

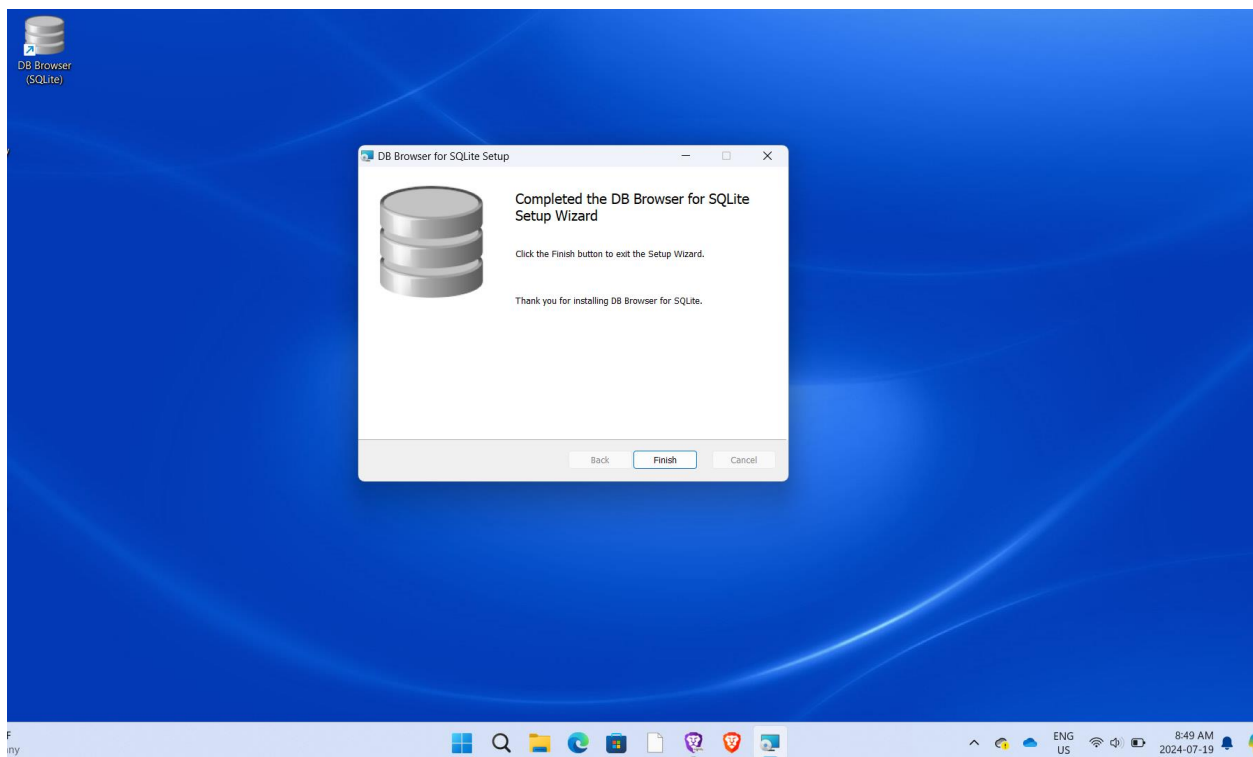
Python II

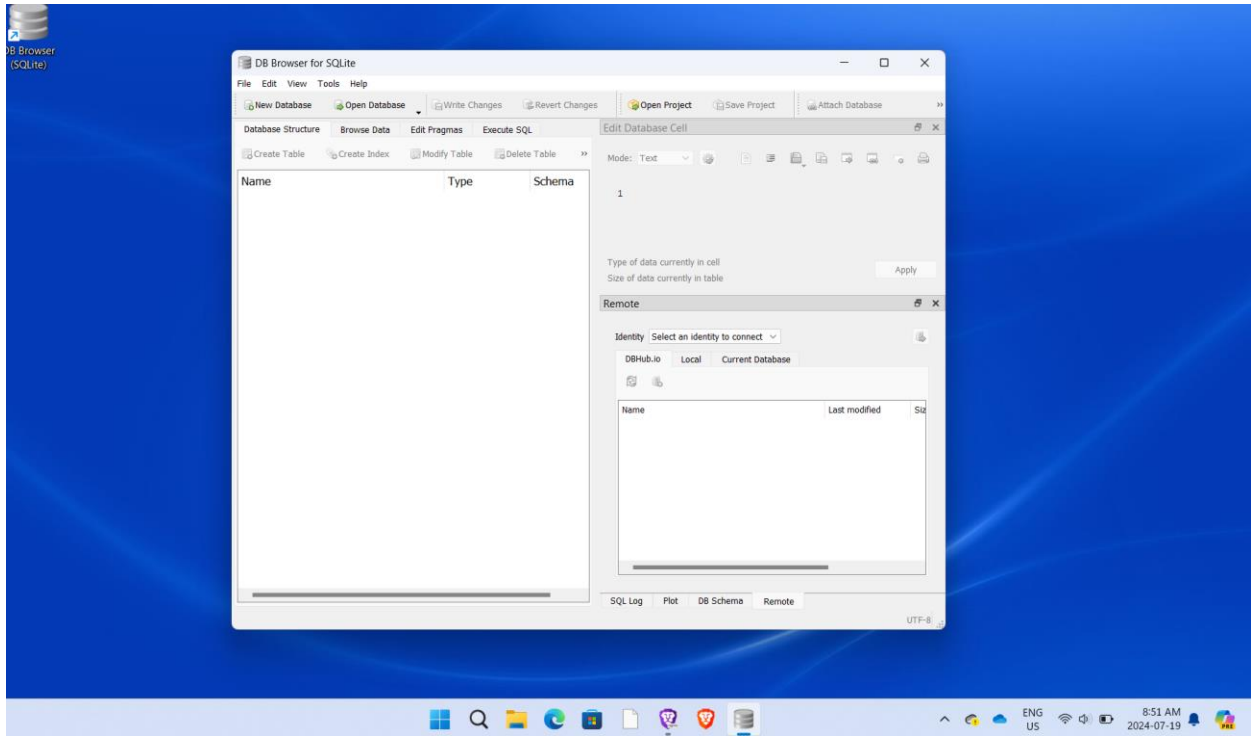
Student ID : C0930321

Student Name : Shreejana Shrestha

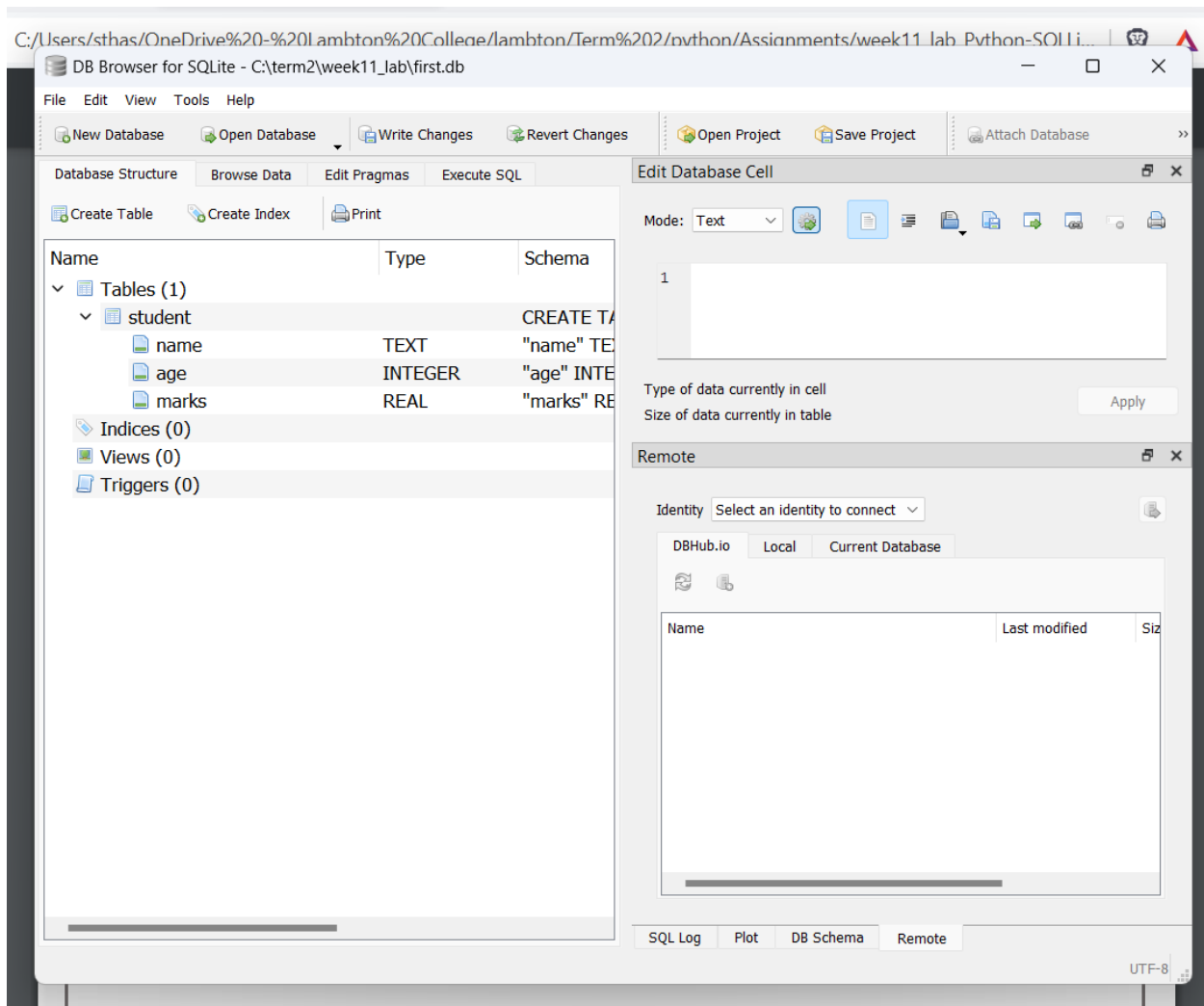
Week 11 Lab work (SQLite connectivity using python)

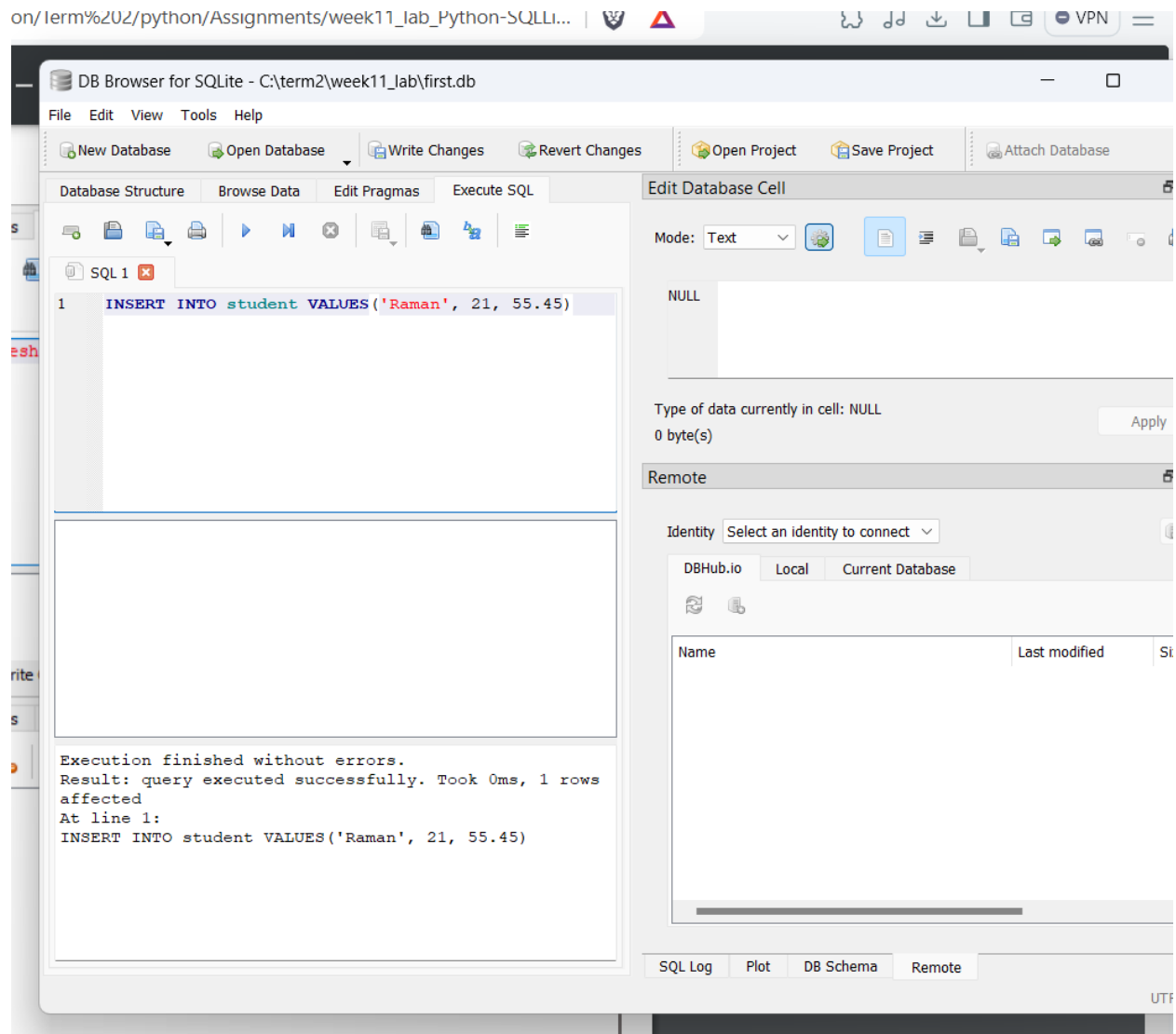
Installation of db browser for SQLite





Database creation and data insertion from db browser for SQLite





DB Browser for SQLite - C:\term2\week11_lab\first.db

File Edit View Tools Help

New DatabaseOpen DatabaseWrite ChangesRevert ChangesOpen ProjectSave ProjectAttach Database

Database StructureBrowse DataEdit PragmasExecute SQL

Table: studentFilter in...

	name	age	marks
	Filter	Filter	Filter
1	Raman	21	55.45

1 - 1 of 1Go to: 1

Edit Database Cell

Mode: Text

11

Type of data currently in cell: Text / Numeric
1 character(s)

Remote

Identity Select an identity to connect

DBHub.ioLocalCurrent Database

Name	Last modified	S
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SQL LogPlotDB SchemaRemote

UTF

DB Browser for SQLite - C:\term2\week11_lab\first.db

File Edit View Tools Help

New DatabaseOpen DatabaseWrite ChangesRevert ChangesOpen ProjectSave ProjectAttach DatabaseClose Database

Database StructureBrowse DataEdit PragmasExecute SQL

SQL 1

```
1 INSERT INTO student VALUES('Raman', 21, 55.45);
2 INSERT INTO student VALUES('Shreejana', 22, 95.45);
3
4 SELECT * FROM student;
```

	name	age	marks
1	Raman	21	55.45
2	Shreejana	22	95.45

Execution finished without errors.
Result: query executed successfully. Took 0ms, 1 rows affected
At line 2:
INSERT INTO student VALUES('Shreejana', 22, 95.45);

Edit Database Cell

Mode: Text

NULL

Type of data currently in cell: NULL
0 byte(s) Apply

Remote

Identity Select an identity to connect

DBHub.ioLocalCurrent Database

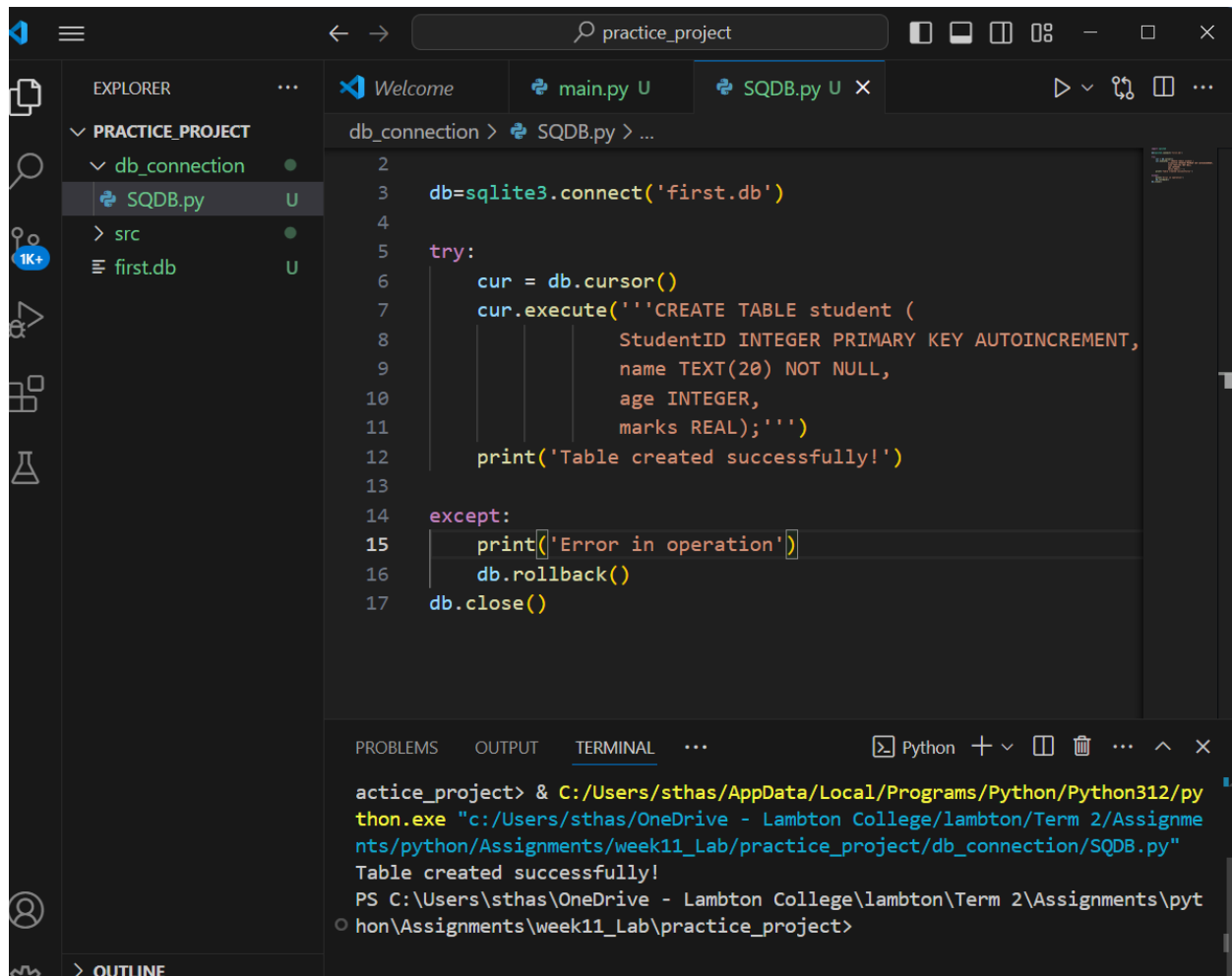
Name	Last modified	Size
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SQL LogPlotDB SchemaRemote

UTF

CRUD using python

Table creation



```
db_connection > SQDB.py > ...
2
3 db=sqlite3.connect('first.db')
4
5 try:
6     cur = db.cursor()
7     cur.execute('''CREATE TABLE student (
8         StudentID INTEGER PRIMARY KEY AUTOINCREMENT,
9         name TEXT(20) NOT NULL,
10        age INTEGER,
11        marks REAL);''')
12    print('Table created successfully!')
13
14 except:
15     print('Error in operation')
16     db.rollback()
17 db.close()
```

actice_project> & C:/Users/sthas/AppData/Local/Programs/Python/Python312/python.exe "c:/Users/sthas/OneDrive - Lambton College/lambton/Term 2/Assignments/python/Assignments/week11_Lab/practice_project/db_connection/SQDB.py"

Table created successfully!

PS C:\Users\sthas\OneDrive - Lambton College\lambton\Term 2\Assignments\python\Assignments\week11_Lab\practice_project>

DB Browser for SQLite - C:\Users\sthas\OneDrive - Lambton College\lambton\Term 2\Assignments\python\Assignments\week11_Lab\practice_project\test.db

File Edit View Tools Help

New DatabaseOpen DatabaseWrite ChangesRevert ChangesOpen ProjectSave ProjectAttach DatabaseClose Database

Database StructureBrowse DataEdit PragmasExecute SQL

Create TableCreate IndexPrint

Name	Type	Schema
Tables (2)		
sqlite_sequence		
CREATE TABLE sqlite_sequence(name,seq)		
student		
CREATE TABLE student (StudentID INTEGER PRIMARY KEY AUTOINCREMENT,		
StudentID	INTEGER	"StudentID" INTEGER
name	TEXT(20)	"name" TEXT(20) NOT NULL
age	INTEGER	"age" INTEGER
marks	REAL	"marks" REAL
Indices (0)		
Views (0)		
Triggers (0)		
Triggers (0)		

Mode:
NULL
Type of
0 byte(
Remote
Ident
DB
Nar
SQL Lc

The screenshot shows a VS Code editor with a dark theme. The Explorer sidebar on the left shows a project named 'PRACTICE_PROJECT' with a subfolder 'db_connection' containing 'SQDB.py'. The main editor window displays the code in 'SQDB.py':

```

1  import sqlite3
2
3  db=sqlite3.connect('first.db')
4  query = "Insert into student (name, age, marks) values('Raje
5  try:
6      cur = db.cursor()
7      cur.execute(query)
8      db.commit()
9      print('One record added successfully!')
10
11 except:
12     print('Error in operation')
13     db.rollback()
14 db.close()

```

The bottom panel shows the TERMINAL output:

```

Python
nts/python/Assignments/week11_Lab/practice_project/db_connection/SQDB.py"
Table created successfully!
PS C:\Users\sthas\OneDrive - Lambton College\lambton\Term 2\Assignments\py
● hon\Assignments\& C:/Users/sthas/AppData/Local/Programs/Python/Python312/py
thon.exe "c:/Users/sthas/OneDrive - Lambton College\lambton\Term 2\Assignme
nts/python/Assignments/week11_Lab/practice_project/db_connection/SQDB.py"
One record added successfully!
○ PS C:\Users\sthas\OneDrive - Lambton College\lambton\Term 2\Assignments\py
hon\Assignments\week11_Lab\practice_project>

```

```

PROBLEMS OUTPUT TERMINAL ... Python + - [ ] [ ] ... ^ x
nts/python/Assignments/week11_Lab/practice_project/db_connection/SQDB.py"
Table created successfully!
PS C:\Users\sthas\OneDrive - Lambton College\lambton\Term 2\Assignments\pyth
on\Assignments\& C:\Users\sthas\AppData\Local\Programs\Python\Python312\py
thon.exe "c:\Users\sthas\OneDrive - Lambton College\lambton\Term 2\Assignme
nts/python/Assignments/week11_Lab/practice_project/db_connection/SQDB.py"
One record added successfully!
PS C:\Users\sthas\OneDrive - Lambton College\lambton\Term 2\Assignments\pyth
on\Assignments\week11_Lab\practice_project>

```

DB Browser for SQLite - C:\Users\sthas\OneDrive - Lambton College\lambton\Term 2\Assignments\python\Assignments\week11_Lab\practice_project\test.db

File Edit View Tools Help

New Database Open Database Write Changes Revert Changes Open Project Save Project Attach Database Close Database

Database Structure Browse Data Edit Pragmas Execute SQL

SQL 1

```
1 select * from student;
```

	StudentID	name	age	marks
1	1	Rajeev	20	50.0

Execution finished without errors.
Result: 2 rows returned in 6ms
At line 1:
select * from student;

Mode: NULL
Type c
0 byte
Remot
Iden
DI
Na

Data Fetching

The screenshot shows a VS Code editor with a dark theme. The Explorer sidebar on the left displays the project structure: **PRACTICE_PROJECT** containing a **db_connection** folder, which includes **SQDB.py**, **src**, **first.db**, and **test.db**. The main editor window shows the **SQDB.py** file with the following Python code:

```

1  import sqlite3
2
3  db=sqlite3.connect('test.db')
4  query = "Insert into student (name, age, mai
5  sql = "SELECT * FROM student"
6
7  cur = db.cursor()
8  cur.execute(sql)
9  while True:
10     record = cur.fetchone()
11     if record == None:
12         break
13     print(record)
14  db.close()

```

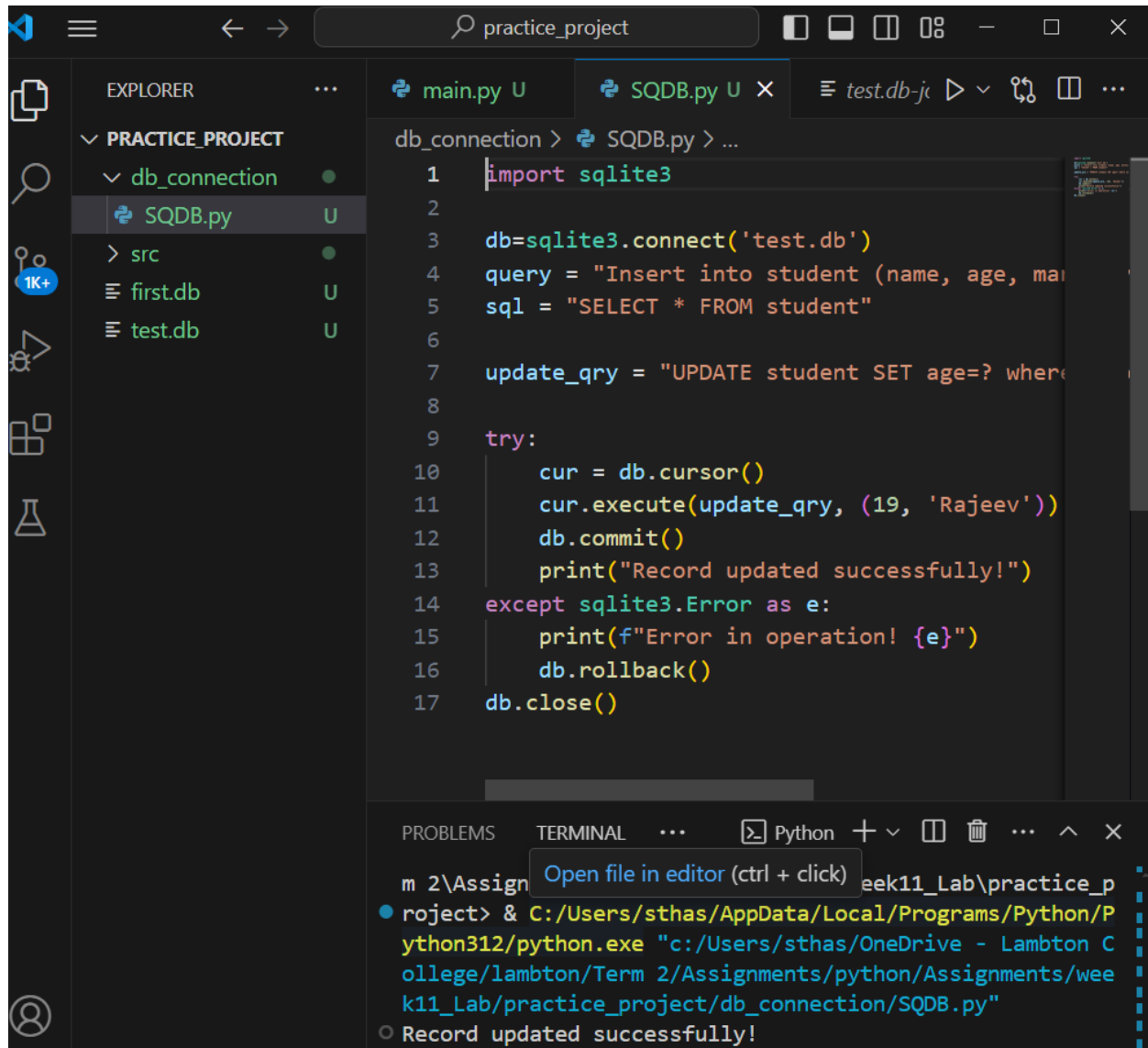
At the bottom, the TERMINAL window shows the command prompt output:

```

roject> & C:/Users/sthas/AppData/Local/Programs/Python/Python312/python.exe
"c:/Users/sthas/OneDrive - Lambton College/lambton/Term
2/Assignments/python/Assignments/week11_Lab/practice_pr
oject/db_connection/SQDB.py"
(1, 'Rajeev', 20, 50.0)

```

Record Update



The screenshot shows a Visual Studio Code editor window with a project named 'practice_project'. The Explorer sidebar on the left shows the project structure: 'PRACTICE_PROJECT' containing 'db_connection' (which includes 'SQDB.py', 'first.db', and 'test.db') and a 'src' folder. The main editor displays the 'SQDB.py' file, which contains Python code for connecting to a SQLite database, executing an update query, and handling errors. The code is as follows:

```
1 import sqlite3
2
3 db=sqlite3.connect('test.db')
4 query = "Insert into student (name, age, mar
5 sql = "SELECT * FROM student"
6
7 update_qry = "UPDATE student SET age=? where
8
9 try:
10     cur = db.cursor()
11     cur.execute(update_qry, (19, 'Rajeev'))
12     db.commit()
13     print("Record updated successfully!")
14 except sqlite3.Error as e:
15     print(f"Error in operation! {e}")
16     db.rollback()
17 db.close()
```

At the bottom, the TERMINAL panel shows the command used to run the script and the output:

```
m 2\Assign Open file in editor (ctrl + click) eek11_Lab\practice_p
● roject> & C:/Users/sthas/AppData/Local/Programs/Python/P
python312/python.exe "c:/Users/sthas/OneDrive - Lambton C
ollege/lambton/Term 2/Assignments/python/Assignments/wee
k11_Lab/practice_project/db_connection/SQDB.py"
○ Record updated successfully!
```

```
1 select * from student;
```

	StudentID	name	age	marks
1	1	Rajeev	19	50.0

Record Delete

DB Browser for SQLite - C:\Users\sthas\OneDrive - Lambton College\lambton\Term 2\Assignments\python\Assignments\week1

File Edit View Tools Help

New Database Open Database Write Changes Revert Changes Open Project Save Project

Database Structure Browse Data Edit Pragmas Execute SQL

SQL 1

```
1 INSERT INTO student VALUES (2, "Aman", 20, 65.0)
2 SELECT * FROM student
```

	StudentID	name	age	marks
1	1	Rajeev	19	50.0
2	2	Aman	20	65.0

Execution finished without errors.
Result: query executed successfully. Took 1ms, 1 rows affected
At line 1:
INSERT INTO student VALUES (2, "Aman", 20, 65.0)

Edit Database Cell

Mode: Text

NULL

Type of data currently in cell: NULL
0 byte(s)

Remote

Identity Select an identity to connect

DBHub.io Local Current Database

Name

DB Browser for SQLite - C:\Users\sthas\OneDrive - Lambton College\lambton\Term 2\Assignments\python\Assignments\week

File Edit View Tools Help

New Database Open Database Write Changes Revert Changes Open Project Save Project At

Database Structure Browse Data Edit Pragmas Execute SQL

SQL 1

```
1 select * from student
```

	StudentID	name	age	marks
1	2	Aman	20	65.0

Mode: Text

NULL

Type of data currently in cell: NULL
0 byte(s)

Remote

Identity Select an identity to connect

DBHub.io Local Current Databa

Name

