protocol)
Server version: 8.0.32 MySQL Community Server - GPL
No default schema selected; type \use <schema> to set one.
MySQL localhost:33060+ ssl SQL >
```

## Creating Sample Tables:

```
sql-table-students* x
Limit to 1000 rows
1 • CREATE DATABASE std;
2 • USE std;
3   -- creating table students
4 • create table students(
5     sid int,
6     name varchar(30),
7     age int,
8     branch varchar(20),
9     studying_yr varchar(2),
10    primary key(sid)
11  );
12
13  -- inserting values into table
14 • insert into students values(1,'Prathamesh',20,'CSE','TY');
15 • insert into students values(2,'Samrat',20,'CSE','TY');
16
17 ✖ --retrieving values
18 select * from students where branch = 'CSE';
19
```

## Result:

Result Grid					
Filter Rows: <input type="text"/>					
Edit:   					
	sid	name	age	branch	studying_yr
▶	1	Prathamesh	20	CSE	TY
	2	Samrat	20	CSE	TY
★	NULL	NULL	NULL	NULL	NULL

**Python GUI:**

**Link of Code:**

<https://github.com/prathameshraje23/ADSL-Assignment-2>

**Result:**

Select the table:

**Operations on selected table:**

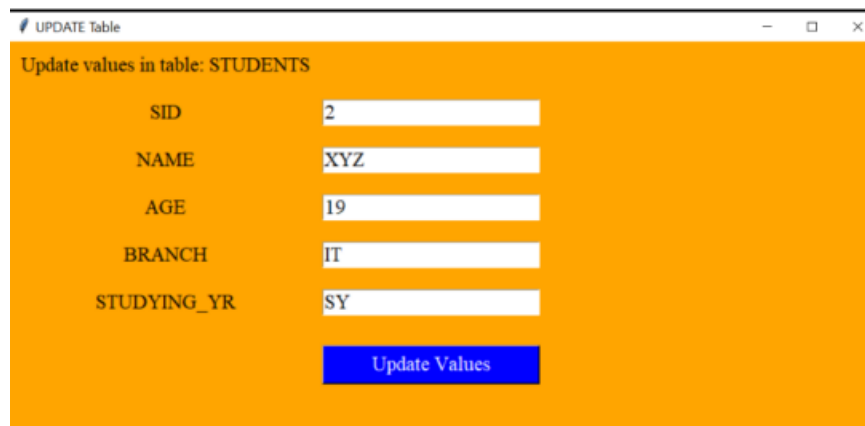
**Insert:**

INSERT into Table

Insert values in table: STUDENTS

SID   
 NAME   
 AGE   
 BRANCH   
 STUDYING\_YR

## Update:



UPDATE Table

Update values in table: STUDENTS

SID	<input type="text" value="2"/>
NAME	<input type="text" value="XYZ"/>
AGE	<input type="text" value="19"/>
BRANCH	<input type="text" value="IT"/>
STUDYING_YR	<input type="text" value="SY"/>

## Delete:

