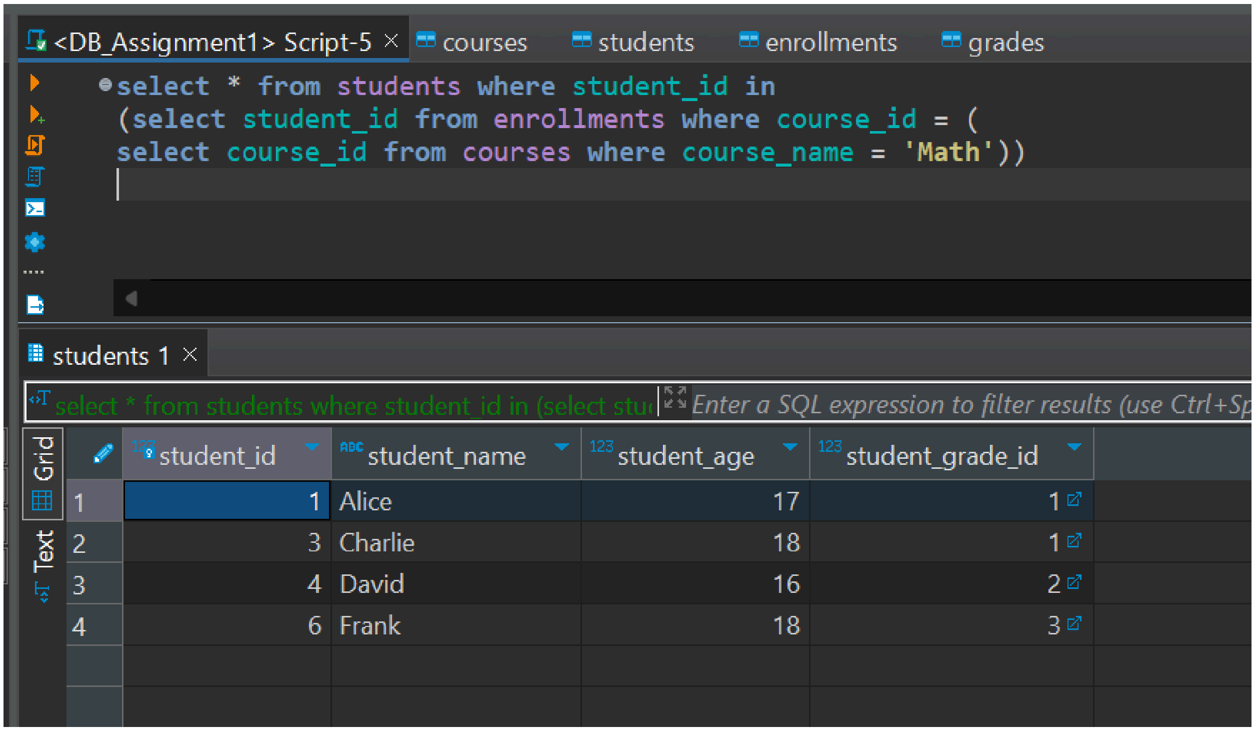
Q1.

```
select * from students where student_id in
(select student_id from enrollments where course_id =
( select course_id from courses where course_name = 'Math'))
```



<DB_Assignment1> Script-5
courses
students
enrollments
grades
students 1
Grid
Text
Enter a SQL expression to filter results (use Ctrl+Sp

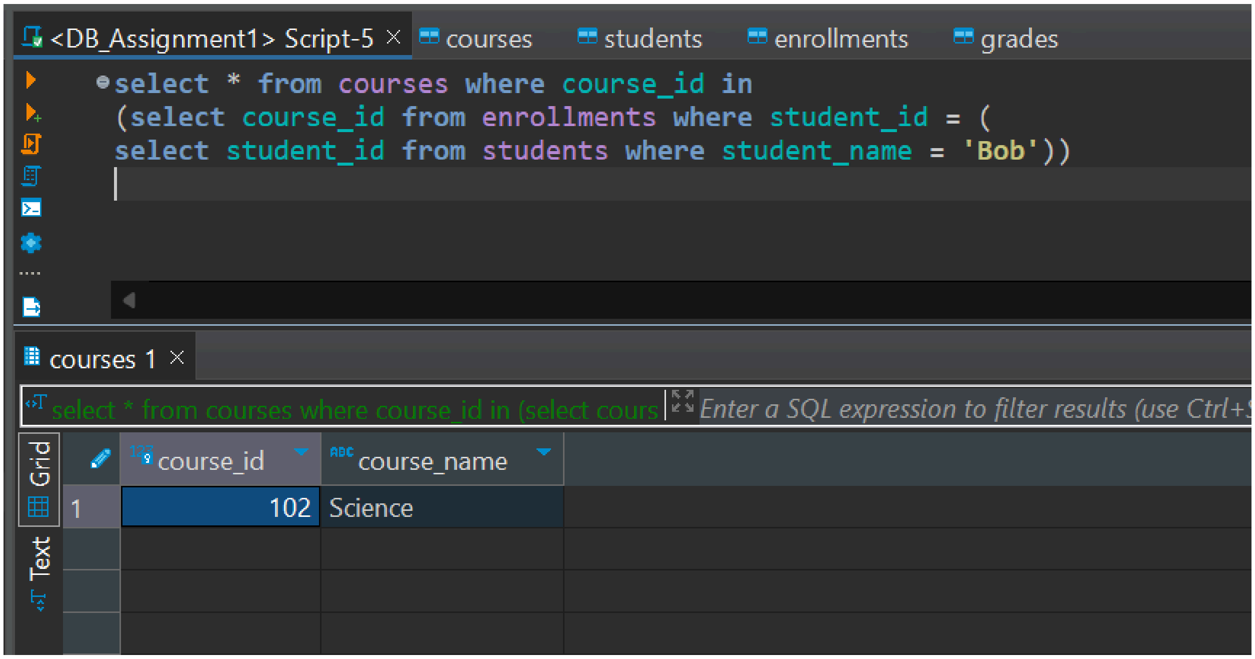
```
select * from students where student_id in
(select student_id from enrollments where course_id = (
select course_id from courses where course_name = 'Math'))
```

select * from students where student_id in (select stu

|  | student_id | student_name | student_age | student_grade_id |
|---|---|---|---|---|
| 1 | 1 | Alice | 17 | 1 |
| 2 | 3 | Charlie | 18 | 1 |
| 3 | 4 | David | 16 | 2 |
| 4 | 6 | Frank | 18 | 3 |

Q2.

```
select * from courses where course_id in
(select course_id from enrollments where student_id = (
select student_id from students where student_name = 'Bob'));
```


<DB_Assignment1> Script-5
courses
students
enrollments
grades
courses 1
Grid
Text
Enter a SQL expression to filter results (use Ctrl+S

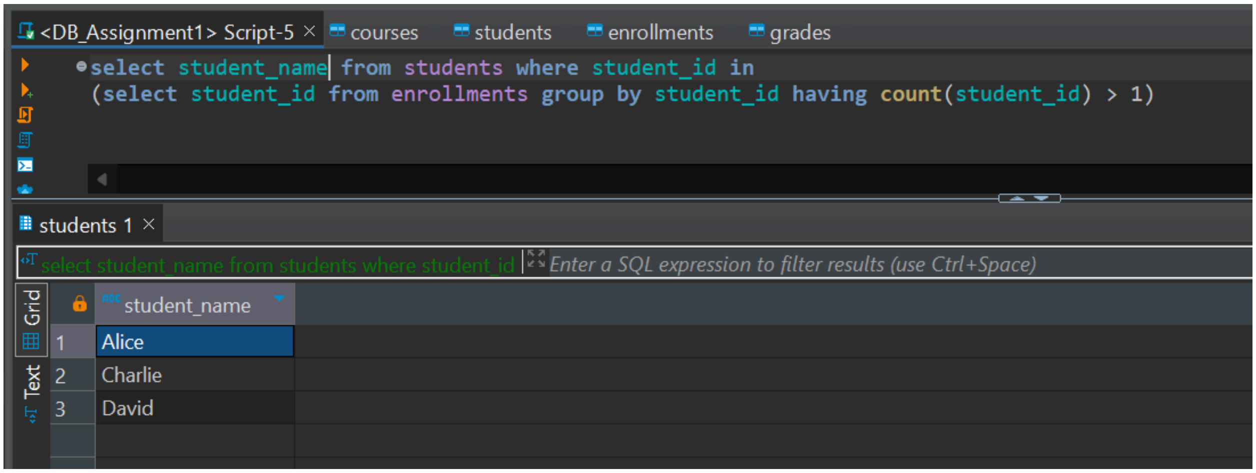
```
select * from courses where course_id in
(select course_id from enrollments where student_id = (
select student_id from students where student_name = 'Bob'))
```

select * from courses where course_id in (select cours

|  | course_id | course_name |
|---|---|---|
| 1 | 102 | Science |

Q3.

```
select student_name from students where student_id in
(select student_id from enrollments group by student_id having count(student_id) > 1);
```


<DB_Assignment1> Script-5
courses
students
enrollments
grades
students 1
Grid
Text
Enter a SQL expression to filter results (use Ctrl+Space)

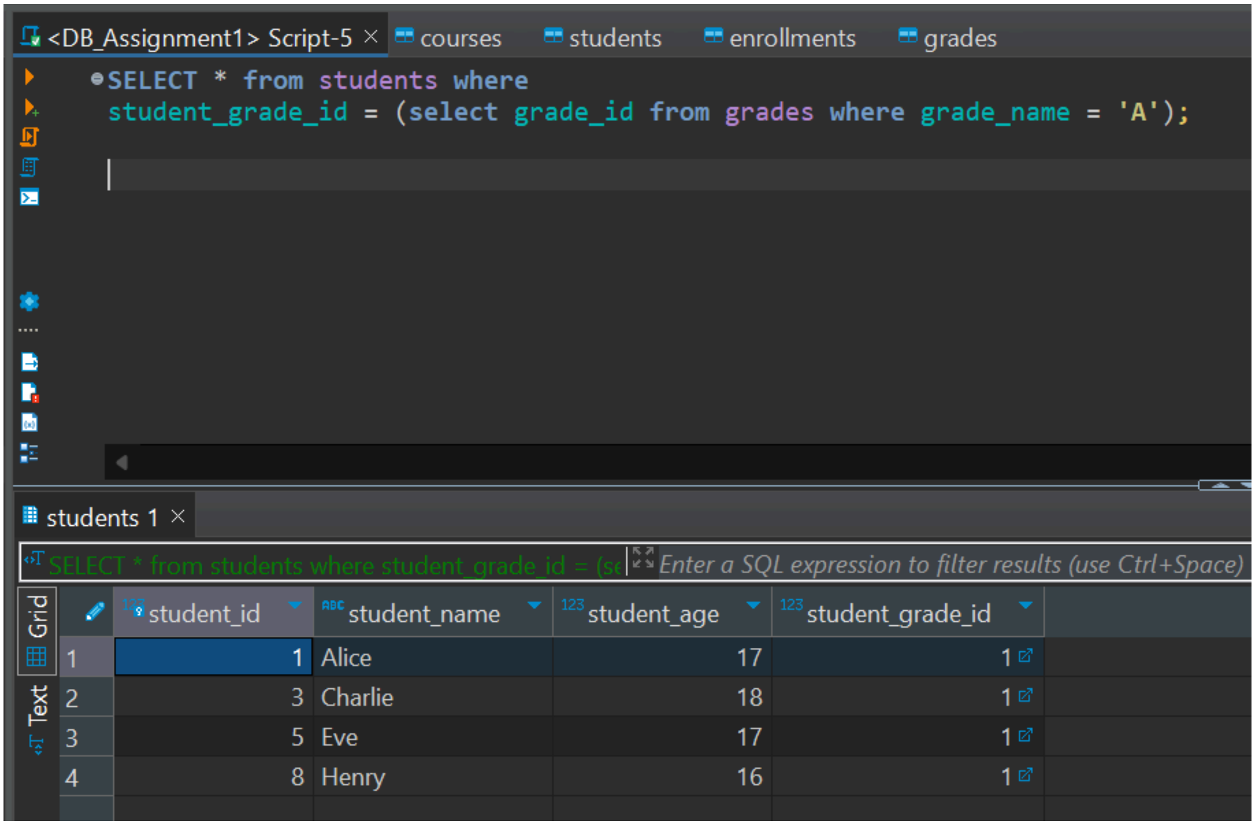
```
select student_name from students where student_id in
(select student_id from enrollments group by student_id having count(student_id) > 1)
```

select student_name from students where student_id

|  | student_name |
|---|---|
| 1 | Alice |
| 2 | Charlie |
| 3 | David |

Q4.

```
SELECT * from students where
student_grade_id = (select grade_id from grades where grade_name = 'A');
```



<DB_Assignment1> Script-5
courses
students
enrollments
grades

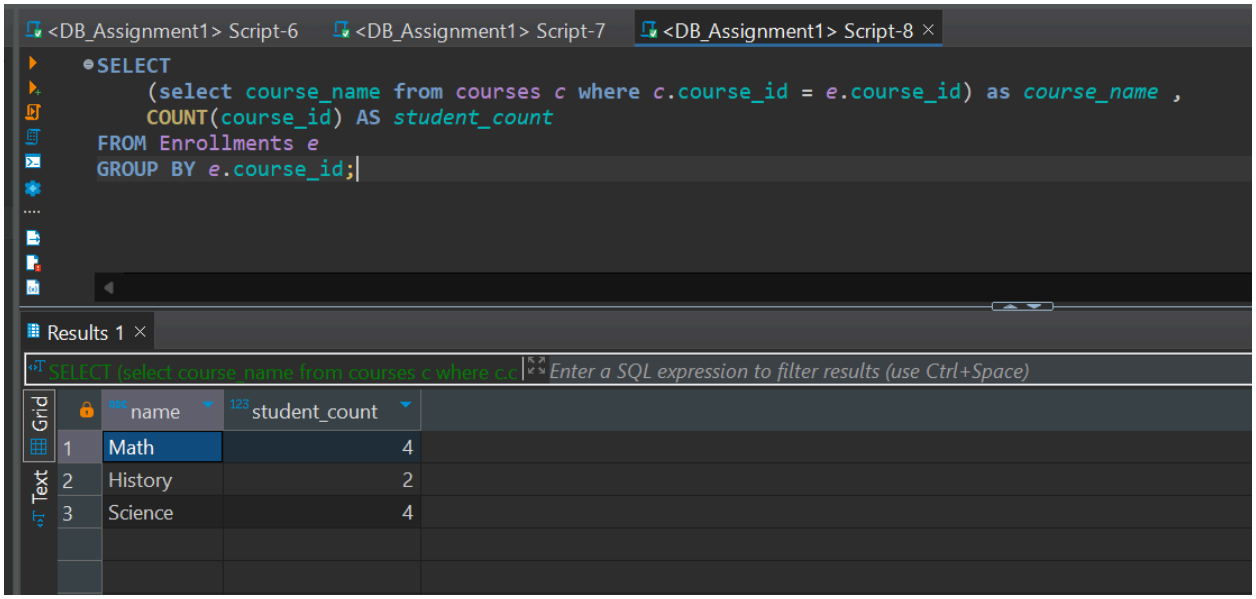
```
SELECT * from students where
student_grade_id = (select grade_id from grades where grade_name = 'A');
```

students 1
SELECT * from students where student_grade_id = (se
Enter a SQL expression to filter results (use Ctrl+Space)
Grid
Text

| | student_id | student_name | student_age | student_grade_id |
|---|---|---|---|---|
| 1 | 1 | Alice | 17 | 1 |
| 2 | 3 | Charlie | 18 | 1 |
| 3 | 5 | Eve | 17 | 1 |
| 4 | 8 | Henry | 16 | 1 |

Q5.

```
SELECT
        (select course_name from courses c where c.course_id = e.course_id) as course_name ,
        COUNT(course_id) AS student_count
FROM Enrollments e
GROUP BY e.course_id;
```



<DB_Assignment1> Script-6
<DB_Assignment1> Script-7
<DB_Assignment1> Script-8
Results 1
Grid
Text

```
SELECT
    (select course_name from courses c where c.course_id = e.course_id) as course_name ,
    COUNT(course_id) AS student_count
FROM Enrollments e
GROUP BY e.course_id;
```

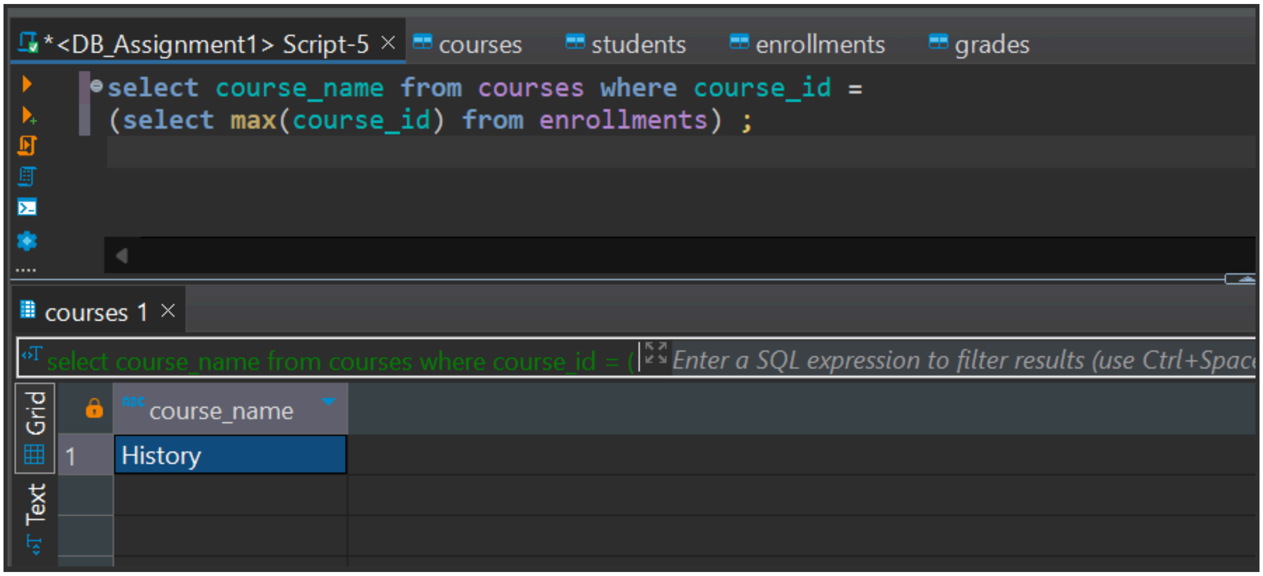
SELECT (select course_name from courses c where c.c

Enter a SQL expression to filter results (use Ctrl+Space)

|   | name | student_count |
|---|---|---|
| 1 | Math | 4 |
| 2 | History | 2 |
| 3 | Science | 4 |

Q6.

```
select course_name from courses where course_id = (select max(course_id) from enrollments) ;
```



*<DB_Assignment1> Script-5
courses
students
enrollments
grades

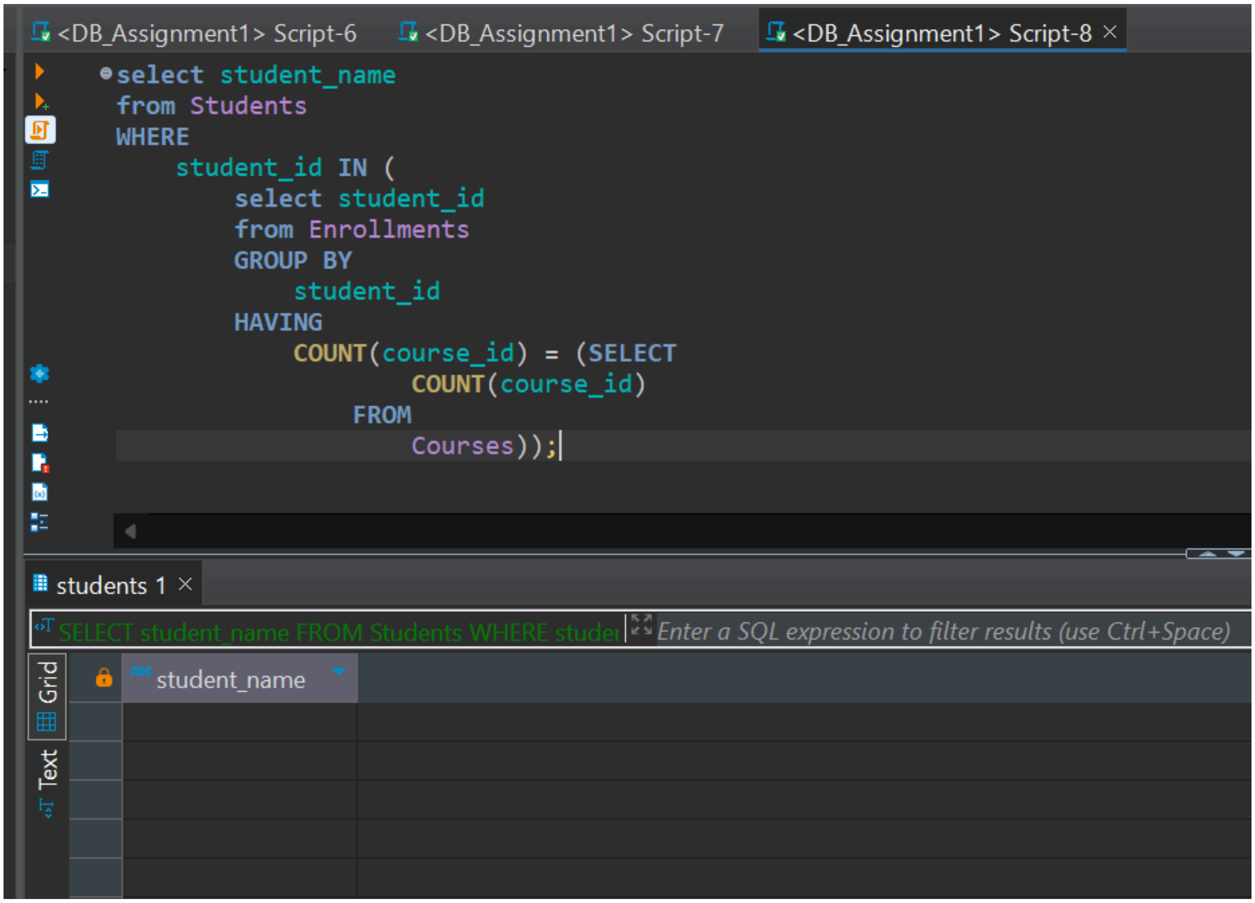
```
select course_name from courses where course_id =
(select max(course_id) from enrollments) ;
```

courses 1
select course_name from courses where course_id = (
Enter a SQL expression to filter results (use Ctrl+Spac
Grid
Text

|  | course_name |
|---|---|
| 1 | History |

Q7.

```
select student_name
from Students
WHERE
  student_id IN (
     select student_id
     from Enrollments
     GROUP BY
        student_id
     HAVING
                       COUNT(course_id) = (SELECT
           COUNT(course_id)
        FROM
           Courses));
```



<DB_Assignment1> Script-6
<DB_Assignment1> Script-7
<DB_Assignment1> Script-8

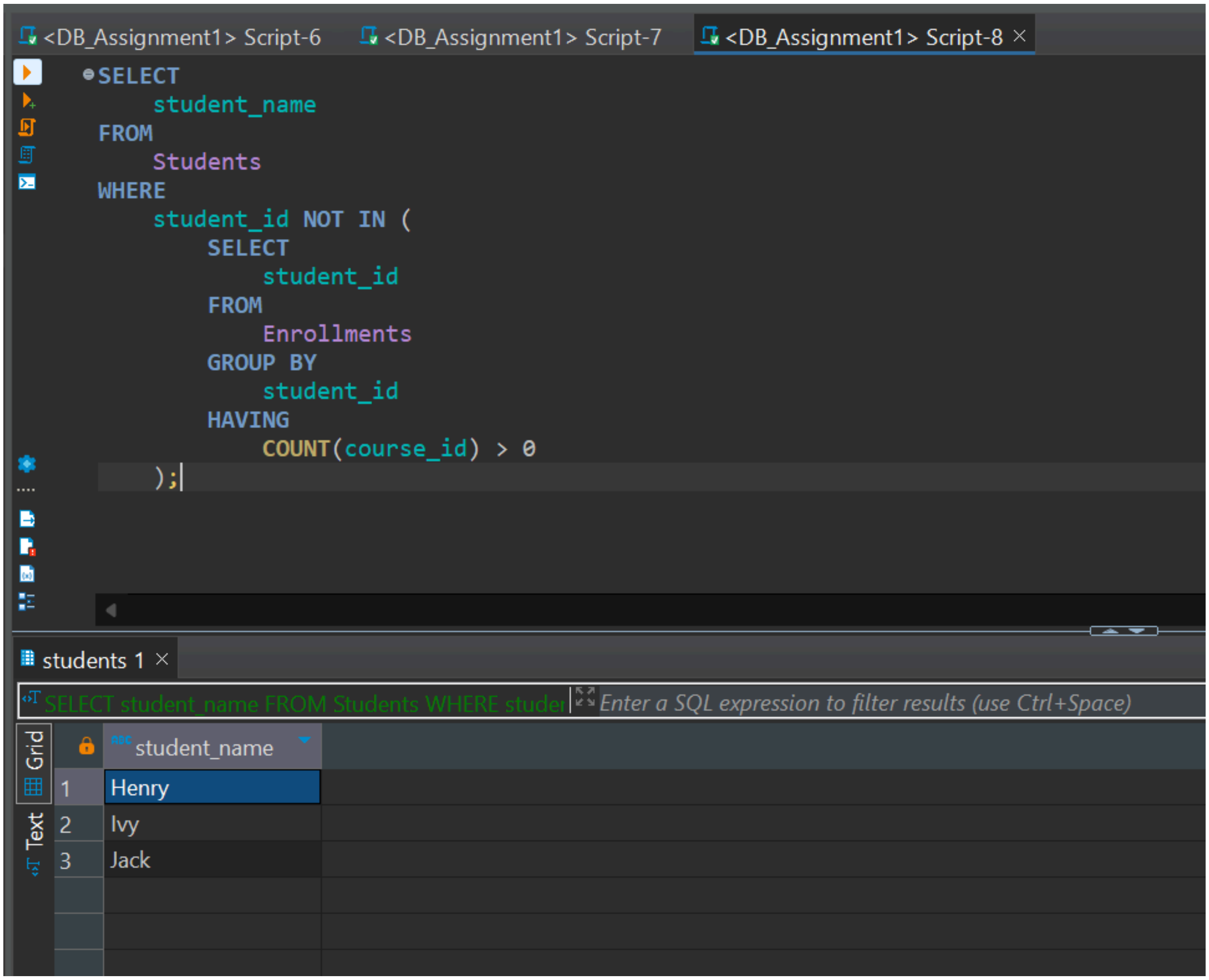
```
select student_name
from Students
WHERE
    student_id IN (
        select student_id
        from Enrollments
        GROUP BY
            student_id
        HAVING
            COUNT(course_id) = (SELECT
                    COUNT(course_id)
                FROM
                    Courses));
```

students 1
SELECT student_name FROM Students WHERE studer
Enter a SQL expression to filter results (use Ctrl+Space)
Grid
Text

| student_name |
|---|

Q8.

```
SELECT
  student_name
FROM
  Students
WHERE
  student_id NOT IN (
    SELECT
      student_id
    FROM
      Enrollments
    GROUP BY
      student_id
    HAVING
      COUNT(course_id) > 0
  );
```


<DB_Assignment1> Script-6
<DB_Assignment1> Script-7
<DB_Assignment1> Script-8
students 1
Enter a SQL expression to filter results (use Ctrl+Space)
Grid
Text

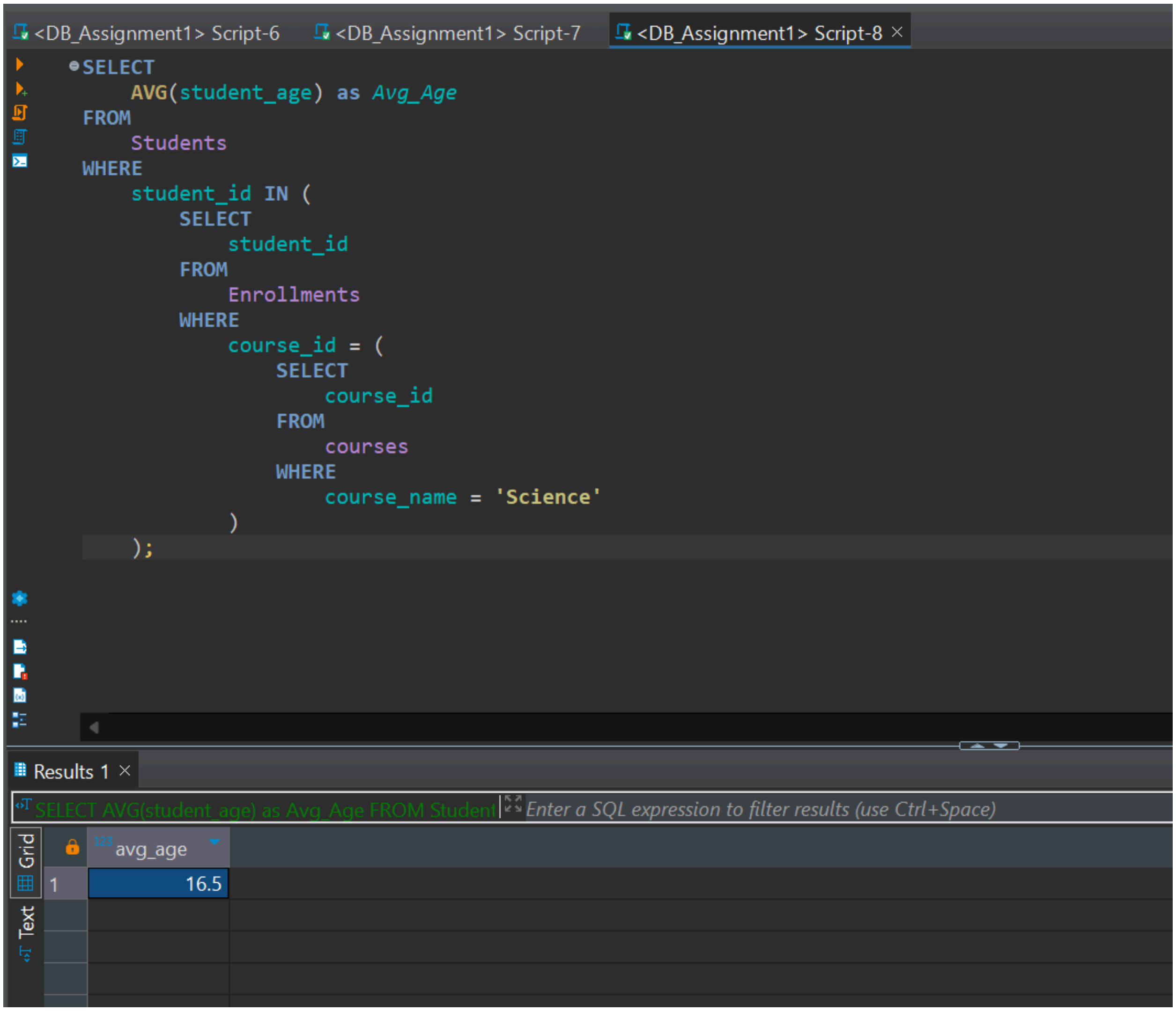
```
SELECT
    student_name
FROM
    Students
WHERE
    student_id NOT IN (
        SELECT
            student_id
        FROM
            Enrollments
        GROUP BY
            student_id
        HAVING
            COUNT(course_id) > 0
    );
```

```
SELECT student_name FROM Students WHERE studer
```

|   | student_name |
|---|---|
| 1 | Henry |
| 2 | Ivy |
| 3 | Jack |

Q9.

```
SELECT
  AVG(student_age) as Avg_Age
FROM
  Students
WHERE
  student_id IN (
     SELECT
        student_id
     FROM
        Enrollments
     WHERE
        course_id = (
           SELECT
              course_id
           FROM
              courses
           WHERE
              course_name = 'Science'
        )
  );
```



<DB_Assignment1> Script-6
<DB_Assignment1> Script-7
<DB_Assignment1> Script-8
Results 1
Grid
Text

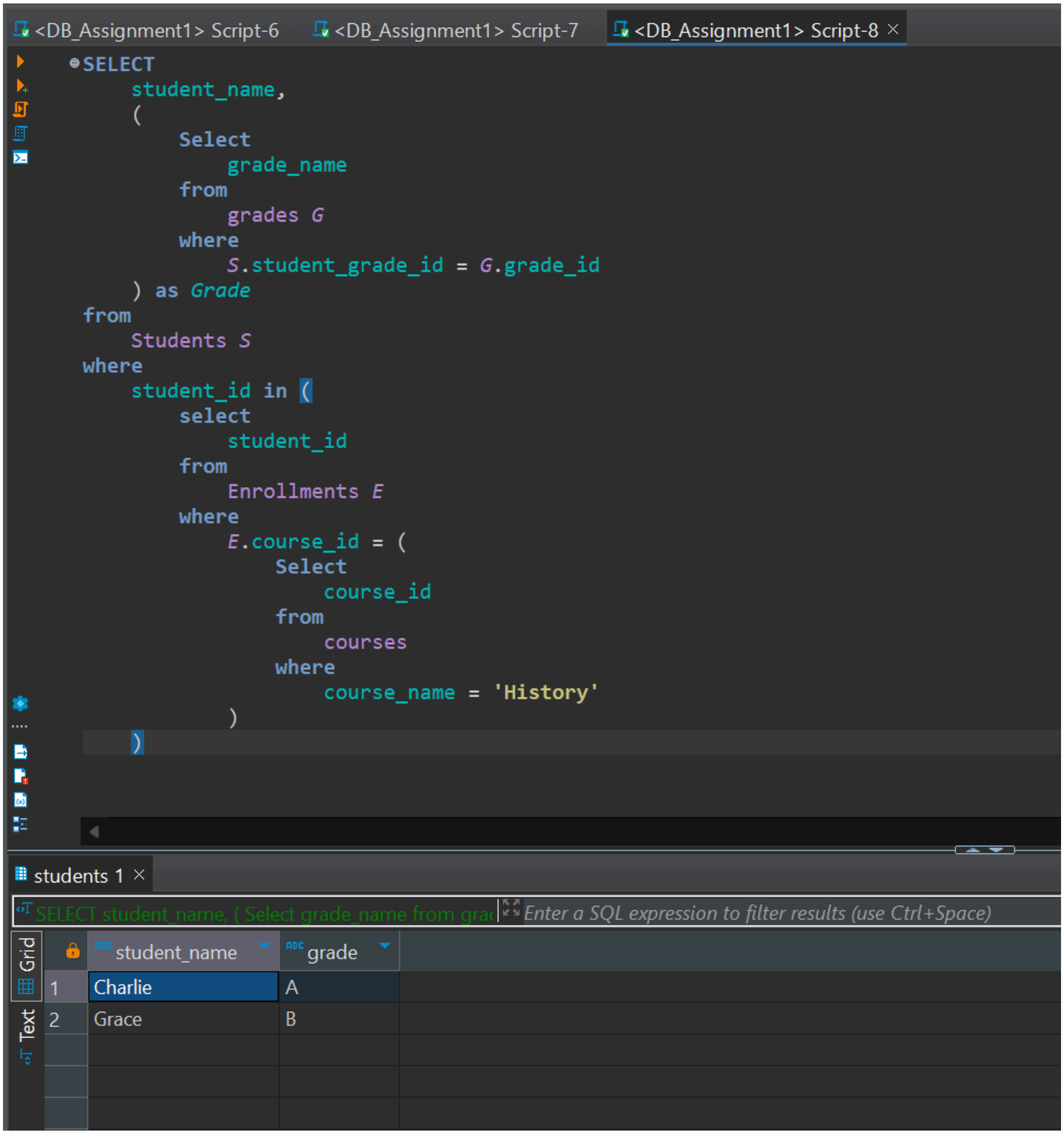
```sql
SELECT
    AVG(student_age) as Avg_Age
FROM
    Students
WHERE
    student_id IN (
        SELECT
            student_id
        FROM
            Enrollments
        WHERE
            course_id = (
                SELECT
                    course_id
                FROM
                    courses
                WHERE
                    course_name = 'Science'
            )
    );
```

SELECT AVG(student_age) as Avg_Age FROM Student | Enter a SQL expression to filter results (use Ctrl+Space)

|   | avg_age |
|---|---|
| 1 | 16.5 |

Q10.

```sql
SELECT
  student_name,
  (
    Select
      grade_name
    from
      grades G
    where
      S.student_grade_id = G.grade_id
  ) as Grade
from
  Students S
where
  student_id in (
    select
      student_id
    from
      Enrollments E
    where
      E.course_id = (
        Select
          course_id
        from
          courses
        where
          course_name = 'History'
      )
  )
```



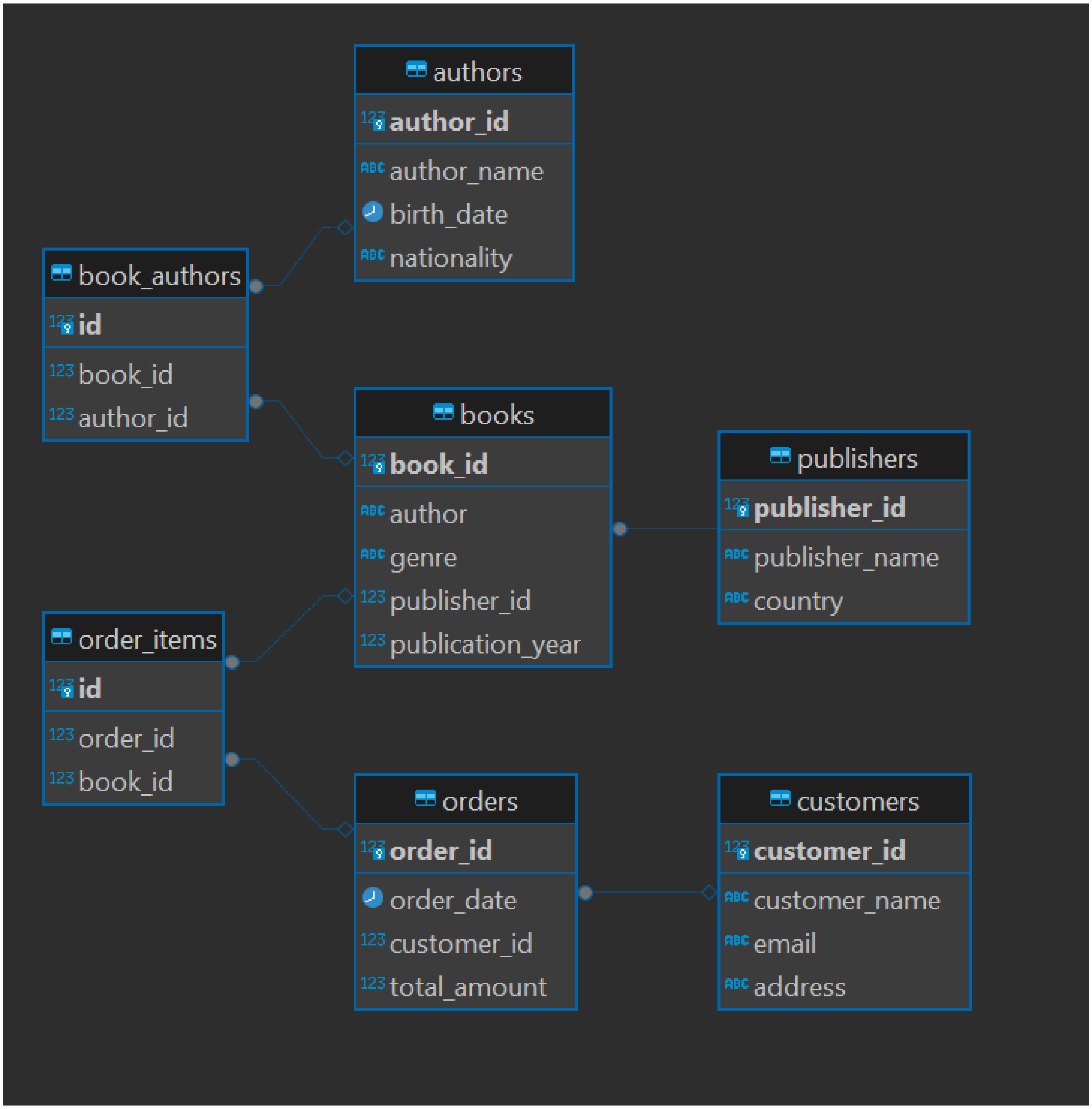
<DB_Assignment1> Script-6
<DB_Assignment1> Script-7
<DB_Assignment1> Script-8

```
SELECT
    student_name,
    (
        Select
            grade_name
        from
            grades G
        where
            S.student_grade_id = G.grade_id
    ) as Grade
from
    Students S
where
    student_id in (
        select
            student_id
        from
            Enrollments E
        where
            E.course_id = (
                Select
                    course_id
                from
                    courses
                where
                    course_name = 'History'
            )
    )
```

students 1
SELECT student_name, ( Select grade_name from grac
Enter a SQL expression to filter results (use Ctrl+Space)
Grid
Text

|   | student_name | grade |
|---|---|---|
| 1 | Charlie | A |
| 2 | Grace | B |

ERD of book store.



authors
author_id
author_name
birth_date
nationality
book_authors
id
book_id
author_id
books
book_id
author
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publication_year
publishers
publisher_id
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total_amount
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customer_name
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address