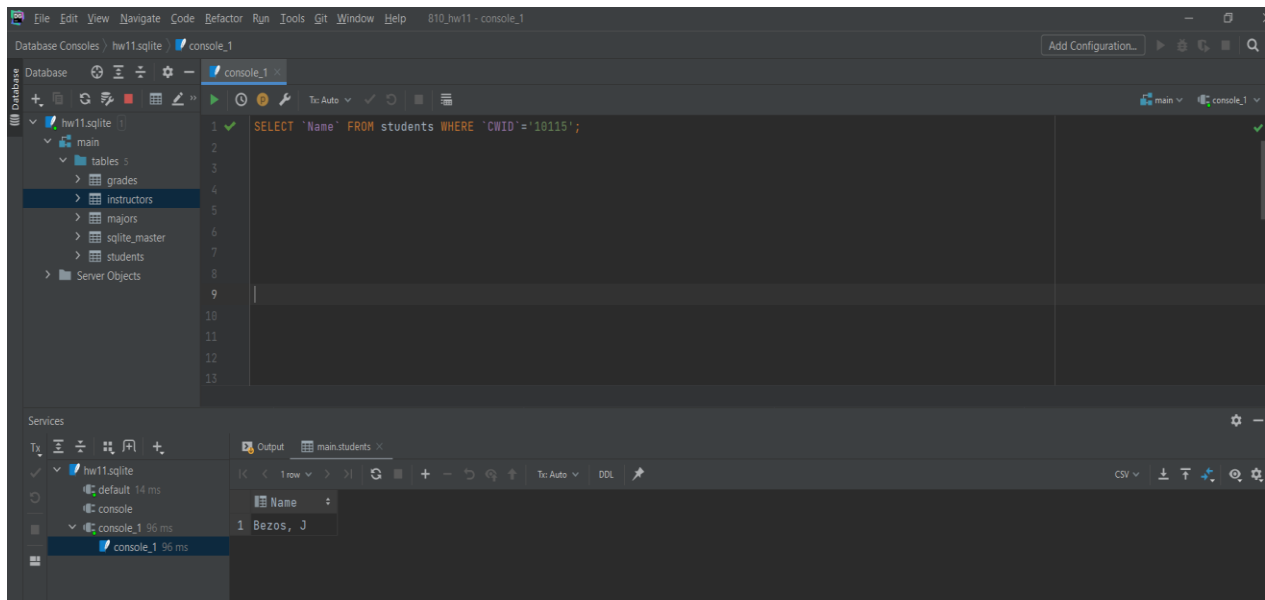


Author: Viyeta Kansara

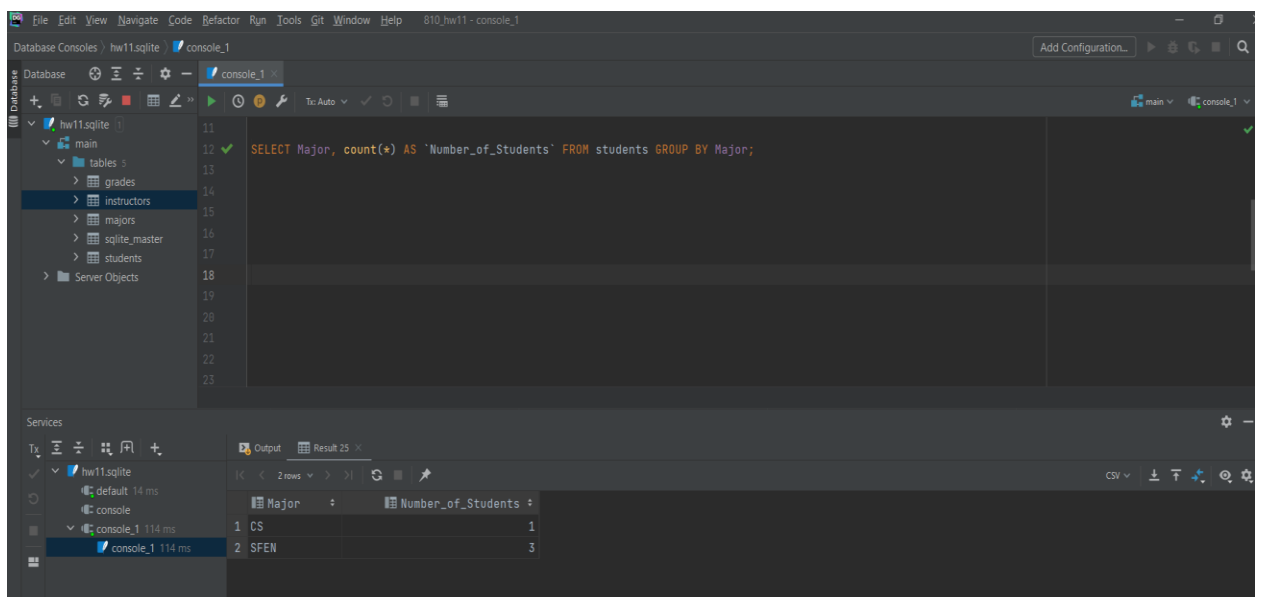
CWID: 10473081

Screen dumps of DataGRIP to **show your query and results** for each of the following queries:

1. What is the name of the student with CWID='10115' (NOTE: if you don't find any matching records then verify that the CWID has type TEXT in all four tables. Integers do not match strings in SQL or Python.)



2. What is the total number of students by major? Hint: you'll need count (*) and 'group by'. See the slide on "**Aggregate functions and GROUP BY**".



3. What is the most frequent grade for SSW 810 across all students?

The screenshot shows an IDE with a SQL console. The query is as follows:

```
SELECT 'Grade', COUNT('Grade') AS value_occurrence
FROM grades WHERE Course = 'SSW 810'
GROUP BY 'Grade' ORDER BY 'value_occurrence' DESC LIMIT 1;
```

The output shows a single row with the grade 'A' and a value occurrence of 2.

Grade	value_occurrence
A	2

4. Display the name and cwid of each student along with the total number of courses taken by the student. Hint: You'll need to join the **students** and **grades** tables on **StudentCWID** and **CWID**.

The screenshot shows an IDE with a SQL console. The query is as follows:

```
SELECT s.Name, s.CWID, COUNT(Course) AS Total_Number_of_Courses FROM students s
LEFT JOIN grades g
ON s.CWID = g.StudentCWID
GROUP BY s.CWID;
```

The output shows a table with 4 rows, displaying the name, CWID, and total number of courses taken by each student.

Name	CWID	Total_Number_of_Courses
Jobs, S	10183	2
Bezos, J	10115	2
Musk, E	10183	2
Gates, B	11714	3

5. Display each student's name, CWID, course, grade, and the instructor's name for all students and grades. The result should be sorted by the student's name. Hint: You'll need to join the **grades** and **students** tables on **StudentCWID** and **CWID** and join the **instructors** table using the instructor's **CWID**.

The screenshot shows an IDE with a SQL query editor and a results pane. The query is as follows:

```
SELECT s.Name, s.CWID, g.Course, g.grade, i.Name FROM students s
JOIN grades g
ON s.CWID = g.StudentCWID
JOIN instructors i
ON g.InstructorCWID = i.CWID
ORDER BY s.Name;
```

The results pane displays the following data:

	Name	CWID	Course	Grade	Name
1	Bezos, J	10115	SSW 810	A	Rowland, J
2	Bezos, J	10115	CS 546	F	Hawking, S
3	Gates, B	11714	SSW 810	B-	Rowland, J
4	Gates, B	11714	CS 546	A	Cohen, R
5	Gates, B	11714	CS 570	A-	Hawking, S
6	Jobs, S	10103	SSW 810	A-	Rowland, J
7	Jobs, S	10103	CS 501	B	Hawking, S
8	Musk, E	10183	SSW 555	A	Rowland, J
9	Musk, E	10183	SSW 810	A	Rowland, J