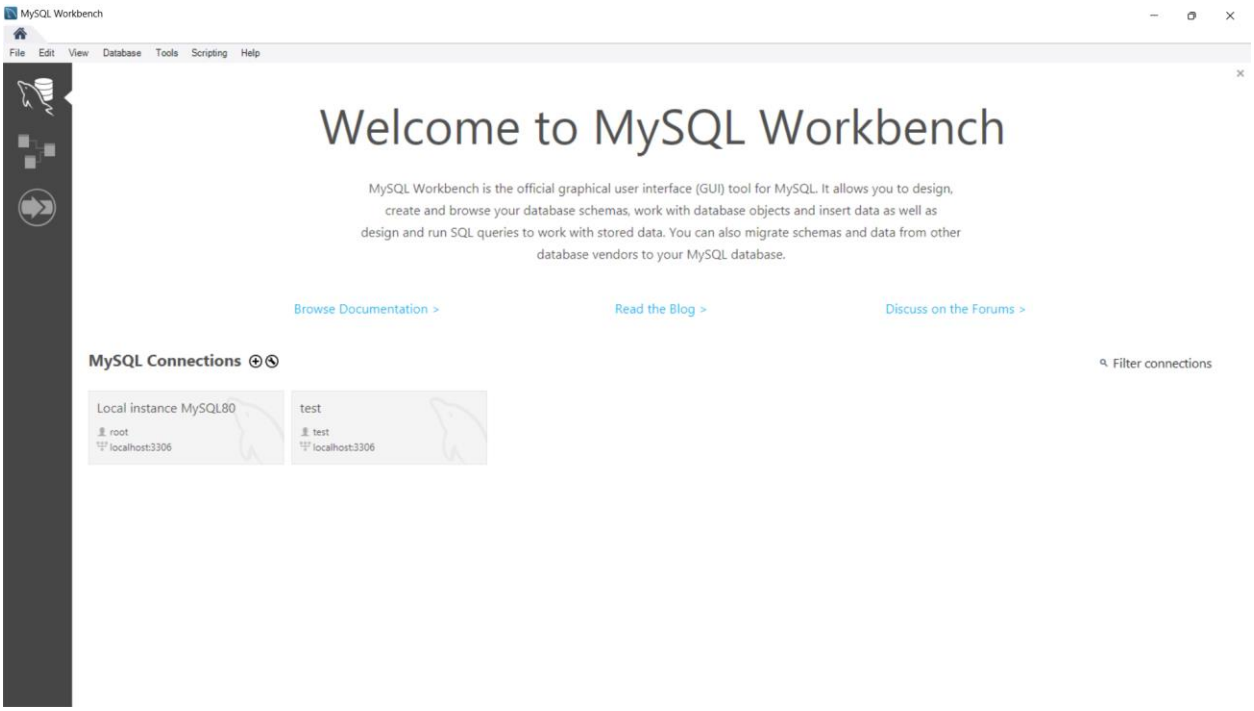
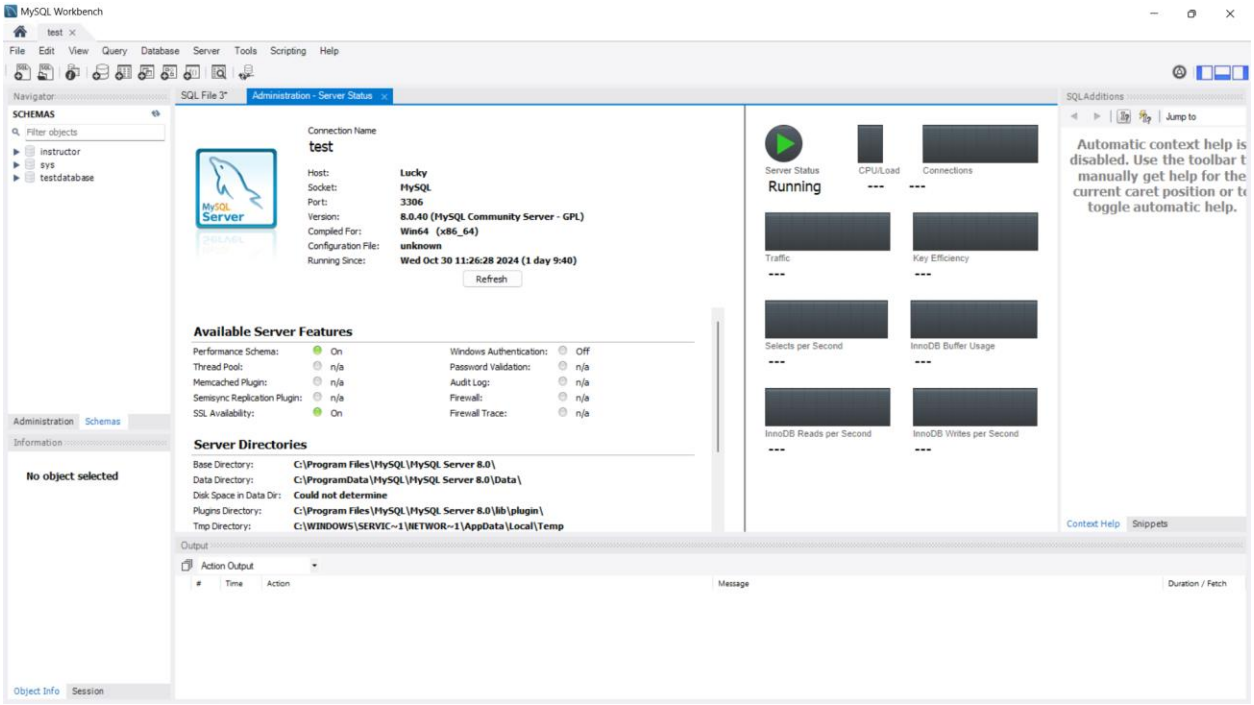
# Assignment 2 FDB:

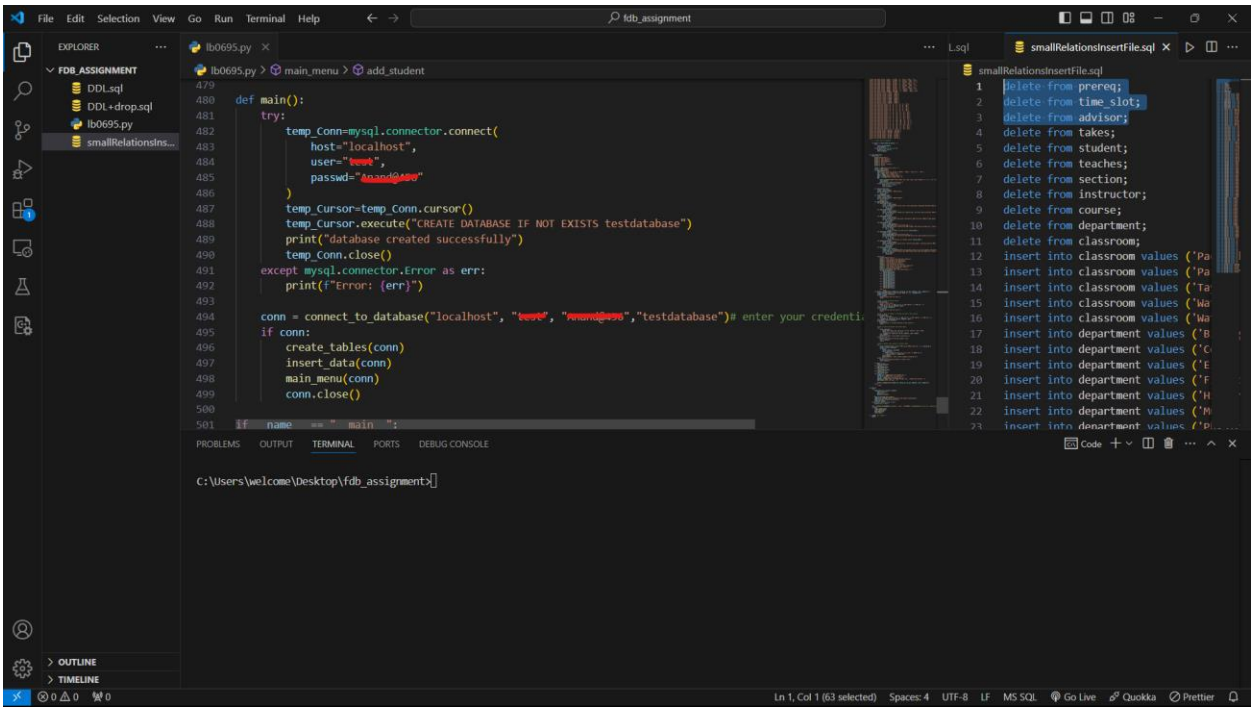
1) Step 1:
   First open the vs code terminal which is the most interactive working environment for developers
2) Step 2: open work bench if the server is running or not.




   You can see I made 2 connections already one is test connection where we are going to connect our application to this connection name “test”. Open this connection and enter the password and check the server status and it should show running.
3) Return basck to the VScode environment and create the python file.
4) Next step 3:open the terminal to install the packages like mysql-connector-python and make sure the python is installed and vscode able to run with the interpreter.
5) Next import the  packages and look for the main function.




6)

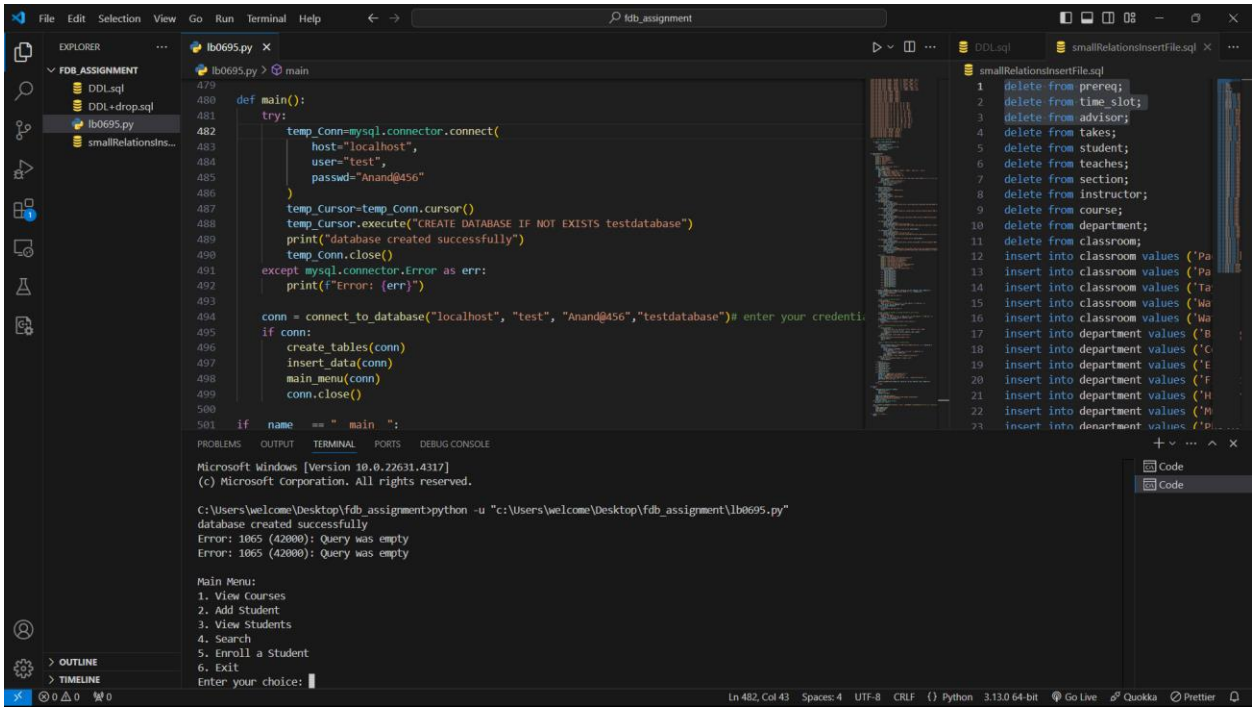



Where I striked with the red marker enter your details in the ipynb file. If your running my file for the first time.

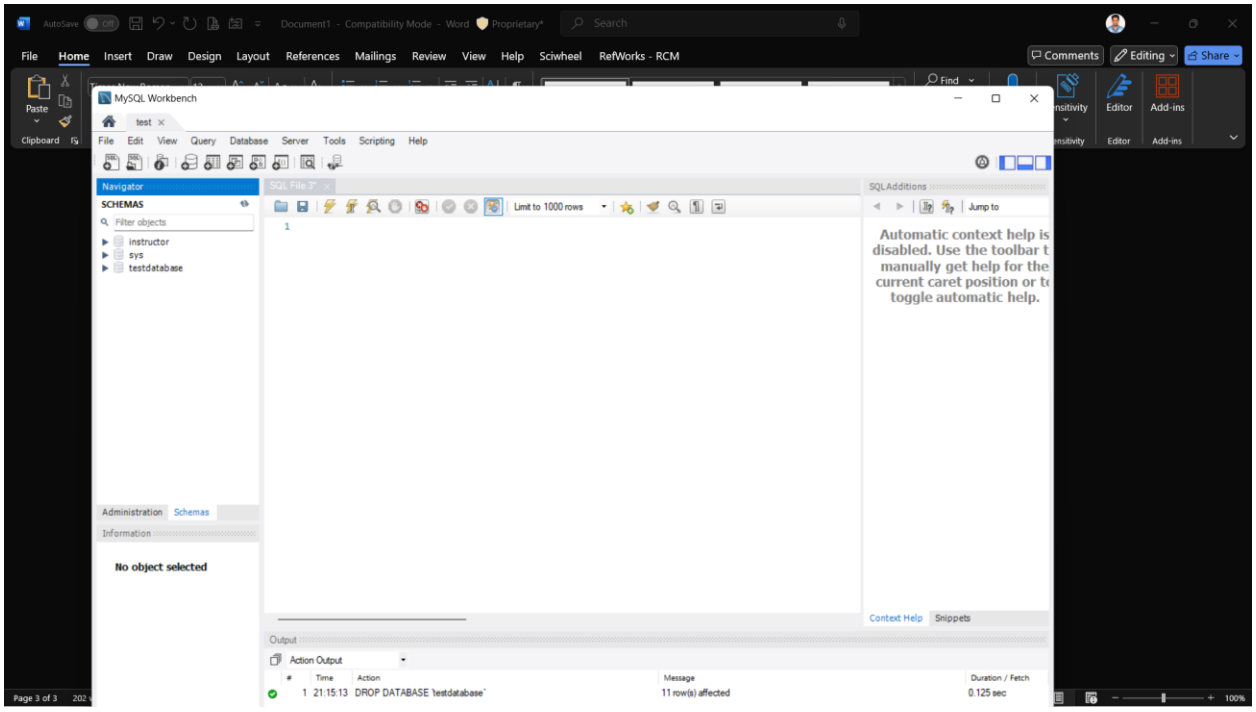
7). Step 4: just run the python file

8)in workbench we can see there no database created with testdatabase. After running the python script we can see that  database is created and ready for taking the input arguments.

9)

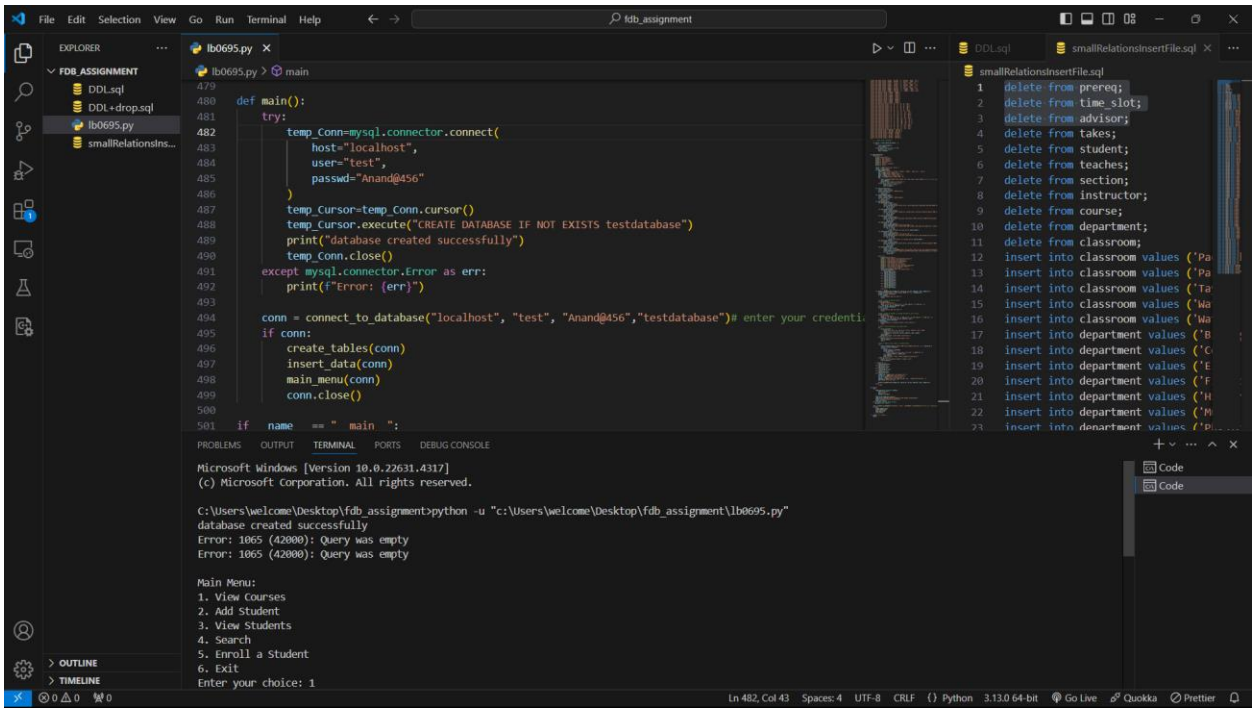



Verfy in workbench



We can see the database created successfully using the migration.

10) Let’s perform the each task

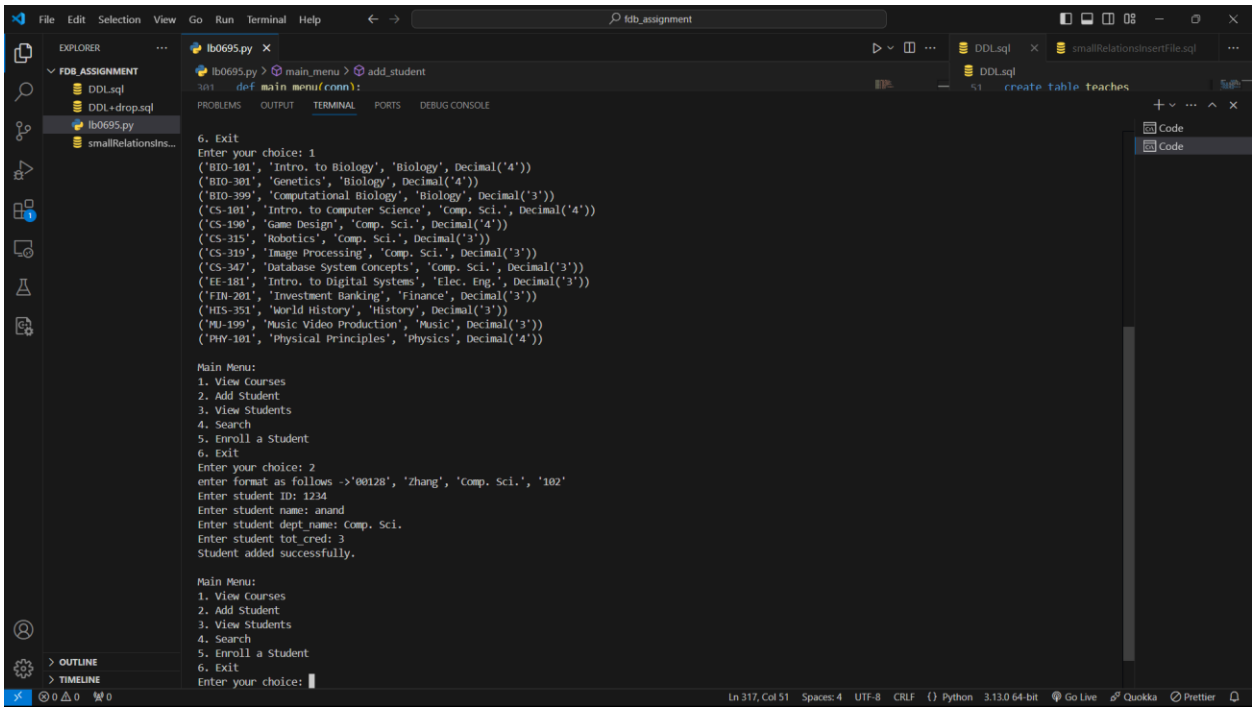



Error triggers:

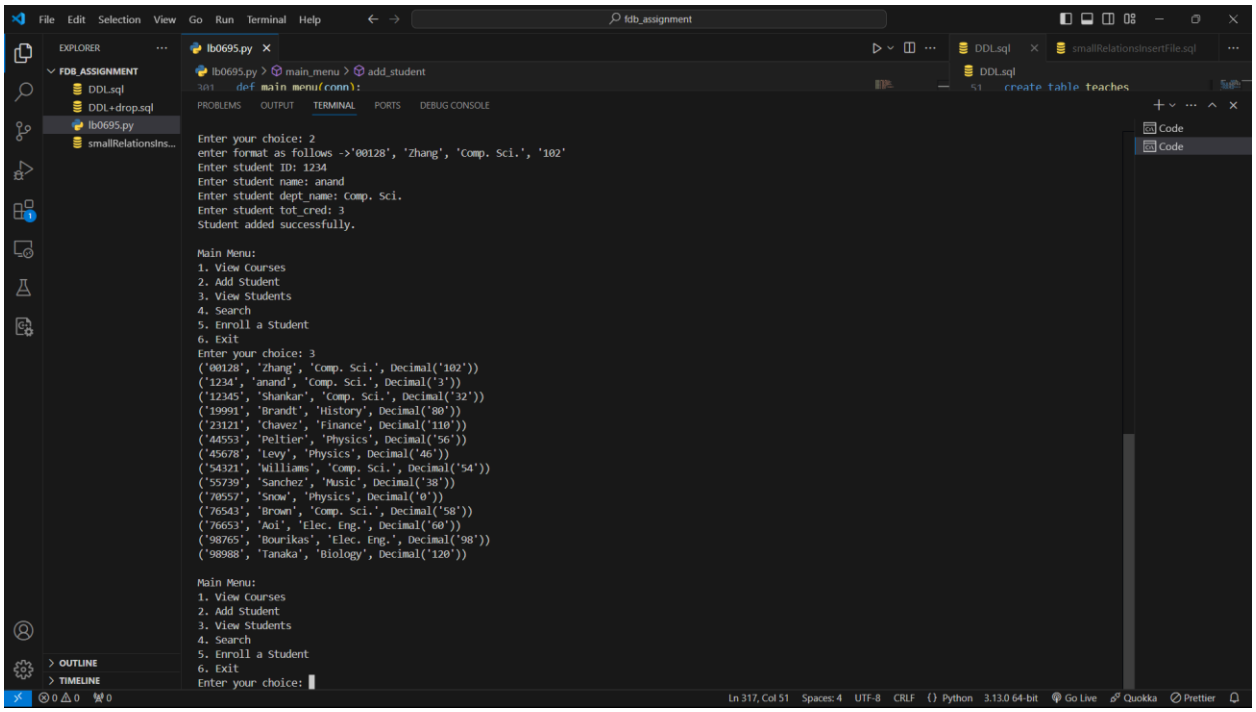
```
Enter your choice: 2
enter format as follows ->'00128', 'Zhang', 'Comp. Sci.', '102'
Enter student ID: 1234
Enter student name: Anand
Enter student major: cs
Enter student GPA: 4
Error: 1054 (42S22): Unknown column 'major' in 'field list'

Main Menu:
```

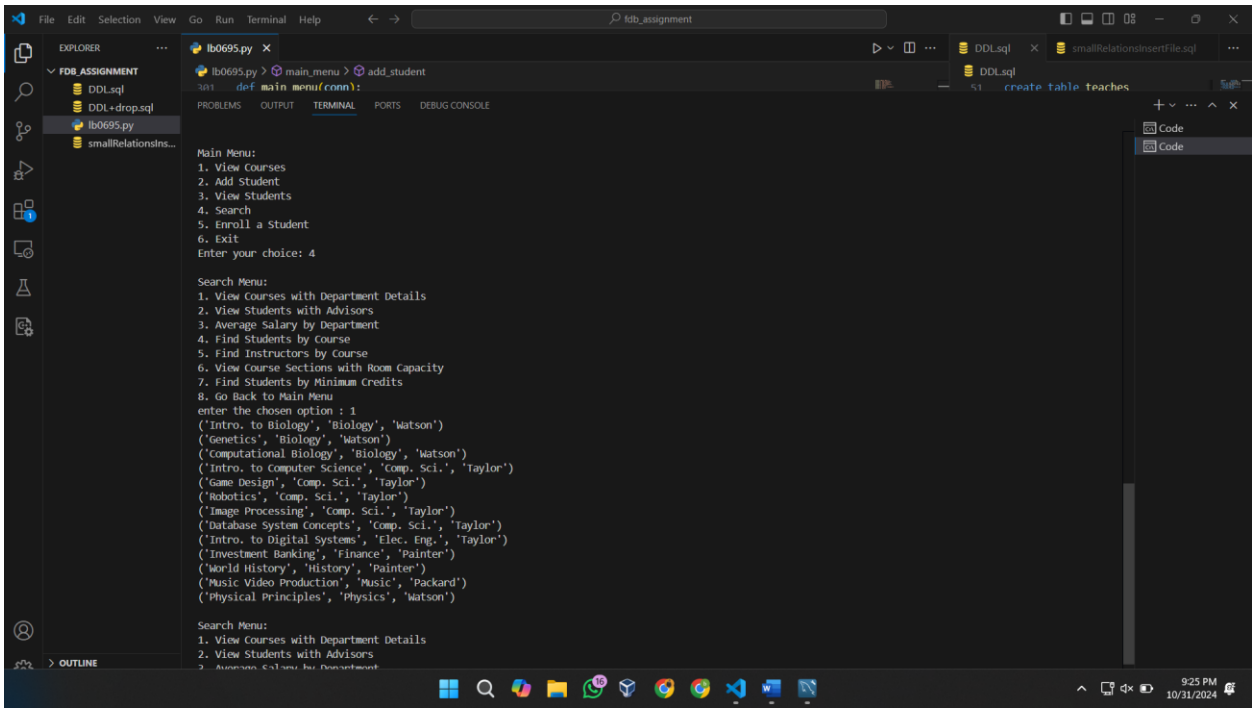
after handling:

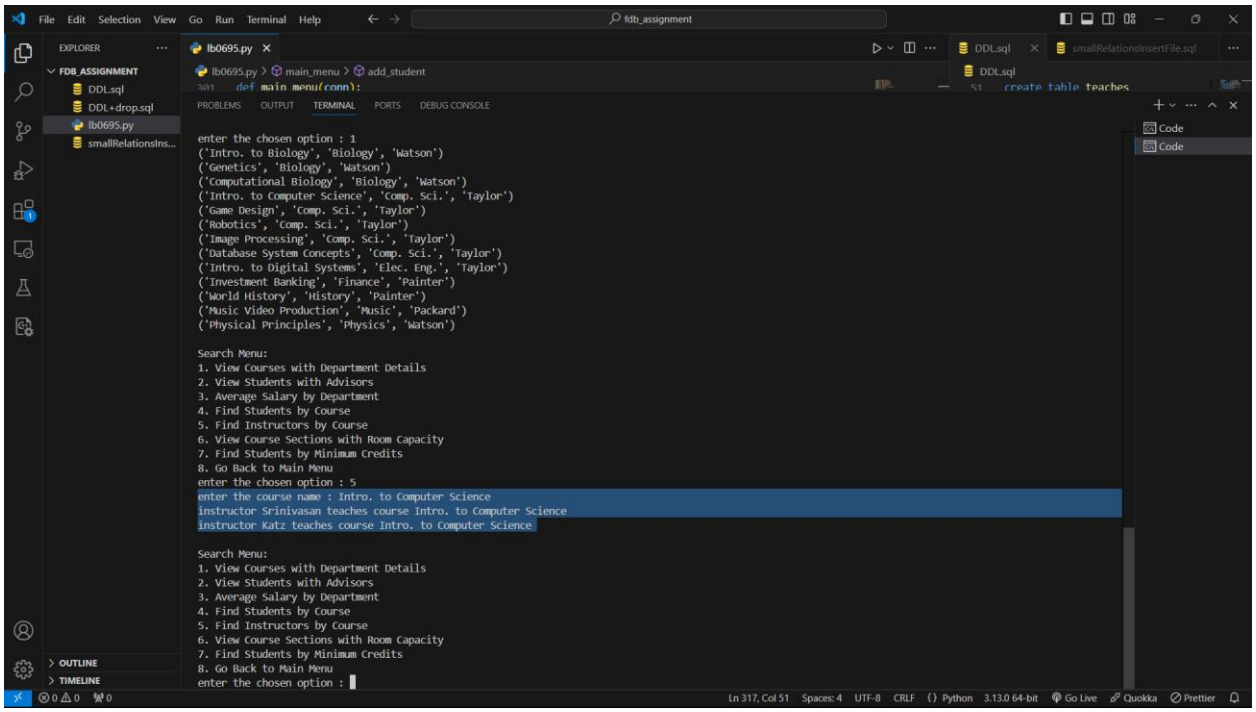



View students option:

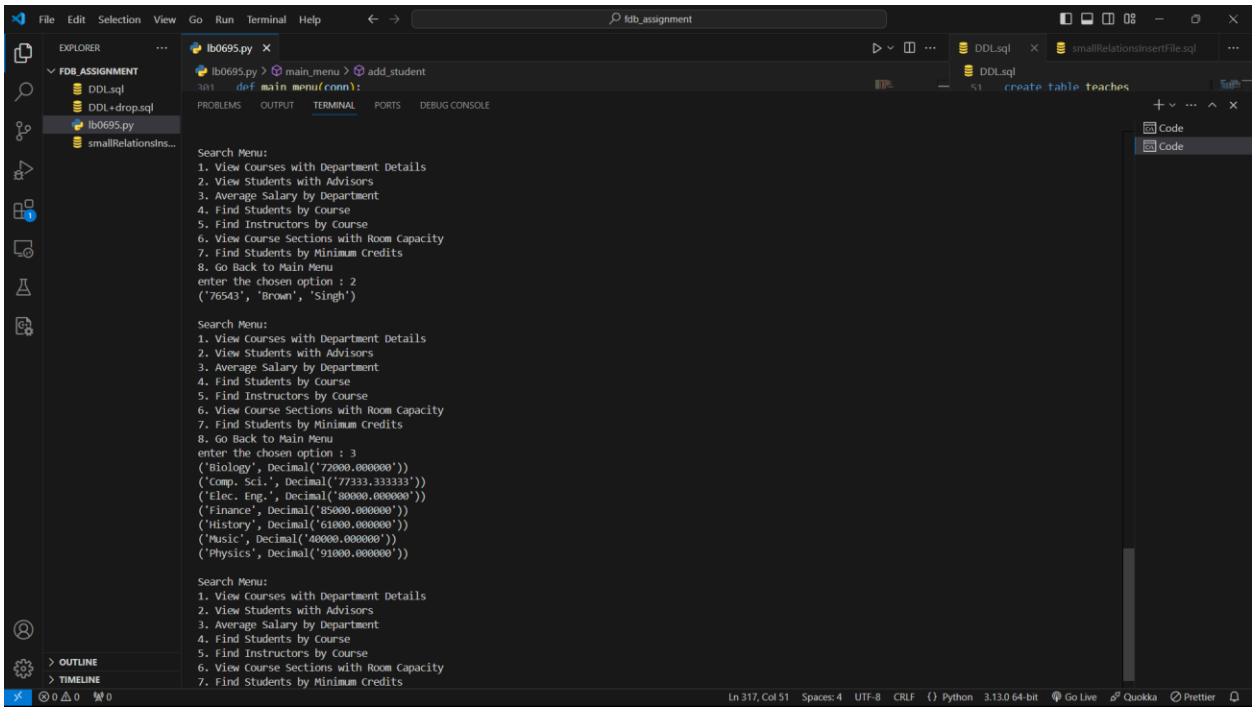


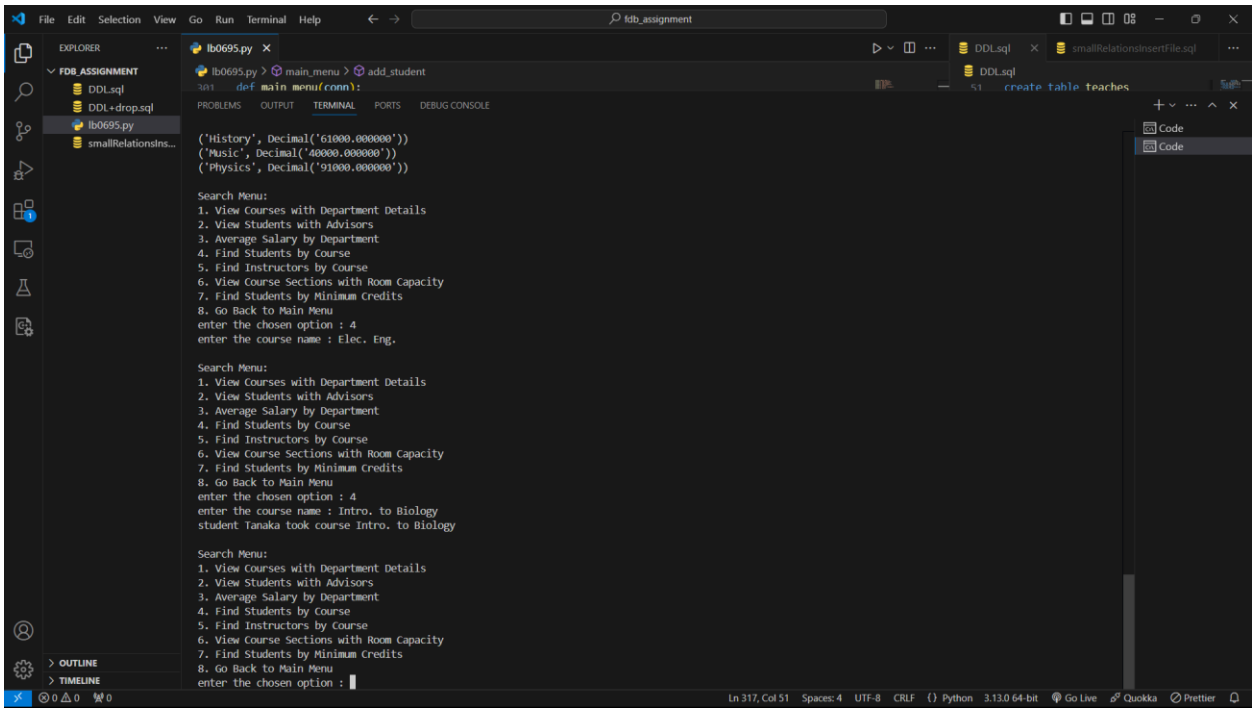
Search option:




View course sections and students with advisors below.


File Edit Selection View Go Run Terminal Help
fdb_assignment
EXPLORER
FDB_ASSIGNMENT
DDL.sql
DDL+drop.sql
lb0695.py
smallRelationsIns...
lb0695.py
DDL.sql
smallRelationsInsertFile.sql
lb0695.py > main_menu > add_student
def main_menu(conn):
create table teaches
PROBLEMS OUTPUT TERMINAL PORTS DEBUG CONSOLE
Code
Code
Search Menu:
1. View Courses with Department Details
2. View Students with Advisors
3. Average Salary by Department
4. Find Students by Course
5. Find Instructors by Course
6. View Course Sections with Room Capacity
7. Find Students by Minimum Credits
8. Go Back to Main Menu
enter the chosen option : 2
('76543', 'Brown', 'Singh')
Search Menu:
1. View Courses with Department Details
2. View Students with Advisors
3. Average Salary by Department
4. Find Students by Course
5. Find Instructors by Course
6. View Course Sections with Room Capacity
7. Find Students by Minimum Credits
8. Go Back to Main Menu
enter the chosen option : 3
('Biology', Decimal('72000.000000'))
('Comp. Sci.', Decimal('77333.333333'))
('Elec. Eng.', Decimal('80000.000000'))
('Finance', Decimal('85000.000000'))
('History', Decimal('61000.000000'))
('Music', Decimal('40000.000000'))
('Physics', Decimal('91000.000000'))
Search Menu:
1. View Courses with Department Details
2. View Students with Advisors
3. Average Salary by Department
4. Find Students by Course
5. Find Instructors by Course
6. View Course Sections with Room Capacity
7. Find Students by Minimum Credits
OUTLINE
TIMELINE
Ln 317, Col 51 Spaces: 4 UTF-8 CRLF Python 3.13.0 64-bit Go Live Quokka Prettier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Code
Code
('History', Decimal('61000.000000'))
('Music', Decimal('40000.000000'))
('Physics', Decimal('91000.000000'))
Search Menu:
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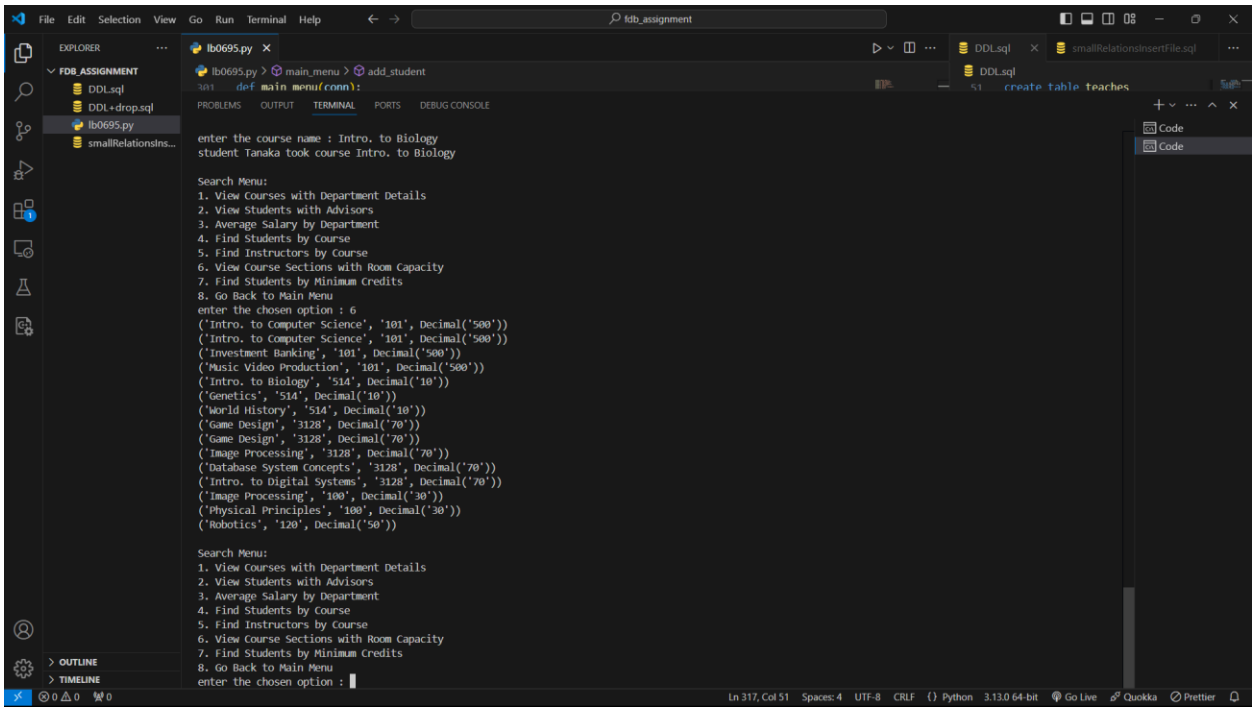
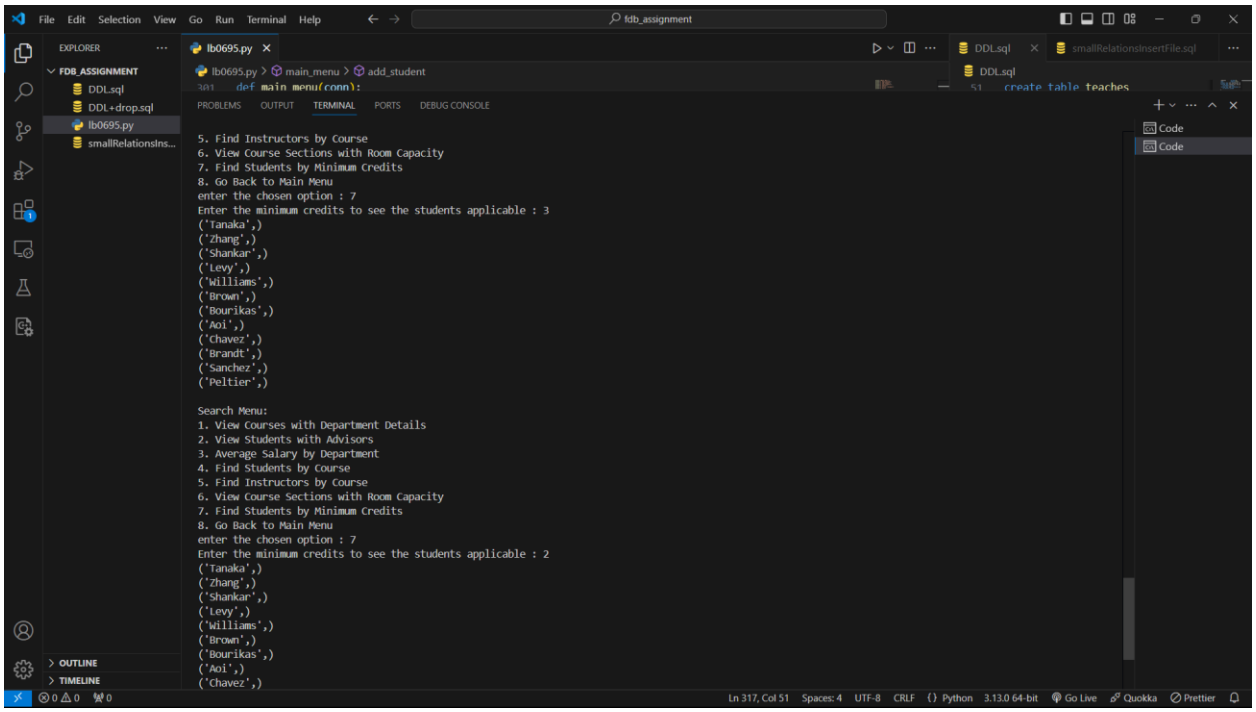
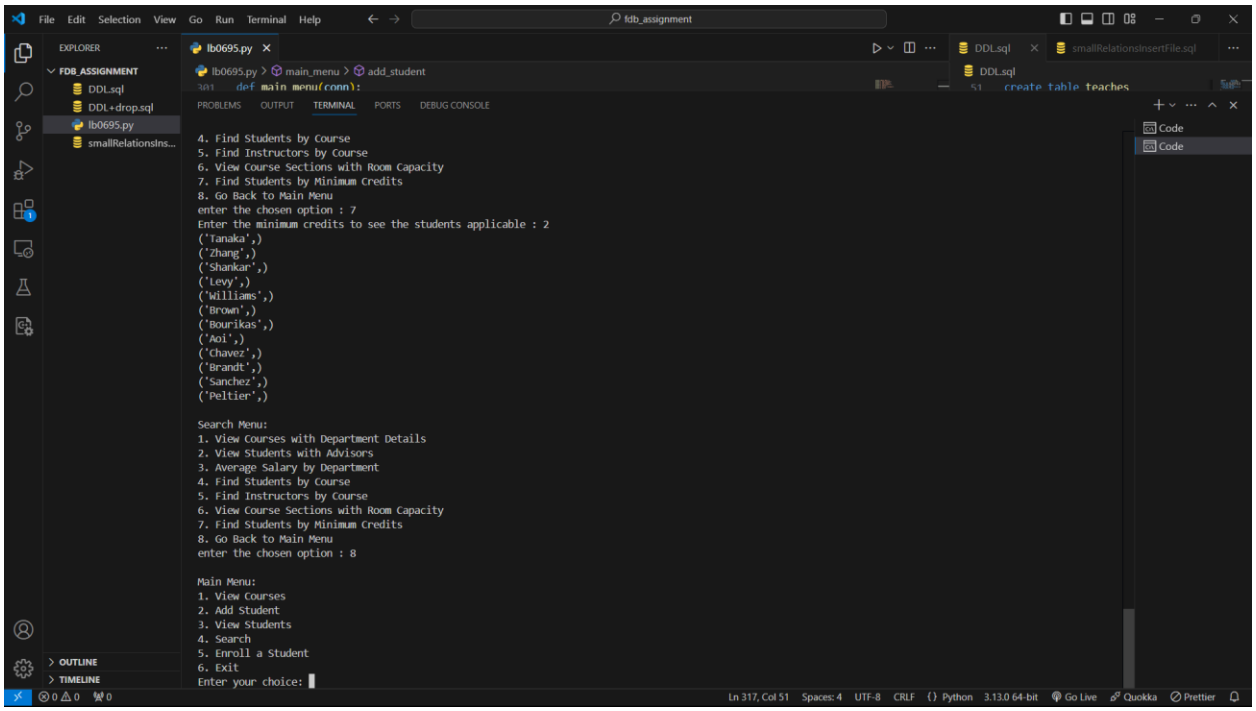
2. View Students with Advisors
3. Average Salary by Department
4. Find Students by Course
5. Find Instructors by Course
6. View Course Sections with Room Capacity
7. Find Students by Minimum Credits
8. Go Back to Main Menu
enter the chosen option : 4
enter the course name : Elec. Eng.
Search Menu:
1. View Courses with Department Details
2. View Students with Advisors
3. Average Salary by Department
4. Find Students by Course
5. Find Instructors by Course
6. View Course Sections with Room Capacity
7. Find Students by Minimum Credits
8. Go Back to Main Menu
enter the chosen option : 4
enter the course name : Intro. to Biology
student Tanaka took course Intro. to Biology
Search Menu:
1. View Courses with Department Details
2. View Students with Advisors
3. Average Salary by Department
4. Find Students by Course
5. Find Instructors by Course
6. View Course Sections with Room Capacity
7. Find Students by Minimum Credits
8. Go Back to Main Menu
enter the chosen option :
OUTLINE
TIMELINE
Ln 317, Col 51 Spaces: 4 UTF-8 CRLF Python 3.13.0 64-bit Go Live Quokka Prettier




Showing the search min credits option

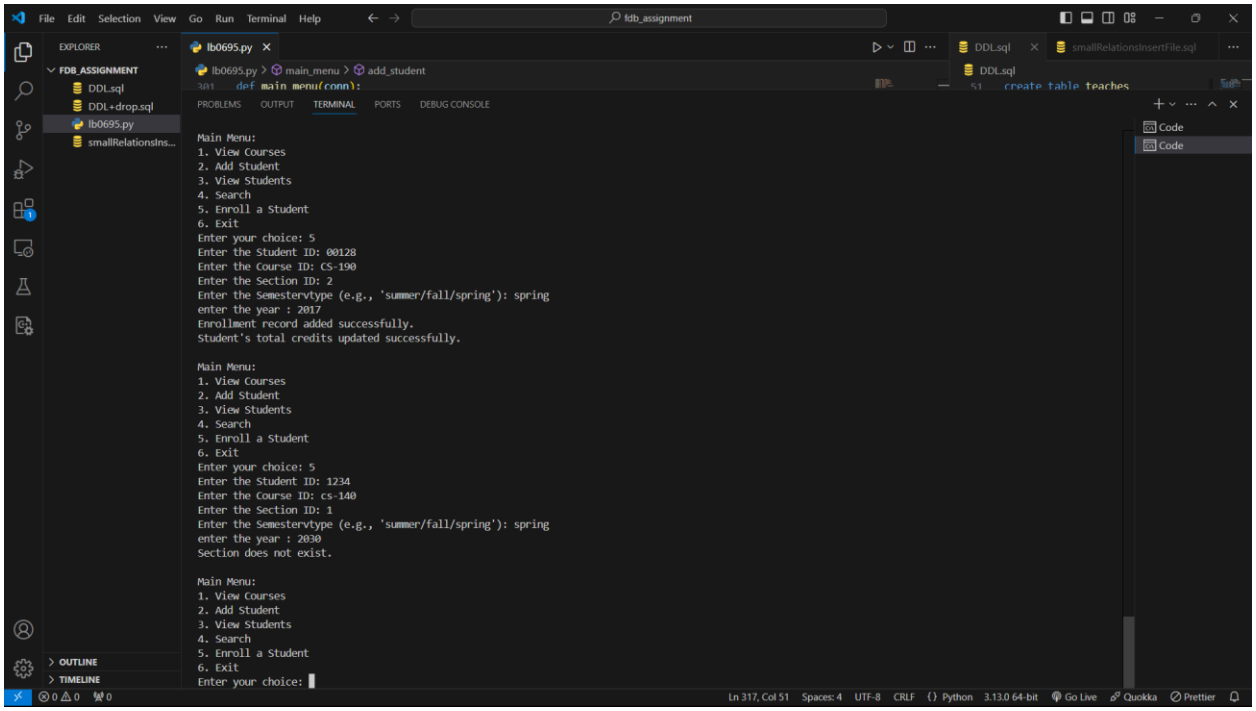



Give the input 8 to get back to main menu

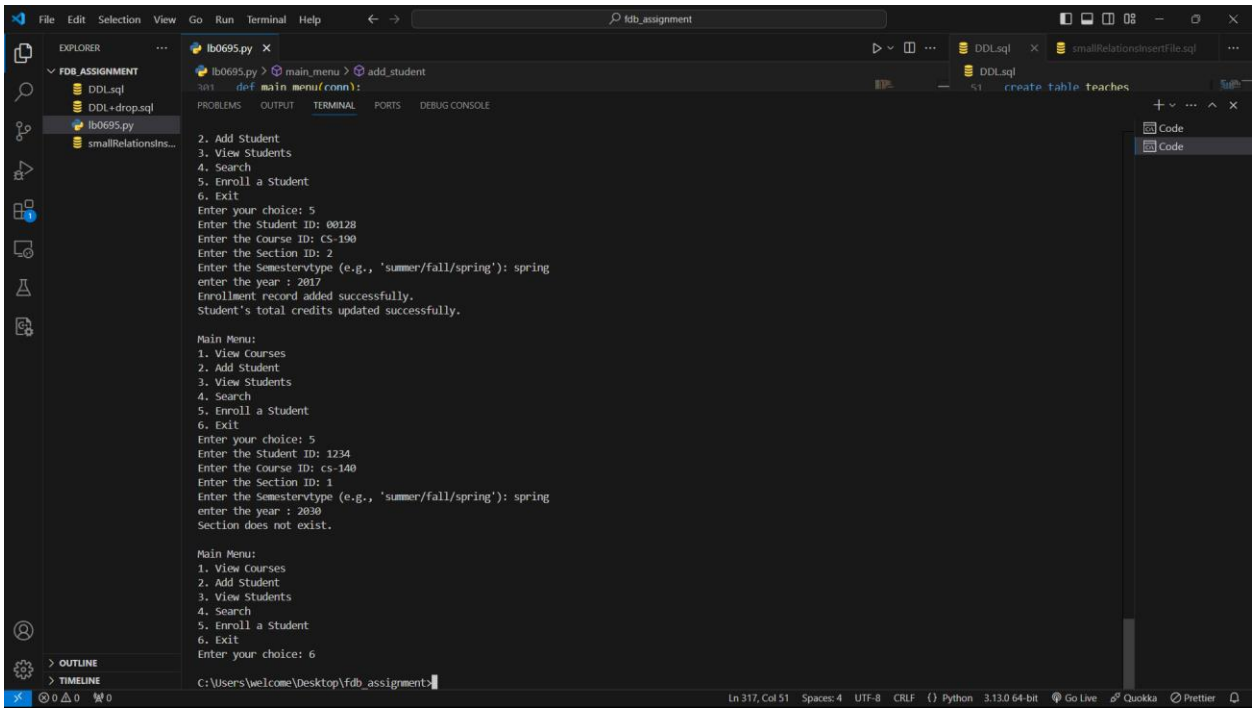



Last one enroll the student:

Steps: first checks the student exists, section exists, course check if any prerequisites needs to be met and then the student gets enrolled. Otherwise student couldn't enroll.



Connection on choosing option 6:




**Overview:**

This application:

Creates database on it's own

Handles errors, reliable

Transaction management

Can able to handle duplicate entries

If user gives another datatype like instead of string given a number asks the user to enter the input again.

Migration of tables and data is included.

Multiple times the script can be runnable.

Secure in the sense of All the connections are established and closed on exit.