TY B.Tech. (CSE) – II [2022-23]
5CS372 : Advanced Database System Lab.
Assignment No. 2
PRN: 2020BTECS00079
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Batch: T8

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

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

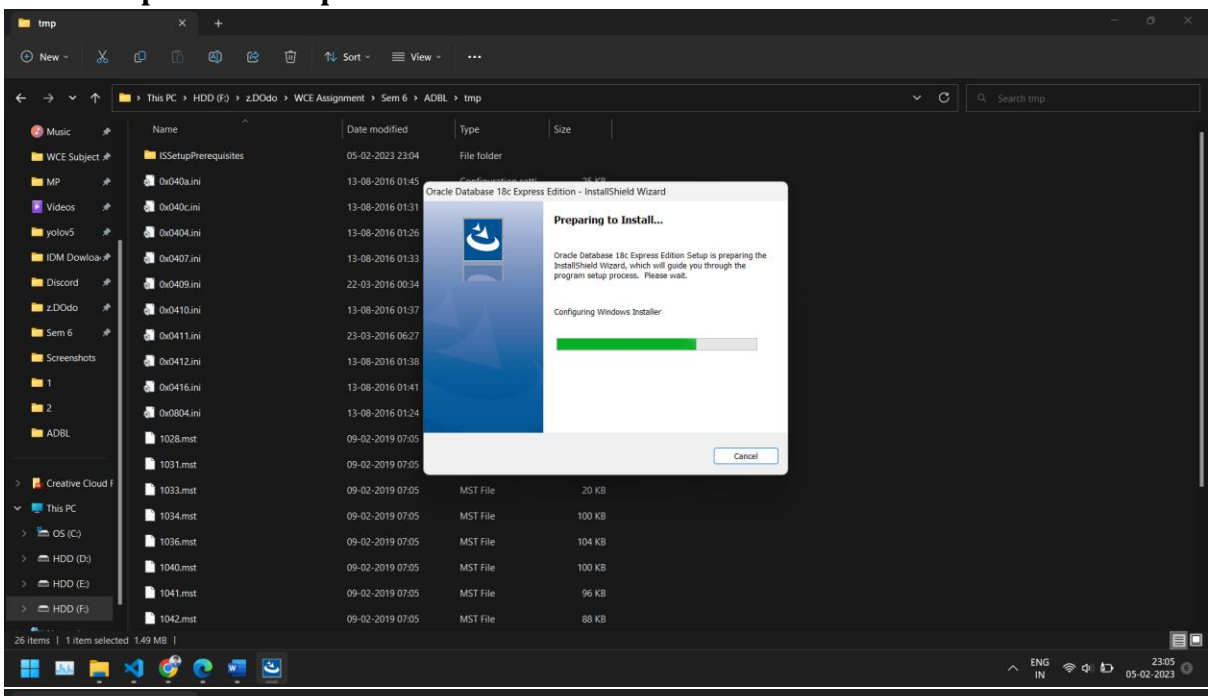
Introduction:
Oracle 18c XE:
Connect Oracle Database to your favorite programming languages and dev environments including Java, .NET, Python, Node.js, Go, PHP, C/C++ and more.
Learn SQL on the world's leading relational database, or experiment with Oracle's native support for JSON documents and spatial & 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.

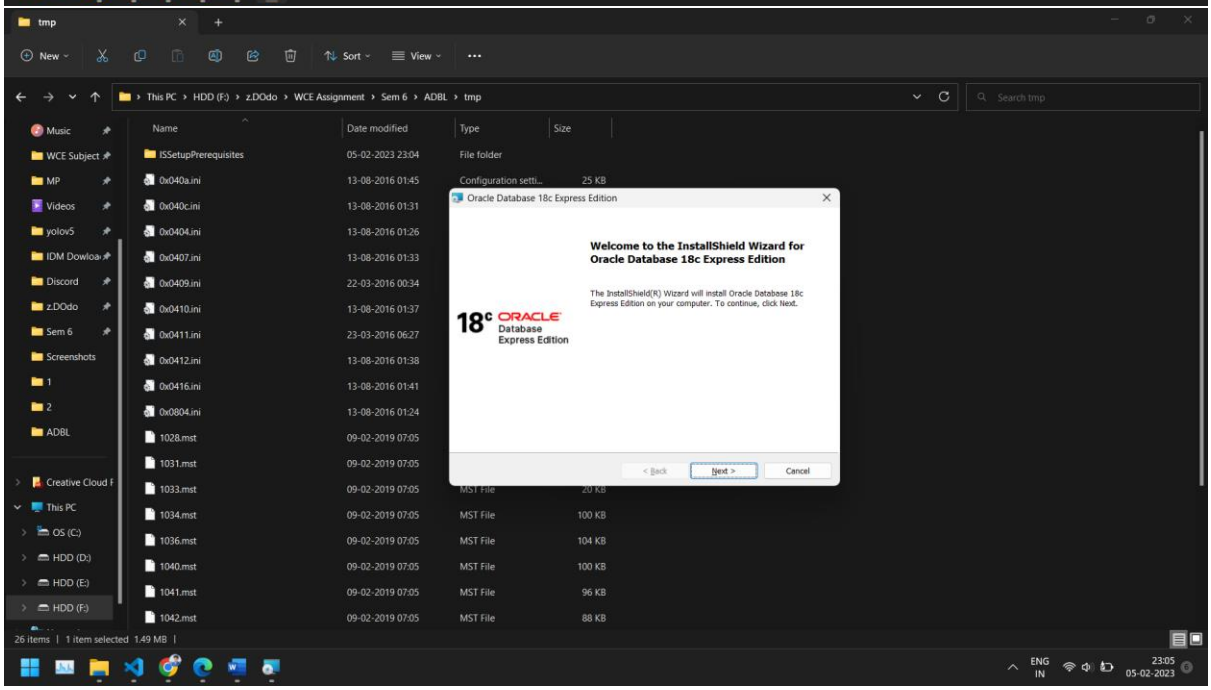
MySQL:
MySQL is an open-source relational database management system (RDBMS) .Its name is a combination of "My", the name of co-founder Michael Widenius's daughter My, and "SQL", the acronym for Structured Query Language. A relational database organizes data into one or more data tables in which data 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:
Oracle 18c XE

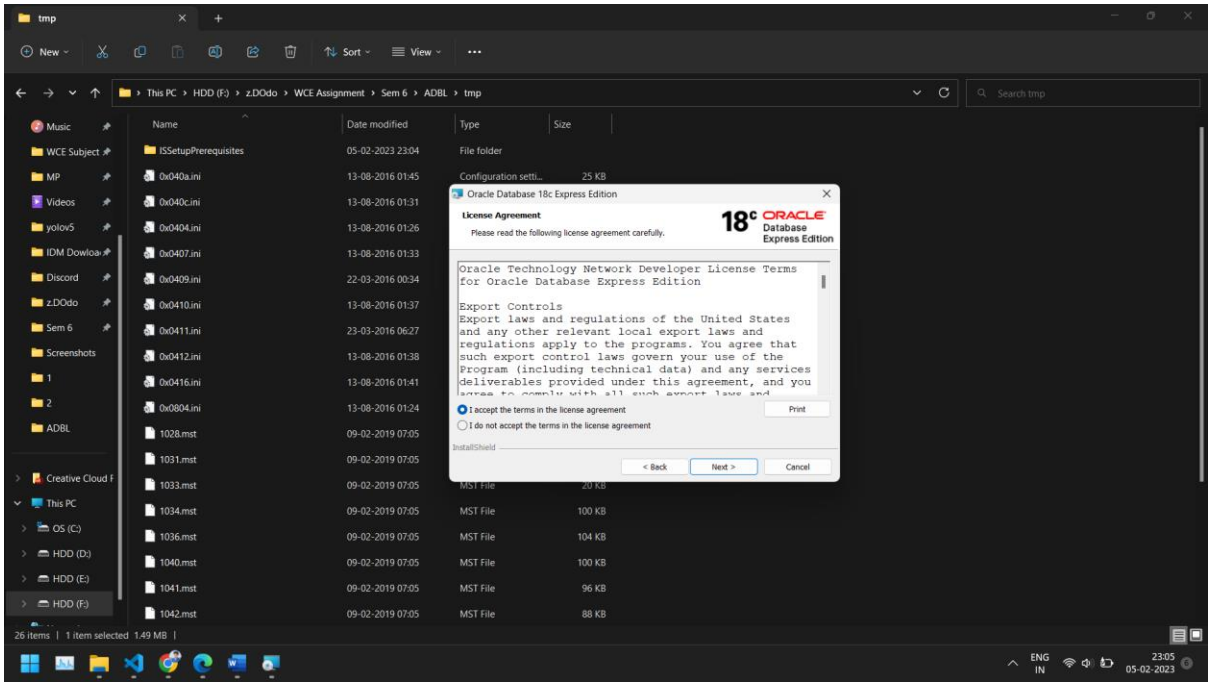
Oracle Server Installation:

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

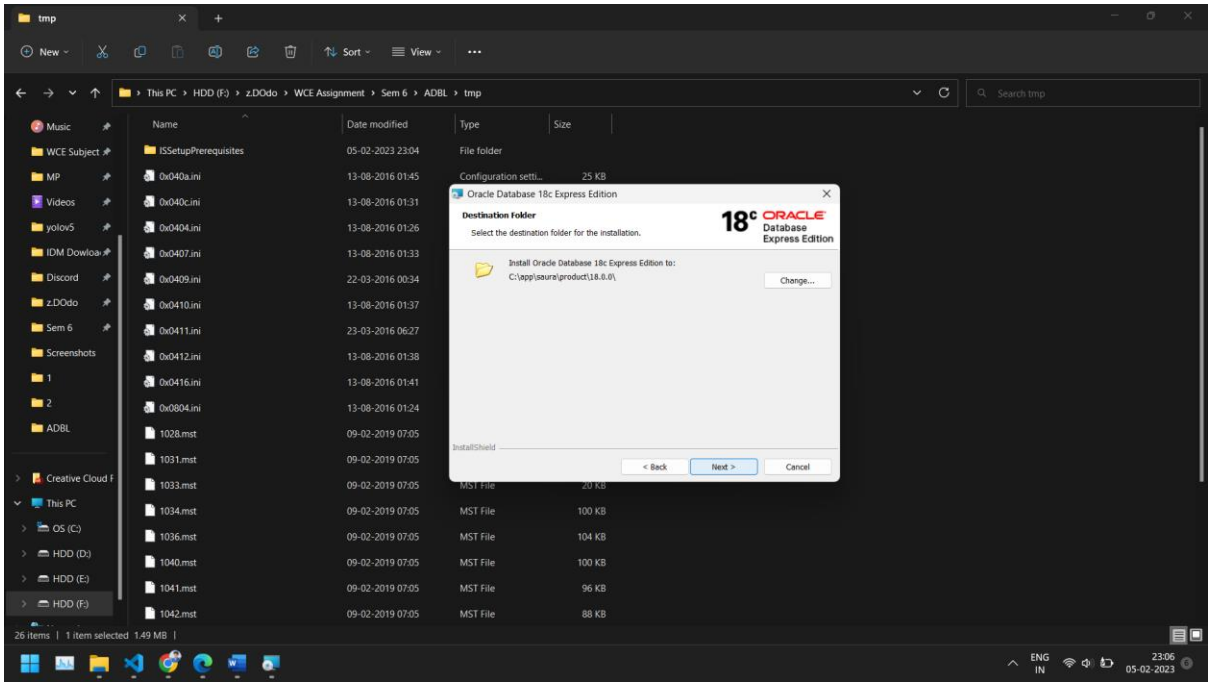




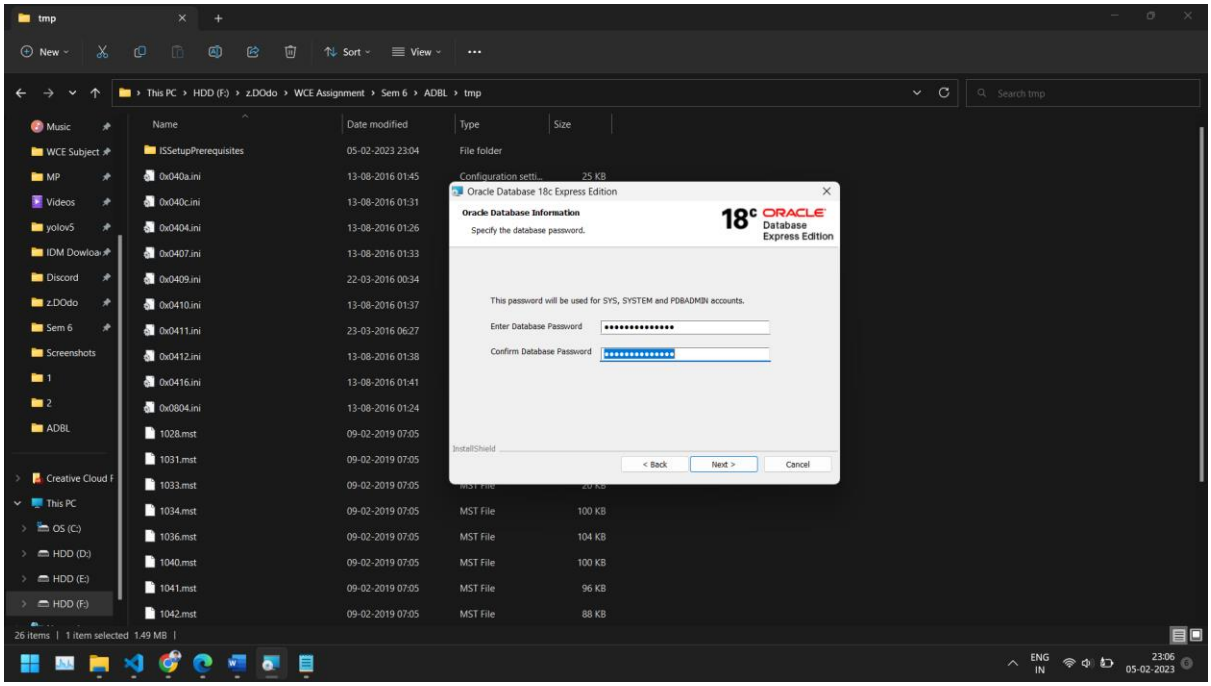
Read & accept the License Agreement.



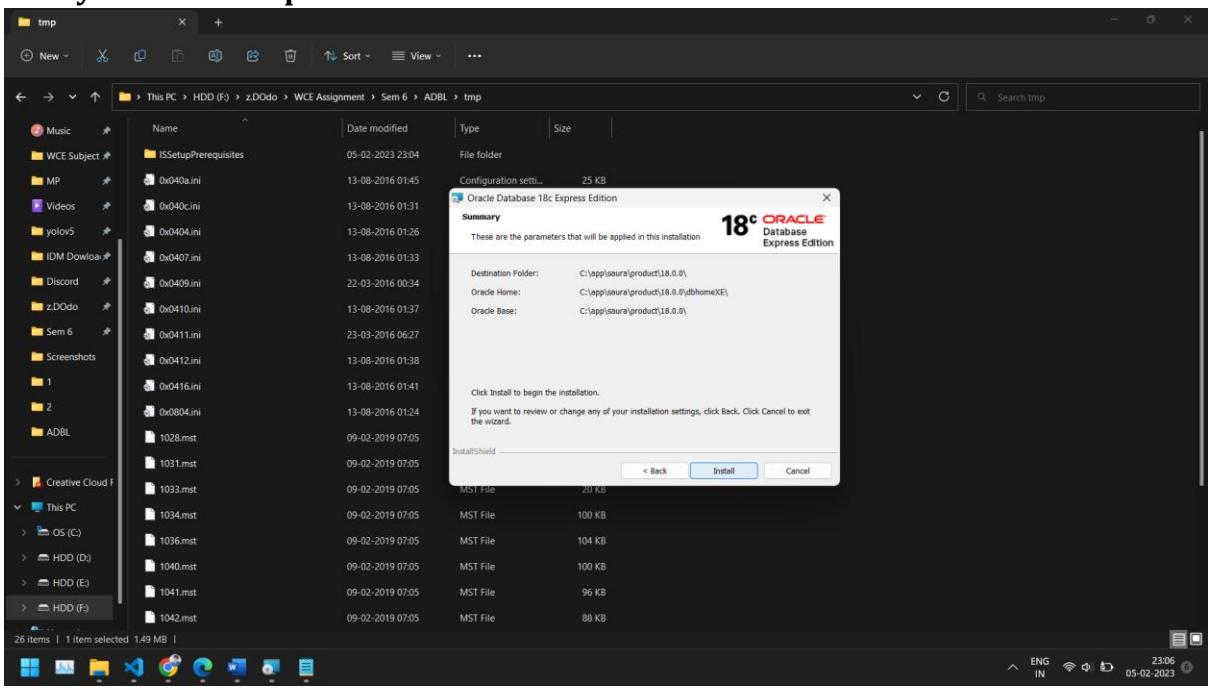
Choose the destination to install the Oracle 18c Database.



Enter the password for the database.

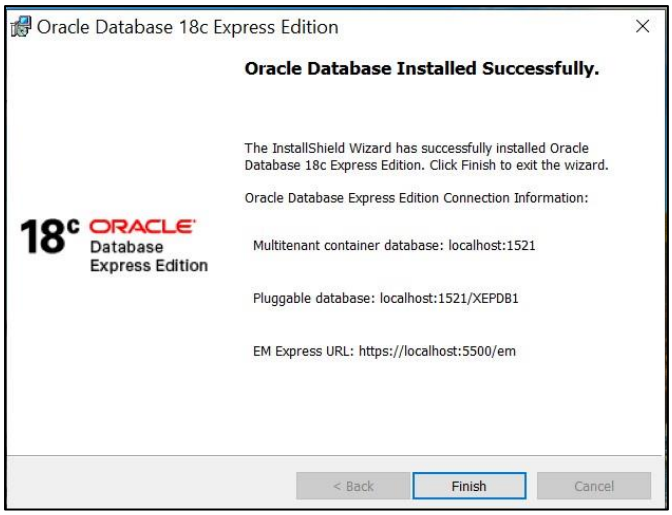


Verify the selected parameters.



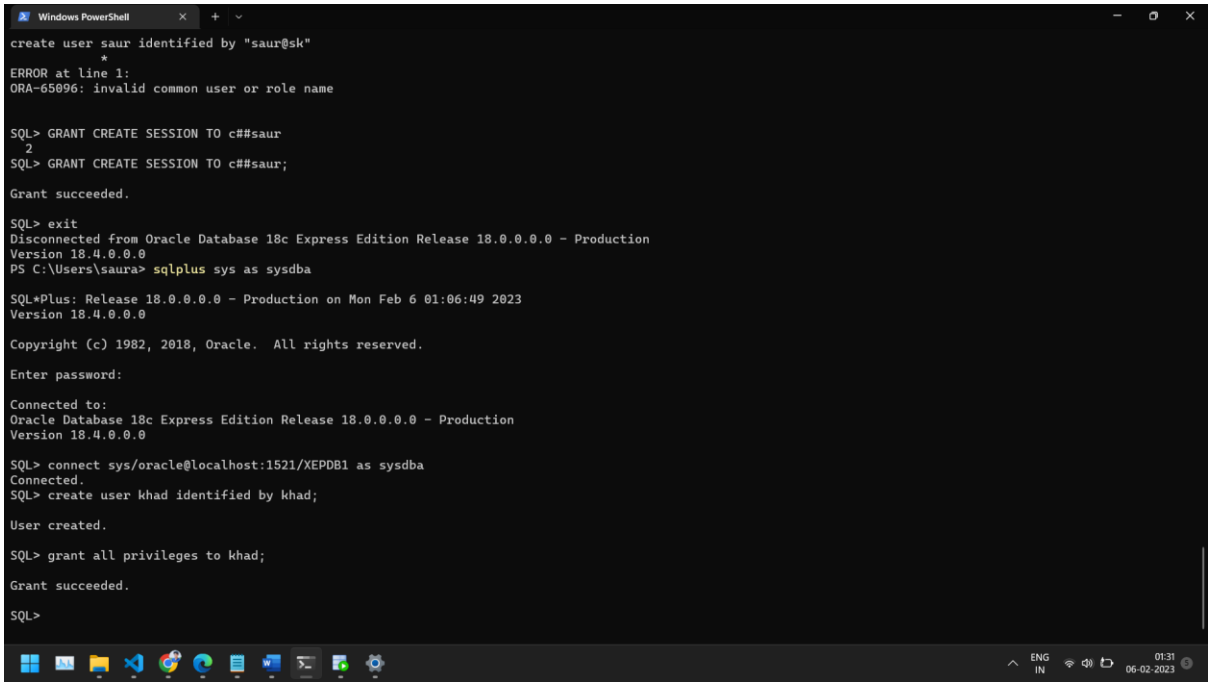
Wait for installation to be completed.

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



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

Testing the connectivity:



Creating Sample Tables:

```sql
--Creating table

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


insert into books values (1, 'The C++ Programming Languaget', 'Engineering', 1000);
insert into books values (2, 'Letters to a Law Student', 'LAW', 750);
insert into books values (3, 'Cloud Computing Principles', 'Engineering', 1500);

select title, price
from books
where type_= 'Engineering';
```

Python GUI Application:

```python
from tkinter import *
from tkinter import ttk
from tkinter import simpledialog
import tkinter
import tkinter.messagebox
import cx_Oracle

# Connecting to DB
dsn_tns = cx_Oracle.makedsn('localhost', '1521',
service_name='XEPDB1')
conn = cx_Oracle.connect(user='khad',password='khad', dsn=dsn_tns)
c = conn.cursor()

# Initializing Window
window = Tk()
window.title("Oracle Database Connectivity")  # Title of window
window.geometry('900x900')  # Size of window (width X height)
window.configure(background="teal")  # Background color of window
window.option_add("*Font", "Times 16")  # Setting the font-family &
font-size

usr_name = Label(window, text=f"Connected to DB as: Khad",
background="orange").grid(row=0, column=1,
```

```
                                pady=20)

# Getting the table names
c.execute('select table_name from user_tables')
DB_NAMES = [a[0] for a in c]
variable = StringVar(window)
variable.set(DB_NAMES[0])  # default value
selected_tb = DB_NAMES[0]

tb_select = Label(window, text="Select the table: ",
background="orange").grid(row=1, column=0, columnspan=1, padx=10,

           pady=10)
tb_dropdown = OptionMenu(
    window, variable, *DB_NAMES).grid(row=1, column=0, columnspan=2,
padx=15)


def confirm_tb():
    global selected_tb
    tkinter.messagebox.showinfo(
        "SUCCESS", f"Table {variable.get()} is selected!")


tb_btn = Button(window, text="Confirm", command=confirm_tb,
background="green", foreground="white", border=5).grid(
    row=1, column=1)


# CRUD Functions
# 1. View
def view_tb():
    newWindow = Toplevel(window)
    newWindow.title("VIEW Table")
    newWindow.geometry('1500x900')
    newWindow.configure(background="green")  # Background color of
window
    # Setting the font-family & font-size
    newWindow.option_add("*Font", "Times 16")
    global selected_tb

    Label(newWindow, text=f"Viewing Table - {selected_tb}",
```

```
          background="orange").grid(row=0, column=0, padx=10,
pady=10)

    # Getting the primary key
    c.execute(f'''select a.column_name
                        from all_cons_columns a
                        inner join all_constraints c
                        on a.constraint_name=c.constraint_name
                        where c.table_name='{selected_tb}' and
c.constraint_type='P'
                         ''')
    for a in c:
        pk = a[0]

    # Getting all column names from table
    c.execute(f'''SELECT column_name
                FROM USER_TAB_COLUMNS
                WHERE table_name = '{selected_tb}'
                ''')
    columns = [a[0] for a in c]
    tree = ttk.Treeview(newWindow, height=20, columns=columns,
show='headings')
    tree.grid(row=1, column=0, sticky='news', padx=10, pady=10)

    # setup columns attributes
    for col in columns:
        tree.heading(col, text=col)
        tree.column(col, width=100, anchor=tkinter.CENTER)

    # populate data to treeview
    c.execute(f'SELECT * FROM {selected_tb} ORDER BY {pk}')
    for a in c:
        tree.insert('', 'end', value=a)

    # scrollbar
    sb = tkinter.Scrollbar(
        newWindow, orient=tkinter.VERTICAL, command=tree.yview)
    sb.grid(row=1, column=1, sticky='ns', padx=0, pady=10)
    tree.config(yscrollcommand=sb.set)

    sbx = tkinter.Scrollbar(
        newWindow, orient=tkinter.HORIZONTAL, command=tree.xview)
```

```
    sbx.grid(row=2, column=0, sticky='ew', padx=10, pady=0)
    tree.config(xscrollcommand=sbx.set)


# 2. Insert
def insert_tb():
    newWindow = Toplevel(window)
    newWindow.title("INSERT into Table")
    newWindow.geometry('900x900')
    newWindow.configure(background="orange")  # Background color of
window
    # Setting the font-family & font-size
    newWindow.option_add("*Font", "Times 16")
    global selected_tb

    Label(newWindow, text=f"Insert values in table: {selected_tb}",
background="orange").grid(row=0, column=0, padx=10,

                              pady=10)
    c.execute(f'''SELECT column_name
                FROM USER_TAB_COLUMNS
                WHERE table_name = '{selected_tb}'
                ''')

    # Getting columns names
    columns = [a[0] for a in c]

    ent_ref = []  # For storing the Entry references
    # Populating Labels and Entries
    for ind, nm in enumerate(columns):
        Label(newWindow, text=nm, background="orange").grid(
            row=ind + 1, column=0, padx=10, pady=10)
        ent = Entry(newWindow)
        ent.grid(row=ind + 1, column=1)
        ent_ref.append(ent)

    def insert_val():
        val = []
        is_empty = False

        # Getting value from each entry field
        for r in ent_ref:
```

```
            if len(r.get()) > 0:
                val.append(r.get())
            else:
                tkinter.messagebox.showerror(
                    "ERROR", "All the fields are required!")
                is_empty = True
                break

        # Checking if all fields are filled, before inserting
        if not is_empty:
            v = []
            # Typecasting values (int, float & string)
            for x in val:
                try:
                    v.append(int(x))
                except ValueError:
                    try:
                        v.append(float(x))
                    except ValueError:
                        v.append(x)

            # Inserting values
            s = f'insert into {selected_tb}(' + ','.join(['?'] *
len(v)) + ')' + ' values(' + ','.join(
                [':?'] * len(v)) + ')'
            for a in columns:
                s = s.replace('?', a, 1)
            for a in columns:
                s = s.replace('?', a, 1)

            try:
                c.execute(s, v)
                conn.commit()
                for r in ent_ref:
                    r.delete(0, END)
                tkinter.messagebox.showinfo(
                    "SUCCESS", "Values inserted into table
successfully!")
            except Exception as e:
                tkinter.messagebox.showerror("ERROR", e)
```

```
    Button(newWindow, text="Insert Values", command=insert_val,
background="green", foreground="white").grid(
        row=ind + 2, column=1, pady=20, sticky='ew')


# 3. Update
def update_tb():
    global selected_tb
    try:
        c.execute(f'''select a.column_name
                       from all_cons_columns a
                       inner join all_constraints c
                       on a.constraint_name=c.constraint_name
                       where c.table_name='{selected_tb}' and
c.constraint_type='P'
                        ''')

        for a in c:
            pk = a[0]

        id = simpledialog.askinteger(
            title="UPDATE", prompt="Enter the ID to be updated: ")

        if id is not None:
            c.execute(f'select * from {selected_tb} where
{pk}={id}')

            if len(c.fetchall()) == 0:
                tkinter.messagebox.showerror(
                    "ERROR", "No record was found with the given ID
!")
            else:
                newWindow = Toplevel(window)
                newWindow.title("UPDATE Table")
                newWindow.geometry('900x900')
                # Background color of window
                newWindow.configure(background="orange")
                # Setting the font-family & font-size
                newWindow.option_add("*Font", "Times 16")

                Label(newWindow, text="Update values in table:",
background="orange").grid(row=0, column=0, padx=10,
```

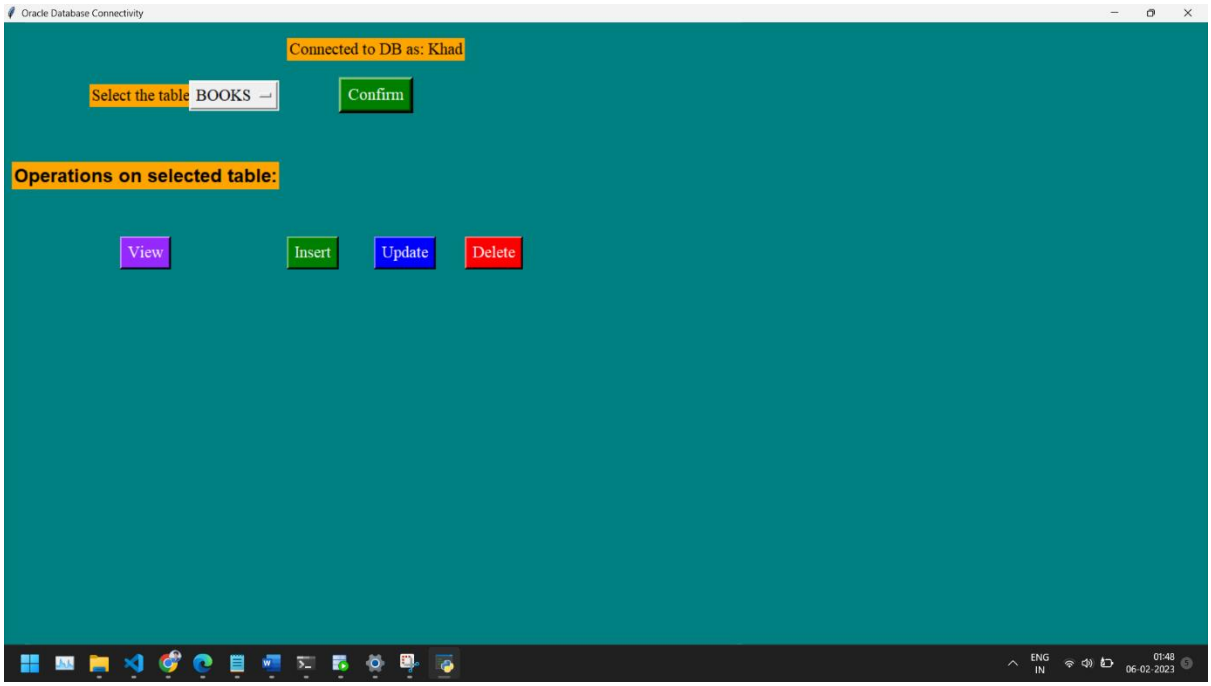
```
                        pady=10)
                c.execute(f'''SELECT column_name
                            FROM USER_TAB_COLUMNS
                            WHERE table_name = '{selected_tb}'
                            ''')

                columns = [a[0] for a in c]
                ent_ref = []

                c.execute(f'select * from {selected_tb} where
{pk}={id}')
                val = []
                for a in c:
                    val.append(a)

                val = [str(item) for t in val for item in t]

                for ind, nm in enumerate(columns):
                    Label(newWindow, text=nm,
background="orange").grid(
                        row=ind + 1, column=0, padx=10, pady=10)
                    ent = Entry(newWindow)
                    ent.grid(row=ind + 1, column=1)
                    ent.insert(0, val[ind])
                    ent_ref.append(ent)

                def update_val():
                    upd_val = []
                    is_empty = False

                    for r in ent_ref:
                        if len(r.get()) > 0:
                            upd_val.append(r.get())
                        else:
                            tkinter.messagebox.showerror(
                                "ERROR", "All the fields are
required!")
                            is_empty = True
                            break

                    if not is_empty:
```

```
                        v = []
                        for x in upd_val:
                            try:
                                v.append(int(x))
                            except ValueError:
                                try:
                                    v.append(float(x))
                                except ValueError:
                                    v.append(x)

                        s = f'update {selected_tb} set ' + \
                            ','.join(['? = :?'] * len(v)) + f' where
{pk}={id}'

                        for a in columns:
                            s = s.replace('?', a, 2)

                        try:
                            c.execute(s, v)
                            conn.commit()
                            newWindow.destroy()
                            tkinter.messagebox.showinfo(
                                "SUCCESS", "Values updated
successfully!")
                        except Exception as e:
                            tkinter.messagebox.showerror("ERROR", e)

                Button(newWindow, text="Update Values",
command=update_val, background="blue",
                       foreground="white").grid(row=ind+2, column=1,
pady=20, sticky='ew')

    except Exception as e:
        tkinter.messagebox.showerror("ERROR", e)


# 4. Delete
def delete_tb():
    global selected_tb
    try:
        c.execute(f'''select a.column_name
                       from all_cons_columns a
```

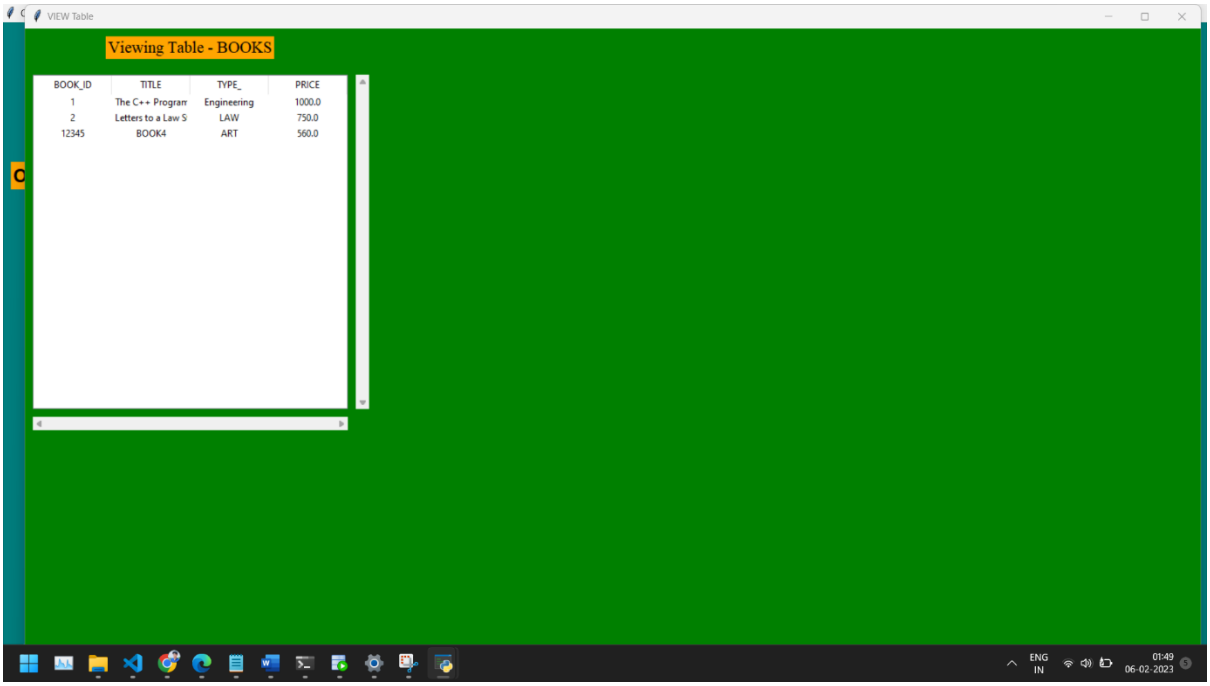
```
                        inner join all_constraints c
                        on a.constraint_name=c.constraint_name
                        where c.table_name='{selected_tb}' and
c.constraint_type='P'
                         ''')

        for a in c:
            pk = a[0]

        id = simpledialog.askinteger(
            title="DELETE", prompt="Enter the ID to be deleted: ")

        if id is not None:
            c.execute(f'delete from {selected_tb} where {pk}={id}')

            if c.rowcount == 0:
                tkinter.messagebox.showerror(
                    "ERROR", "Cannot DELETE!\nNo record was found
with the given ID !")
            else:
                conn.commit()
                tkinter.messagebox.showinfo(
                    "SUCCESS", "Deleted record from table
successfully!")

    except Exception as e:
        tkinter.messagebox.showerror("ERROR", e)


# CRUD operation buttons
if selected_tb is not None:
    Label(window, text="Operations on selected table:",
background="orange", font='Helvetica 18 bold').grid(row=3,

                                            column=0,

                                            padx=10,

                                            pady=60)

    view_btn = Button(window, text="View", command=view_tb,
background="#9629ff", foreground="white", border=3).grid(
```

```
        row=4, column=0)
    insert_btn = Button(window, text="Insert", command=insert_tb,
background="green", foreground="white",
                        border=3).grid(row=4, column=1, sticky='w',
columnspan=1)
    update_btn = Button(window, text="Update", command=update_tb,
background="blue", foreground="white", border=3).grid(
        row=4, column=1, columnspan=2)
    delete_btn = Button(window, text="Delete", command=delete_tb,
background="red", foreground="white", border=3).grid(
        row=4, column=2)

window.mainloop()  # window remains until user closes it
conn.close()  # Closing the connection to database
```

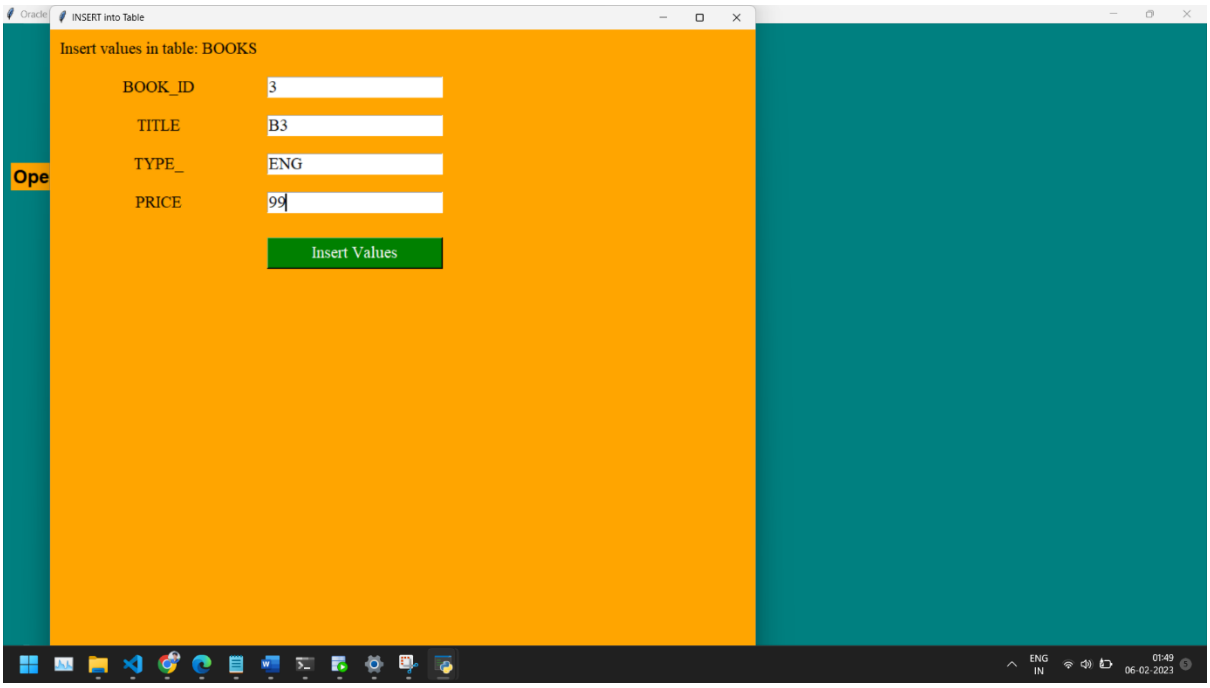
Result:



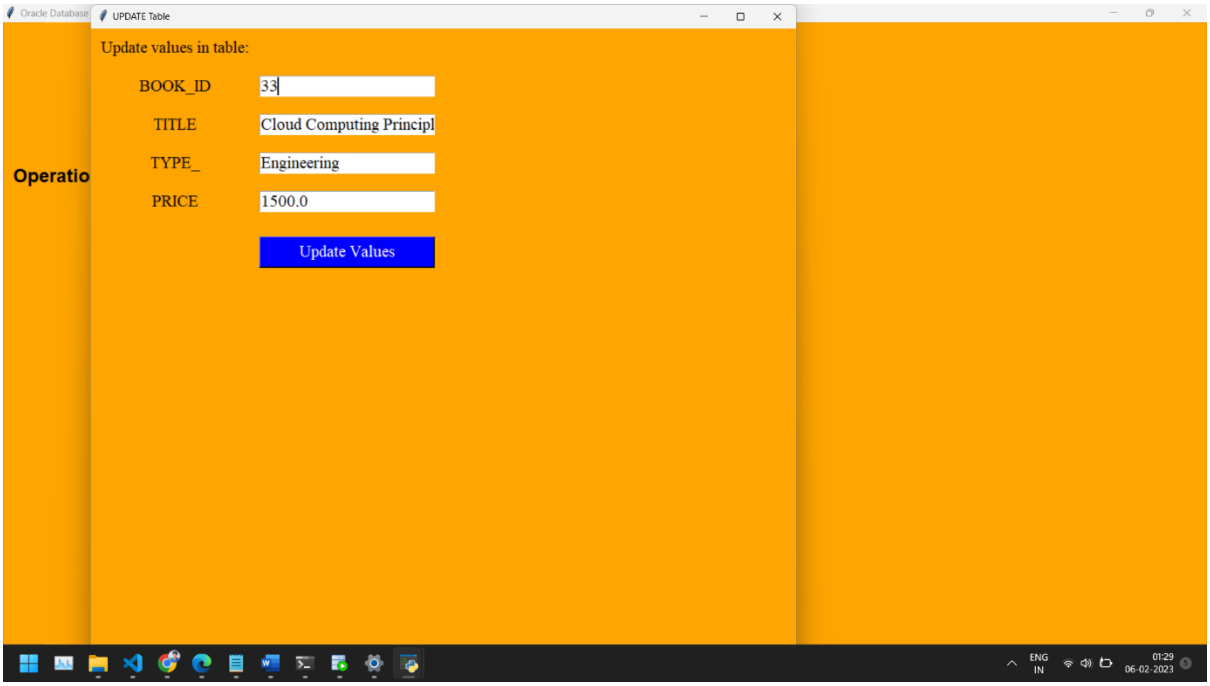
1. **View:**



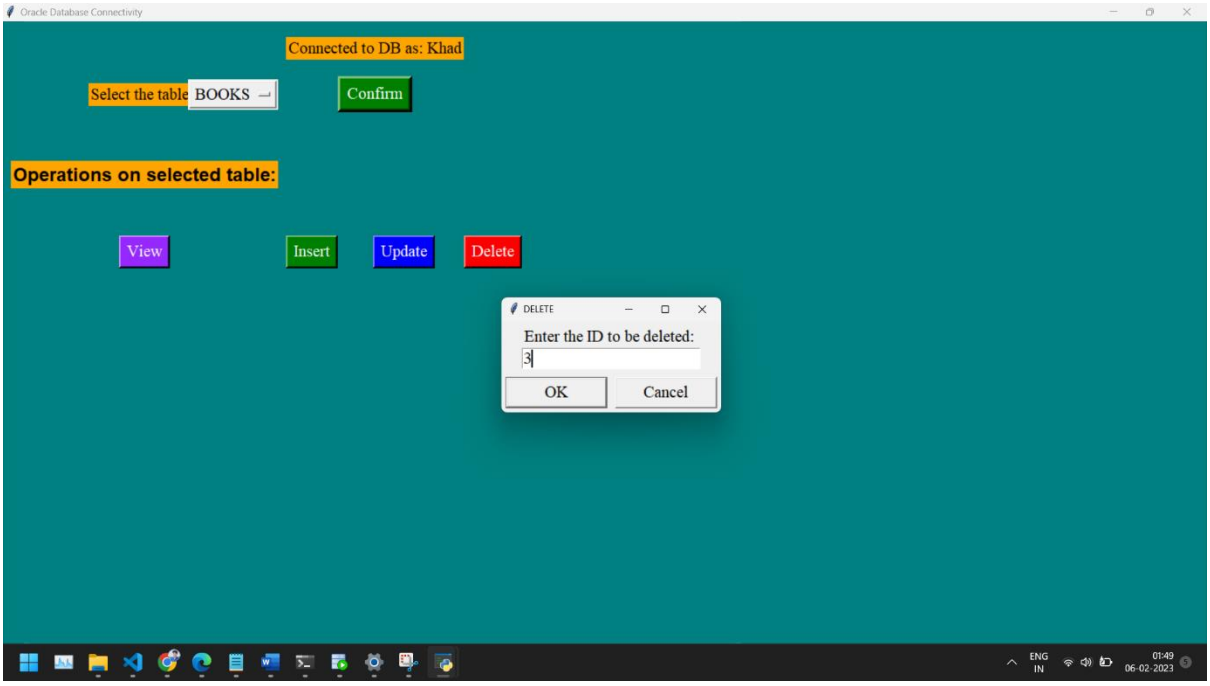
2. **Insert:**



3. **Update:**


Oracle Database
UPDATE Table
Update values in table:
BOOK_ID
33
TITLE
Cloud Computing Principl
TYPE_
Engineering
PRICE
1500.0
Update Values
Operatio

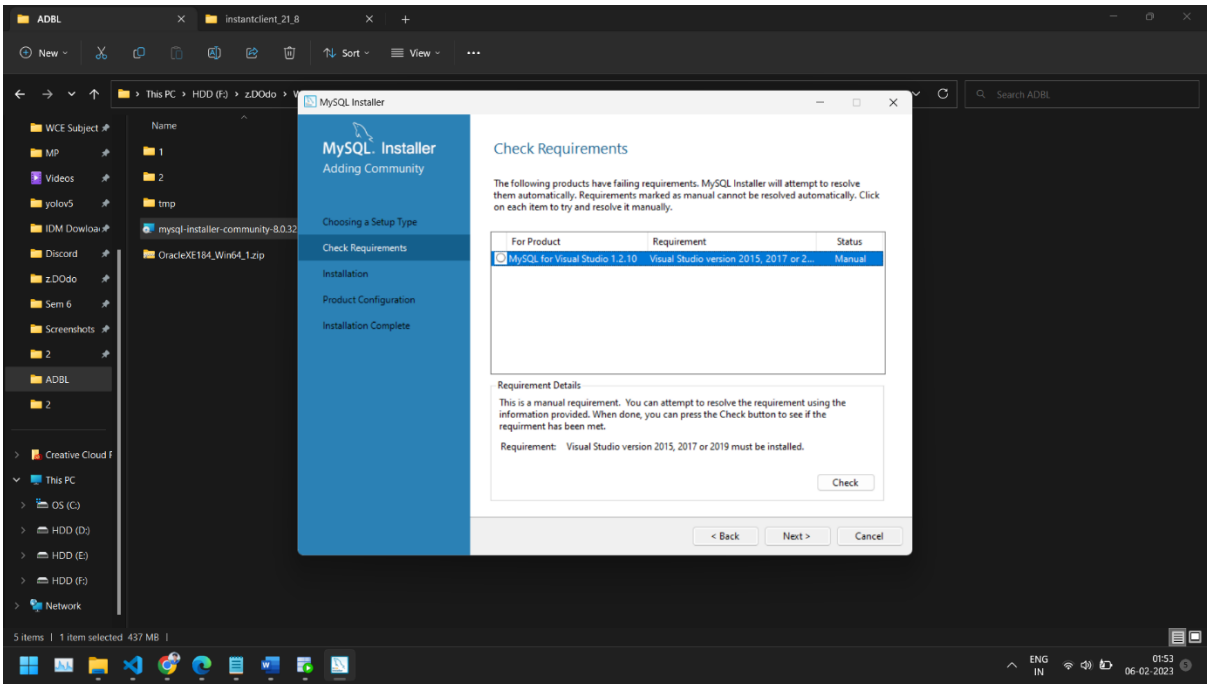
4. **Delete:**


Oracle Database Connectivity
Connected to DB as: Khad
Select the table
BOOKS
Confirm
Operations on selected table:
View
Insert
Update
Delete
DELETE
Enter the ID to be deleted:
3
OK
Cancel

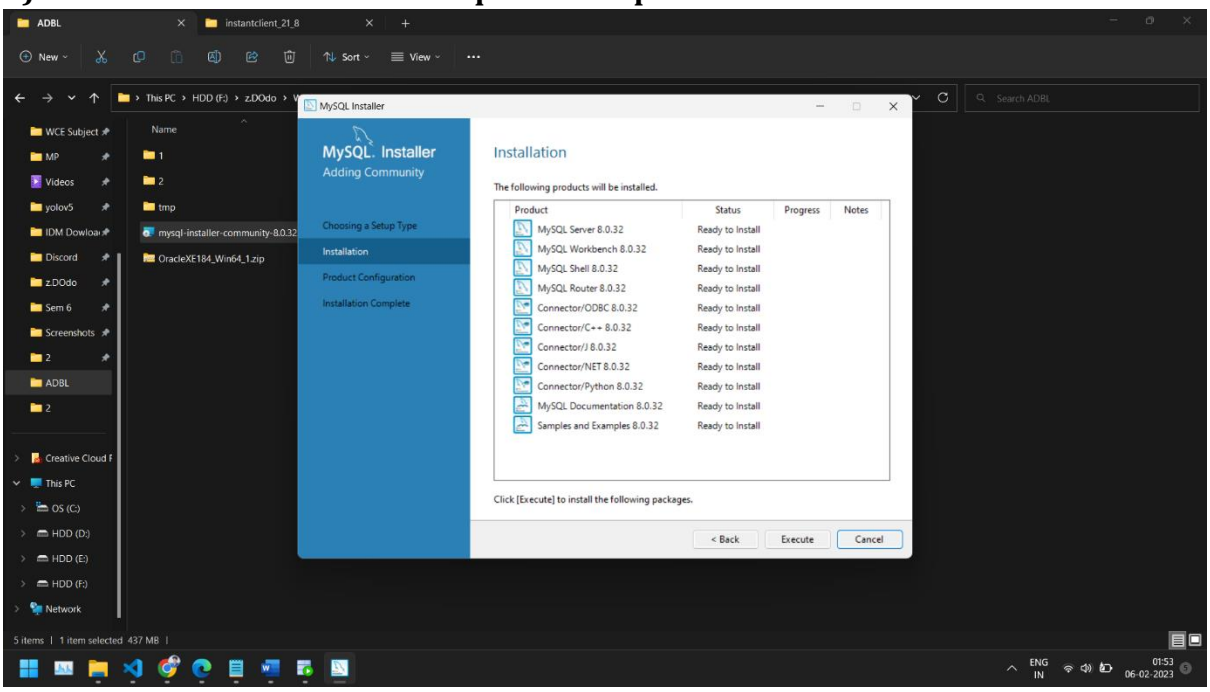
MySQL installation:

1)Install the setup for MySQL from MySQL [website](). Run the setup.exe. Choose installation type as 'Full'.

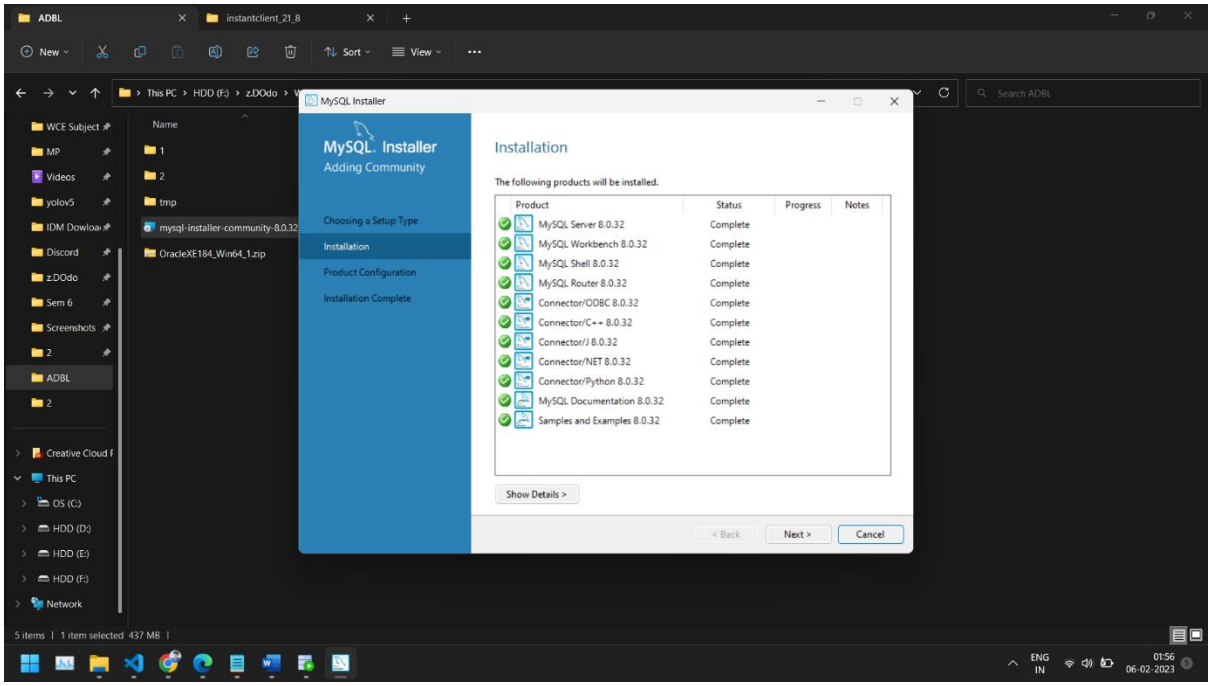
2) It will check whether your computer satisfies the necessary requirements. Install the necessary requirements (select requirements and click Execute) and click next. quirements and click Execute) and click next.



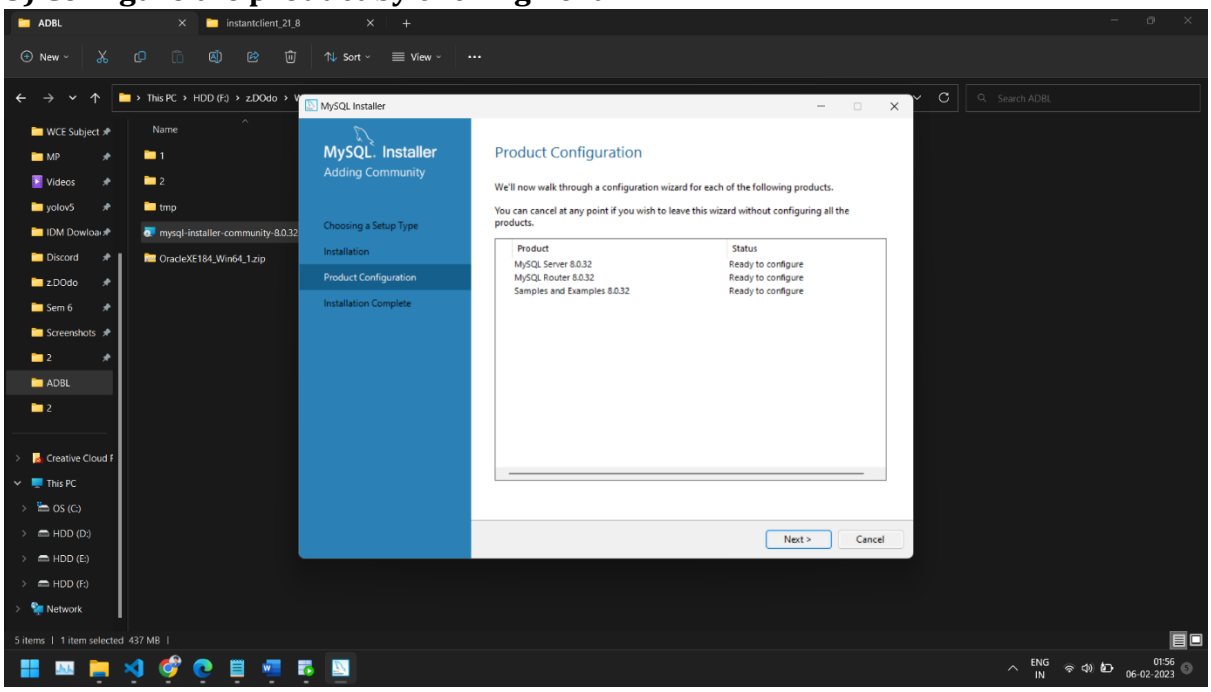
3) Click execute to install the required setups.



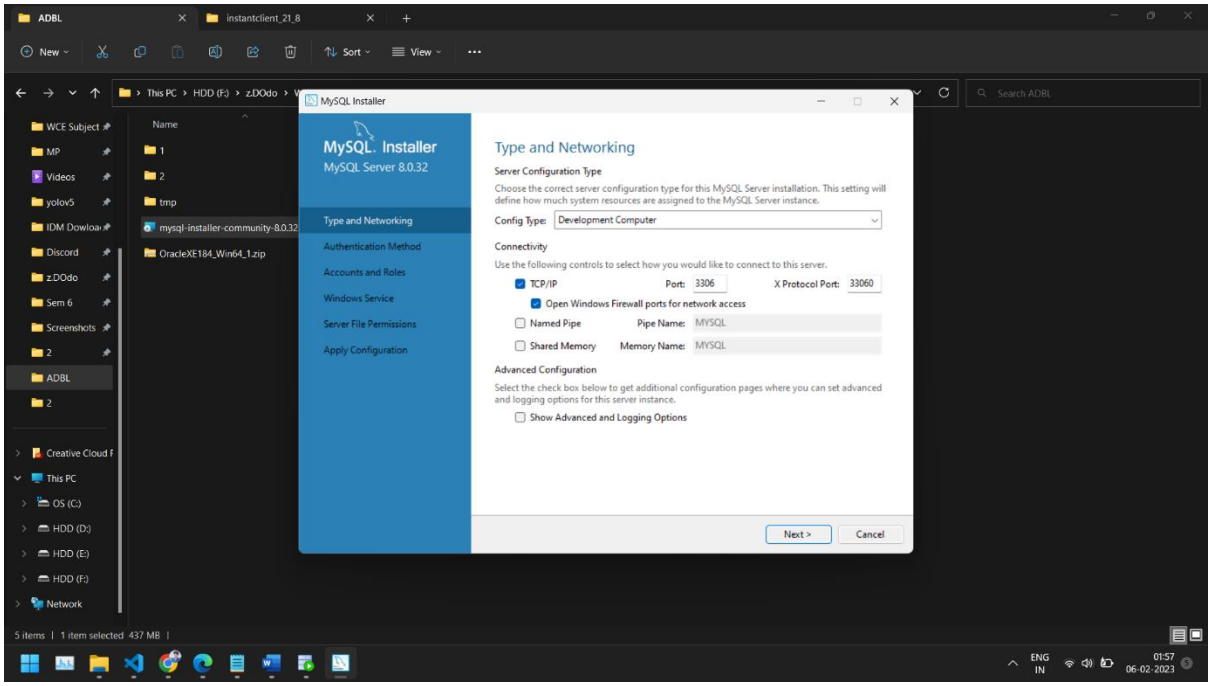
4) Wait until all the files are installed.



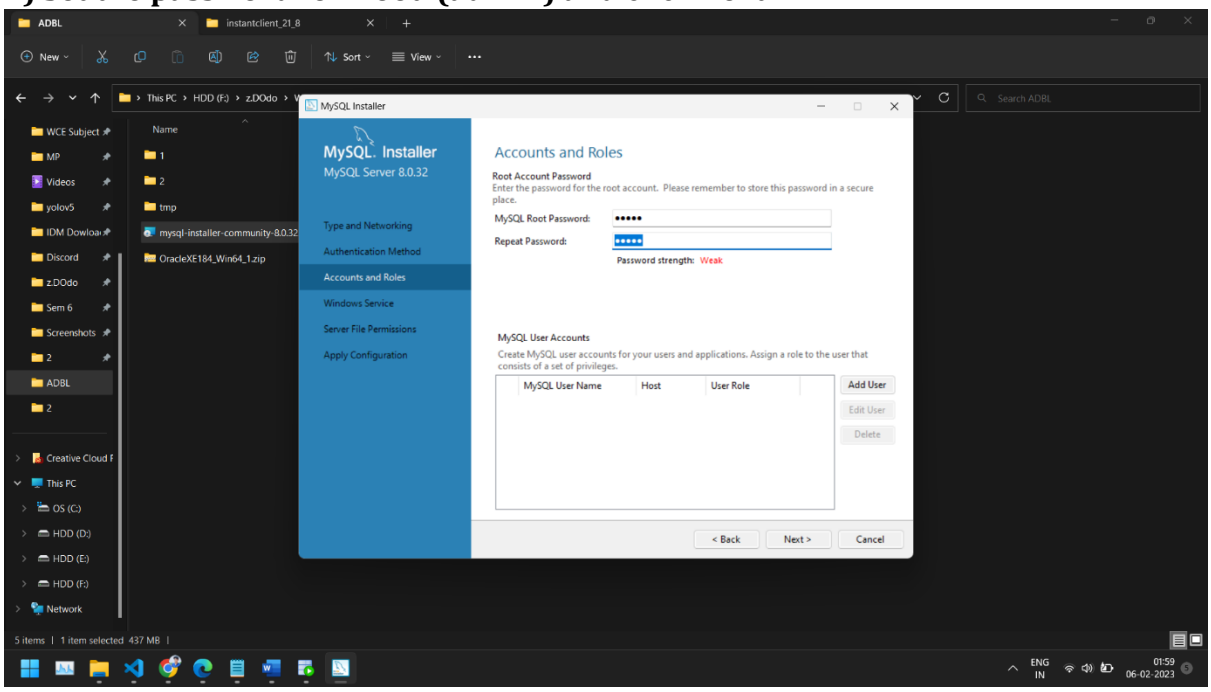
5) Configure the product by clicking next.



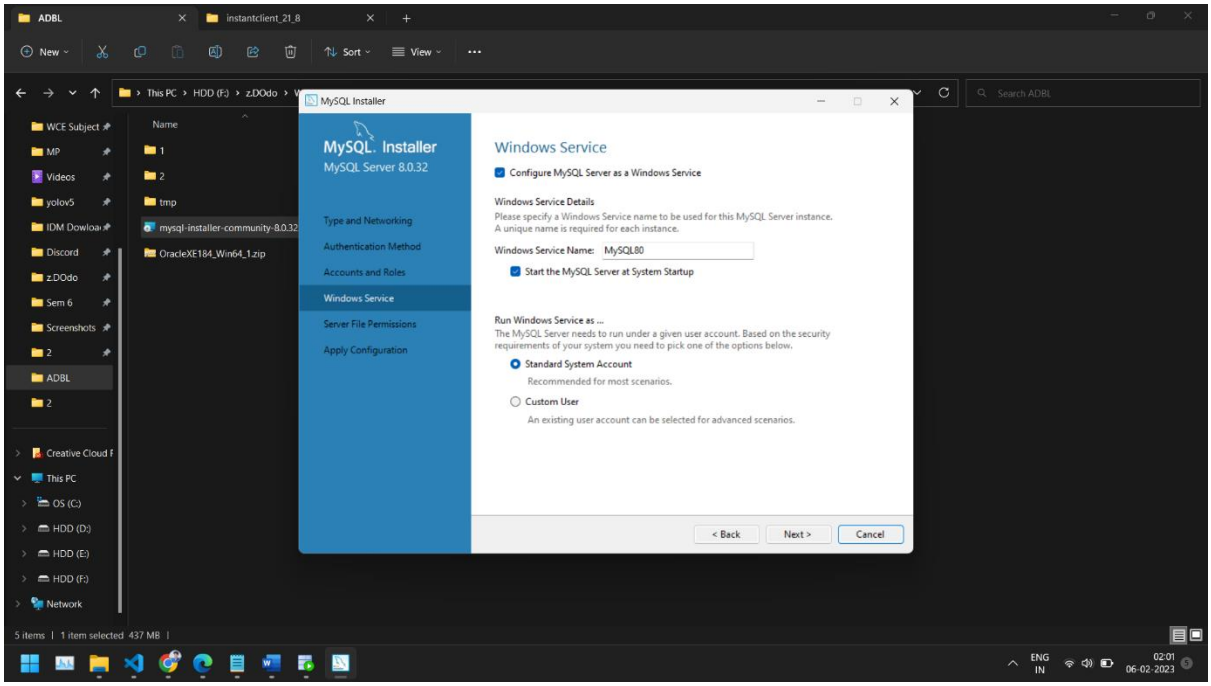
6) Configure the network and click next.



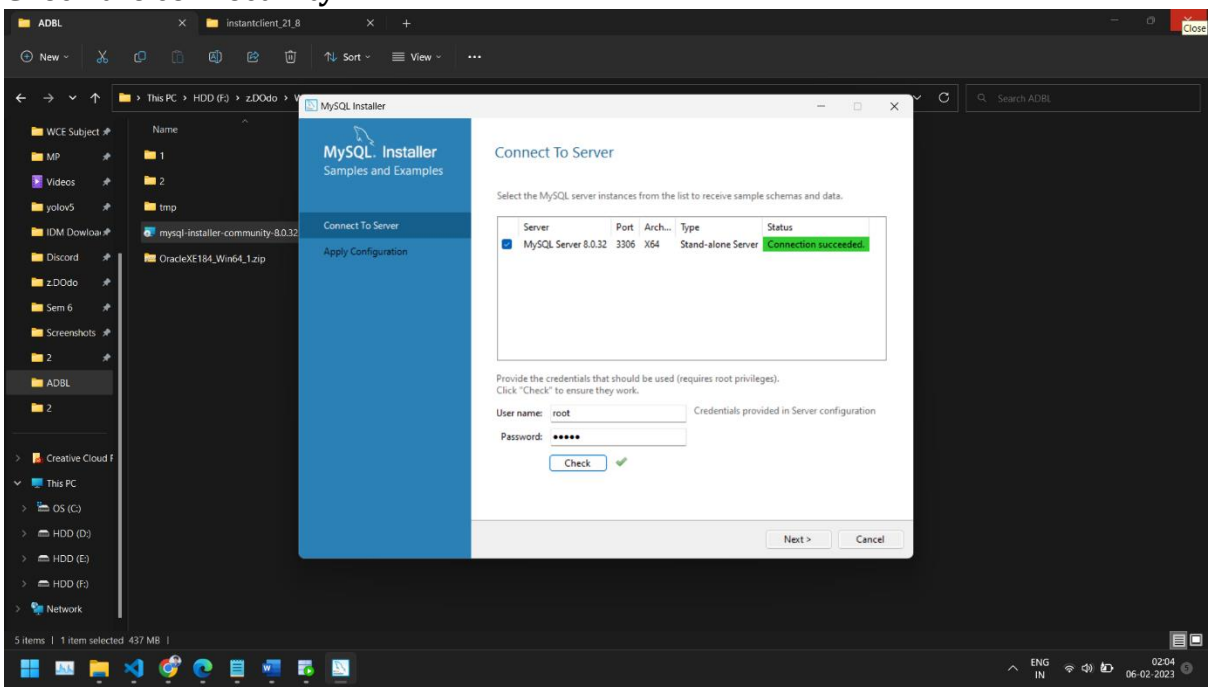
7) Set the password for 'root' (admin) and click next.



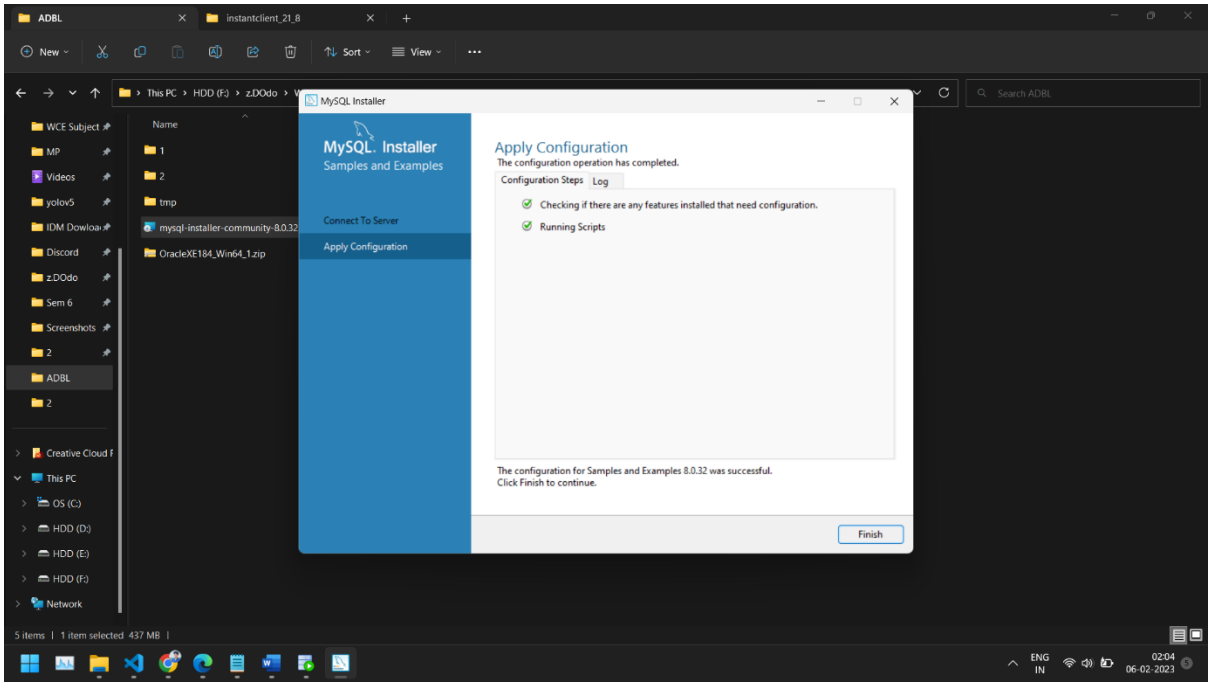
8) Configure the windows service to start. Click next.



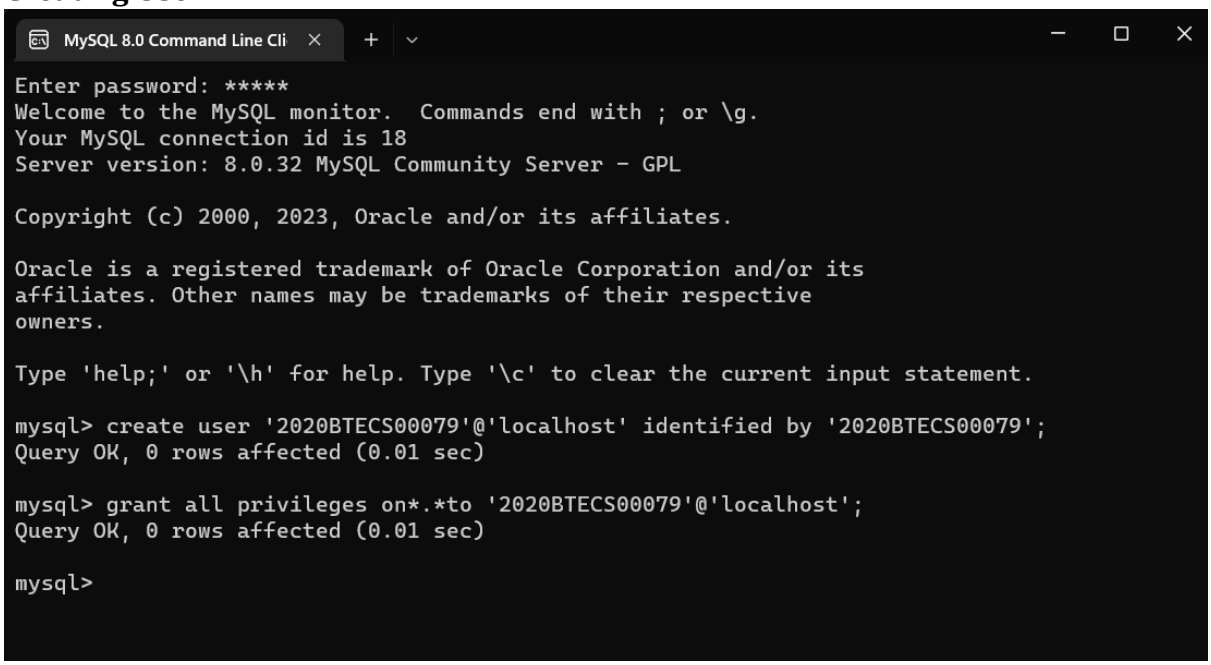
9) Connect to server by logging in with the created credentials. Check the connectivity.



10) Apply the configuration by clicking on execute. Wait for all changes to be applied. MySQL is installed successfully.



Creating User:



Connecting to created user:

```
MySQL Shell

MySQL Shell 8.0.32

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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 '\?' for help; '\quit' to exit.
 MySQL  JS > \sql
Switching to SQL mode... Commands end with ;
 MySQL  SQL > \connect 2020BTECS00079@localhost
Creating a session to '2020BTECS00079@localhost'
Please provide the password for '2020BTECS00079@localhost': **************
Save password for '2020BTECS00079@localhost'? [Y]es/[N]o/Ne[v]er (default No): Y
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 >
```
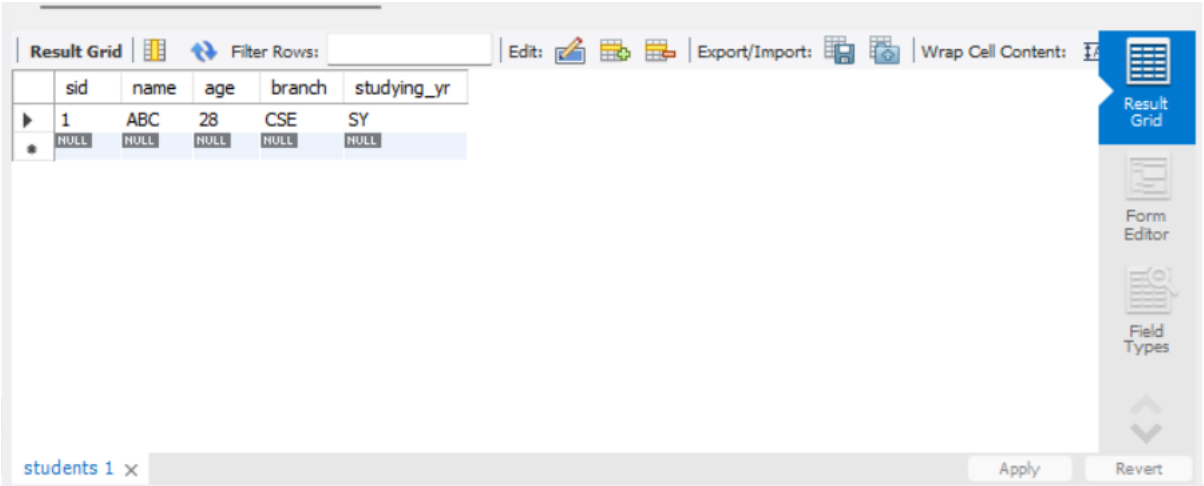

Creating Sample Tables:

```sql
USE dbsc;
create table students(
    sid int,
    name varchar(30),
    age int,
    branch varchar(20),
    studying_yr varchar(2),
    primary key(sid)
);

-- Inserting values
insert into students values(1, 'ABC', 28, 'CSE', 'SY');
insert into students values(2, 'XYZ', 67, 'IT', 'TY');

-- Retriving values
select *
from students
where branch = 'CSE';
```

Result:



Python GUI Application:

```
from tkinter import *
from tkinter import ttk
from tkinter import simpledialog
import tkinter
import tkinter.messagebox
import mysql.connector as connector

# Connecting to DBz
conn = connector.connect(host='localhost',
user='2020BTECS00079',password='2020BTECS00079', database='sakil')
c = conn.cursor()

# Initializing Window
window = Tk()
window.title("MySQL Database Connectivity")  # Title of window
window.geometry('900x900')  # Size of window (width X height)
window.configure(background="teal")  # Background color of window
window.option_add("*Font", "Times 16")  # Setting the font-family &
font-size

usr_name = Label(window, text=f"Connected to DB as: 2020BTECS00079",
                 background="skyblue").grid(row=0, column=1,
pady=20)

# Getting the table names
c.execute('show tables')
```

```
DB_NAMES = [str.upper(a[0]) for a in c]
variable = StringVar(window)
variable.set(DB_NAMES[0])  # default value
selected_tb = DB_NAMES[0]

tb_select = Label(window, text="Select the table: ",
background="skyblue").grid(
    row=1, column=0, columnspan=1, padx=10, pady=10)
tb_dropdown = OptionMenu(
    window, variable, *DB_NAMES).grid(row=1, column=0, columnspan=2,
padx=15)


def confirm_tb():
    global selected_tb
    selected_tb = variable.get()
    tkinter.messagebox.showinfo("SUCCESS", f"Table {selected_tb} is
selected!")


tb_btn = Button(window, text="Confirm", command=confirm_tb,
                background="green", foreground="white",
border=5).grid(row=1, column=1)

# CRUD Functions
# 1. View


def view_tb():
    newWindow = Toplevel(window)
    newWindow.title("VIEW Table")
    newWindow.geometry('1500x900')
    newWindow.configure(background="skyblue")  # Background color of
window
    # Setting the font-family & font-size
    newWindow.option_add("*Font", "Times 16")
    global selected_tb

    Label(newWindow, text=f"Viewing Table - {selected_tb}",
          background="skyblue").grid(row=0, column=0, padx=10,
pady=10)

    # Getting the primary key
```

```
    c.execute(f'''select column_name
                      from information_schema.key_column_usage
                      where table_name='{selected_tb}' and
constraint_name='PRIMARY'
                        ''')
    for a in c:
        pk = a[0]

    # Getting all column names from table
    c.execute(f'''show columns
                      FROM {selected_tb}
                ''')
    columns = [str.upper(a[0]) for a in c]
    tree = ttk.Treeview(newWindow, height=20, columns=columns,
show='headings')
    tree.grid(row=1, column=0, sticky='news', padx=10, pady=10)

    # setup columns attributes
    for col in columns:
        tree.heading(col, text=col)
        tree.column(col, width=100, anchor=tkinter.CENTER)

    # populate data to treeview
    c.execute(f'SELECT * FROM {selected_tb} ORDER BY {pk}')
    for a in c:
        tree.insert('', 'end', value=a)

    # scrollbar
    sb = tkinter.Scrollbar(
        newWindow, orient=tkinter.VERTICAL, command=tree.yview)
    sb.grid(row=1, column=1, sticky='ns', padx=0, pady=10)
    tree.config(yscrollcommand=sb.set)

    sbx = tkinter.Scrollbar(
        newWindow, orient=tkinter.HORIZONTAL, command=tree.xview)
    sbx.grid(row=2, column=0, sticky='ew', padx=10, pady=0)
    tree.config(xscrollcommand=sbx.set)

# 2. Insert


def insert_tb():
```

```
    newWindow = Toplevel(window)
    newWindow.title("INSERT into Table")
    newWindow.geometry('900x900')
    newWindow.configure(background="skyblue")  # Background color of
window
    # Setting the font-family & font-size
    newWindow.option_add("*Font", "Times 16")
    global selected_tb

    Label(newWindow, text=f"Insert values in table: {selected_tb}",
background="yellow").grid(
        row=0, column=0, padx=10, pady=10)
    c.execute(f'''show columns
                  FROM {selected_tb}
                '''')

    # Getting columns names
    columns = [str.upper(a[0]) for a in c]

    ent_ref = []  # For storing the Entry references
    # Populating Labels and Entries
    for ind, nm in enumerate(columns):
        Label(newWindow, text=nm, background="yellow").grid(
            row=ind+1, column=0, padx=10, pady=10)
        ent = Entry(newWindow)
        ent.grid(row=ind+1, column=1)
        ent_ref.append(ent)

    def insert_val():
        val = []
        is_empty = False

        # Getting value from each entry field
        for r in ent_ref:
            if len(r.get()) > 0:
                val.append(r.get())
            else:
                tkinter.messagebox.showerror(
                    "ERROR", "All the fields are required!")
                is_empty = True
                break
```

```
        # Checking if all fields are filled, before inserting
        if not is_empty:
            v = []
            # Typecasting values (int, float & string)
            for x in val:
                try:
                    v.append(int(x))
                except ValueError:
                    try:
                        v.append(float(x))
                    except ValueError:
                        v.append(x)

            # Inserting values
            s = f'insert into {selected_tb}('+','.join(
                ['?']*len(v))+')' + '
values('+','.join(['%s']*len(v))+')'
            for a in columns:
                s = s.replace('?', a, 1)

            try:
                c.execute(s, v)
                conn.commit()
                for r in ent_ref:
                    r.delete(0, END)
                tkinter.messagebox.showinfo(
                    "SUCCESS", "Values inserted into table
successfully!")
            except Exception as e:
                tkinter.messagebox.showerror("ERROR", e)

    Button(newWindow, text="Insert Values", command=insert_val,
background="green",
           foreground="white").grid(row=ind+2, column=1, pady=20,
sticky='ew')

# 3. Update


def update_tb():
    global selected_tb
    try:
```

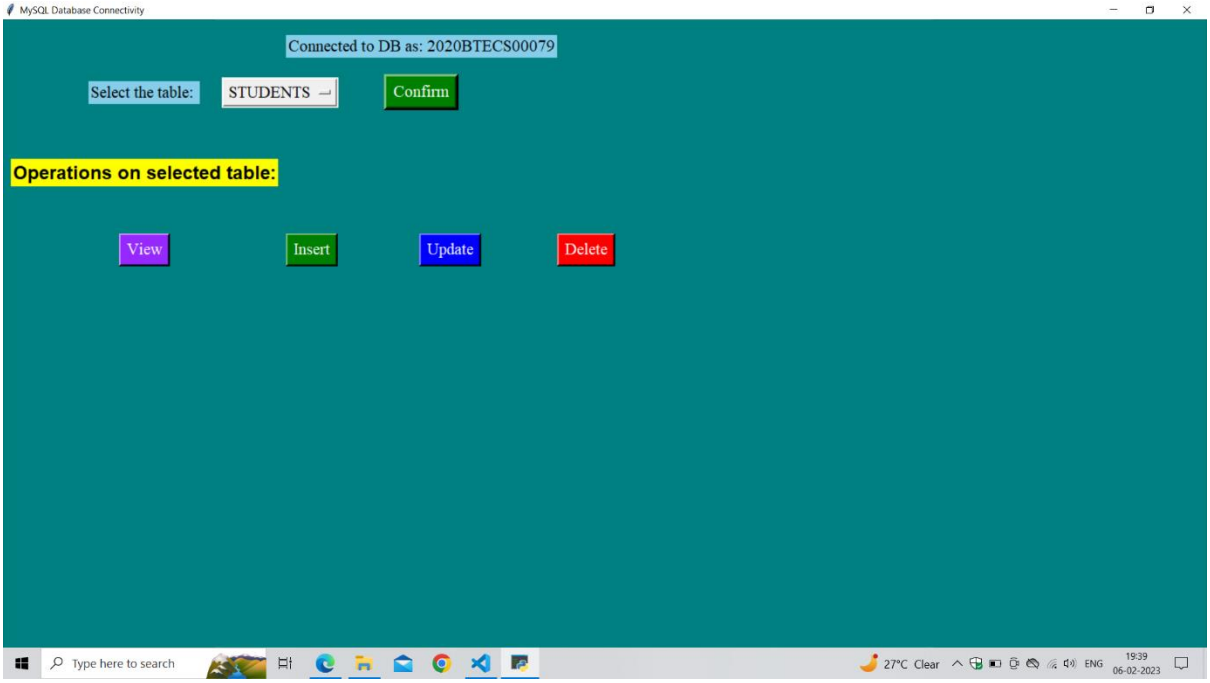
```
        c.execute(f'''select column_name
                       from information_schema.key_column_usage
                       where table_name='{selected_tb}' and
constraint_name='PRIMARY'
                         ''')

        for a in c:
            pk = a[0]

        id = simpledialog.askinteger(
            title="UPDATE", prompt="Enter the ID to be updated: ")

        if id is not None:
            c.execute(f'select * from {selected_tb} where
{pk}={id}')

            if len(c.fetchall()) == 0:
                tkinter.messagebox.showerror(
                    "ERROR", "No record was found with the given ID
!")
            else:
                newWindow = Toplevel(window)
                newWindow.title("UPDATE Table")
                newWindow.geometry('900x900')
                # Background color of window
                newWindow.configure(background="skyblue")
                # Setting the font-family & font-size
                newWindow.option_add("*Font", "Times 16")

                Label(newWindow, text=f"Update values in table:
{selected_tb}", background="yellow").grid(
                    row=0, column=0, padx=10, pady=10)
                c.execute(f'''show columns
                               FROM {selected_tb}
                         ''')

                columns = [str.upper(a[0]) for a in c]
                ent_ref = []

                c.execute(f'select * from {selected_tb} where
{pk}={id}')
                val = []
```

```
                for a in c:
                    val.append(a)

                val = [str(item) for t in val for item in t]

                for ind, nm in enumerate(columns):
                    Label(newWindow, text=nm,
background="yellow").grid(
                        row=ind+1, column=0, padx=10, pady=10)
                    ent = Entry(newWindow)
                    ent.grid(row=ind+1, column=1)
                    ent.insert(0, val[ind])
                    ent_ref.append(ent)

                def update_val():
                    upd_val = []
                    is_empty = False

                    for r in ent_ref:
                        if len(r.get()) > 0:
                            upd_val.append(r.get())
                        else:
                            tkinter.messagebox.showerror(
                                "ERROR", "All the fields are
required!")
                            is_empty = True
                            break

                    if not is_empty:
                        v = []
                        for x in upd_val:
                            try:
                                v.append(int(x))
                            except ValueError:
                                try:
                                    v.append(float(x))
                                except ValueError:
                                    v.append(x)

                        s = f'update {selected_tb} set ' + \
                            ','.join(['? = %s']*len(v))+f' where
{pk}={id}'
```

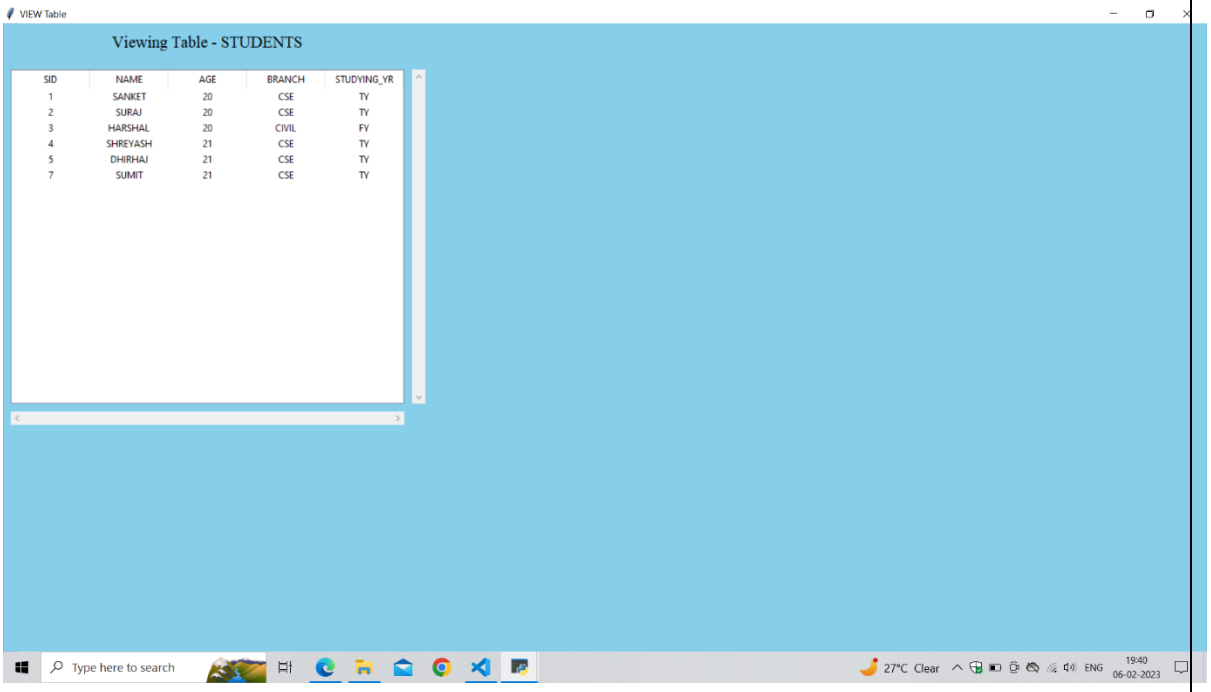
```
                        for a in columns:
                            s = s.replace('?', a, 1)

                        try:
                            c.execute(s, v)
                            conn.commit()
                            newWindow.destroy()
                            tkinter.messagebox.showinfo(
                                "SUCCESS", "Values updated
successfully!")
                        except Exception as e:
                            tkinter.messagebox.showerror("ERROR", e)

                Button(newWindow, text="Update Values",
command=update_val, background="blue",
                       foreground="white").grid(row=ind+2, column=1,
pady=20, sticky='ew')

    except Exception as e:
        tkinter.messagebox.showerror("ERROR", e)

# 4. Delete


def delete_tb():
    global selected_tb
    try:
        c.execute(f'''select column_name
                      from information_schema.key_column_usage
                      where table_name='{selected_tb}' and
constraint_name='PRIMARY'
                        ''')

        for a in c:
            pk = a[0]

        id = simpledialog.askinteger(
            title="DELETE", prompt="Enter the ID to be deleted: ")

        if id is not None:
            c.execute(f'delete from {selected_tb} where {pk}={id}')
```

```
            if c.rowcount == 0:
                tkinter.messagebox.showerror(
                    "ERROR", "Cannot DELETE!\nNo record was found
with the given ID !")
            else:
                conn.commit()
                tkinter.messagebox.showinfo(
                    "SUCCESS", "Deleted record from table
successfully!")

    except Exception as e:
        tkinter.messagebox.showerror("ERROR", e)


# CRUD operation buttons
if selected_tb is not None:
    Label(window, text="Operations on selected table:",
background="yellow",
          font='Helvetica 18 bold').grid(row=3, column=0, padx=10,
pady=60)

    view_btn = Button(window, text="View", command=view_tb,
background="#9629ff",
                      foreground="white", border=3).grid(row=4,
column=0)
    insert_btn = Button(window, text="Insert", command=insert_tb,
background="green",
                        foreground="white", border=3).grid(row=4,
column=1, sticky='w', columnspan=1)
    update_btn = Button(window, text="Update", command=update_tb,
background="blue",
                        foreground="white", border=3).grid(row=4,
column=1, columnspan=2)
    delete_btn = Button(window, text="Delete", command=delete_tb,
                        background="red", foreground="white",
border=3).grid(row=4, column=2)

window.mainloop()  # window remains until user closes it
conn.close()
```

Result:

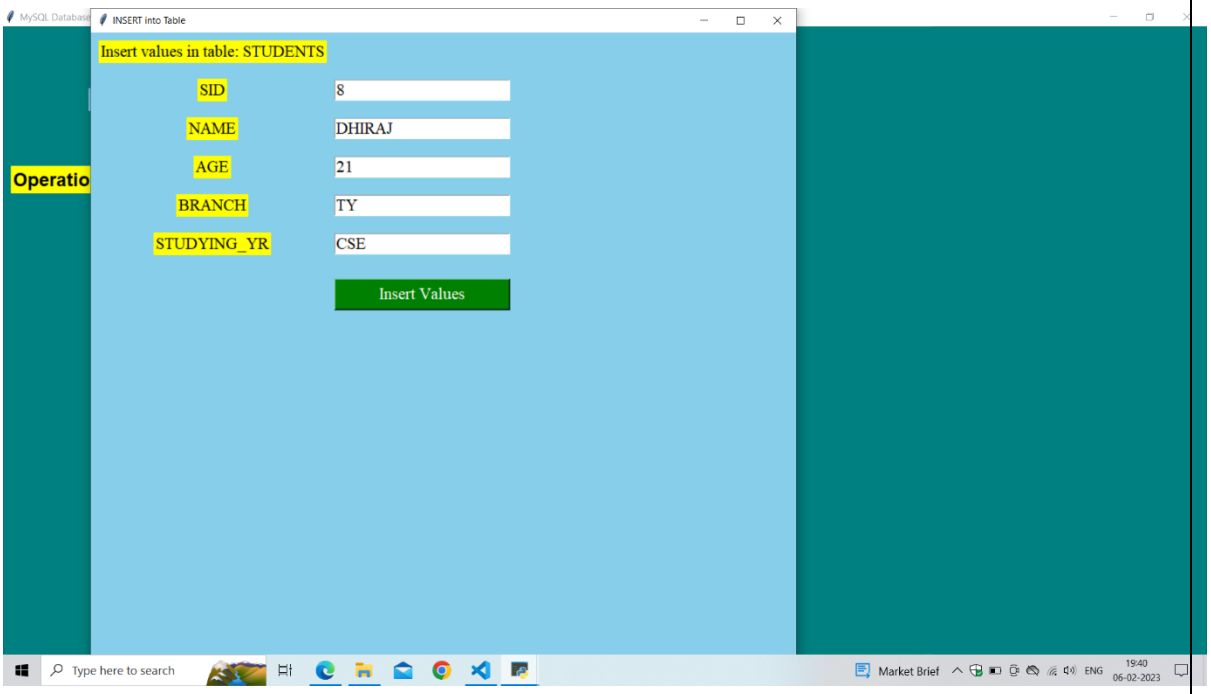


1. View:

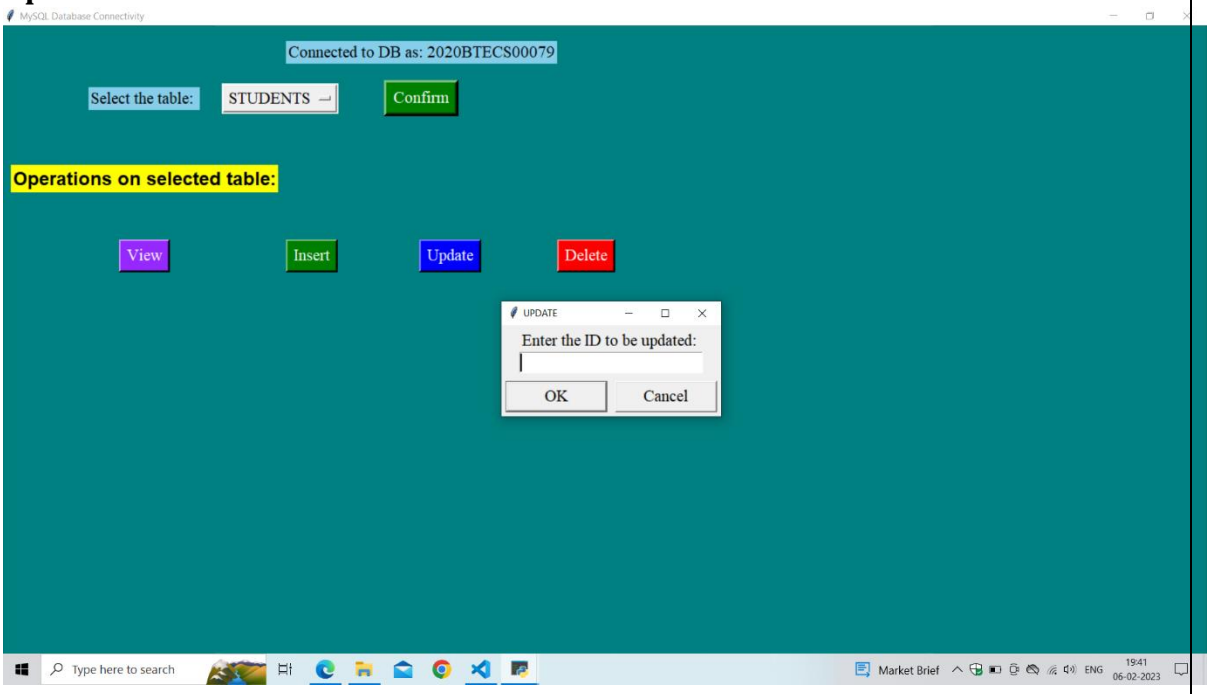


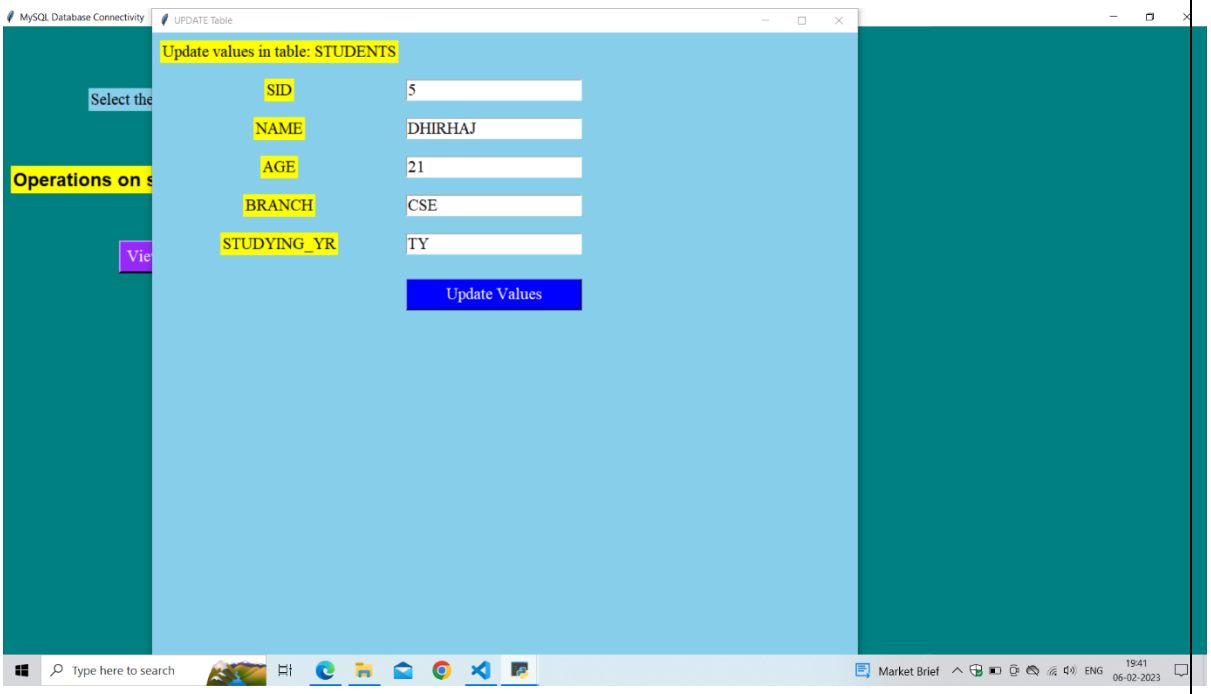
SID	NAME	AGE	BRANCH	STUDYING_YR
1	SANKET	20	CSE	TY
2	SURAJ	20	CSE	TY
3	HARSHAL	20	CIVIL	FY
4	SHREYASH	21	CSE	TY
5	DHIRHAJ	21	CSE	TY
7	SUMIT	21	CSE	TY

2. Insert:

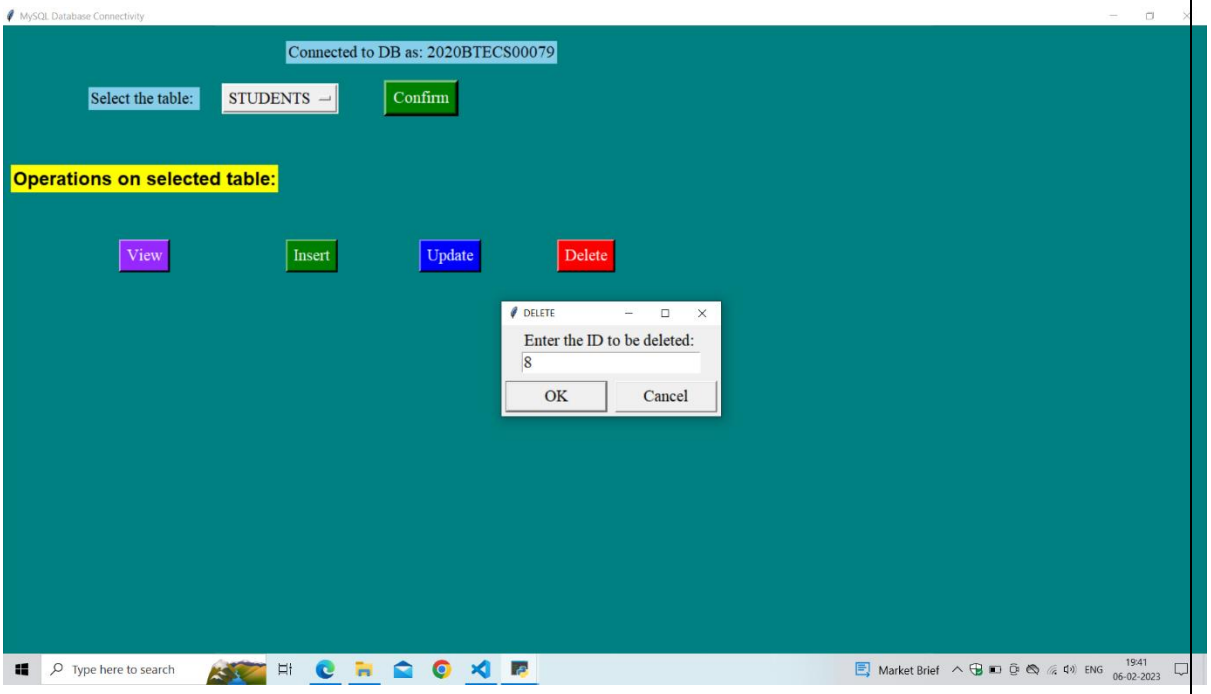

INSERT into Table
Insert values in table: STUDENTS
SID
8
NAME
DHIRAJ
AGE
21
BRANCH
TY
STUDYING_YR
CSE
Insert Values
Operatio

3. **Update:**


Connected to DB as: 2020BTECS00079
Select the table:
STUDENTS
Confirm
Operations on selected table:
View
Insert
Update
Delete
UPDATE
Enter the ID to be updated:
OK
Cancel


MySQL Database Connectivity
UPDATE Table
Update values in table: STUDENTS
SID
5
NAME
DHIRHAJ
AGE
21
BRANCH
CSE
STUDYING_YR
TY
Update Values
Select the
Operations on s
Vie
Type here to search
Market Brief
ENG
19:41
06-02-2023

4. Delete:


MySQL Database Connectivity
Connected to DB as: 2020BTECS00079
Select the table:
STUDENTS
Confirm
Operations on selected table:
View
Insert
Update
Delete
DELETE
Enter the ID to be deleted:
8
OK
Cancel
Type here to search
Market Brief
ENG
19:41
06-02-2023