ASSIGNMENT 2

STUDENT MANAGEMENT SYSTEM

Task1:

1,2&4.

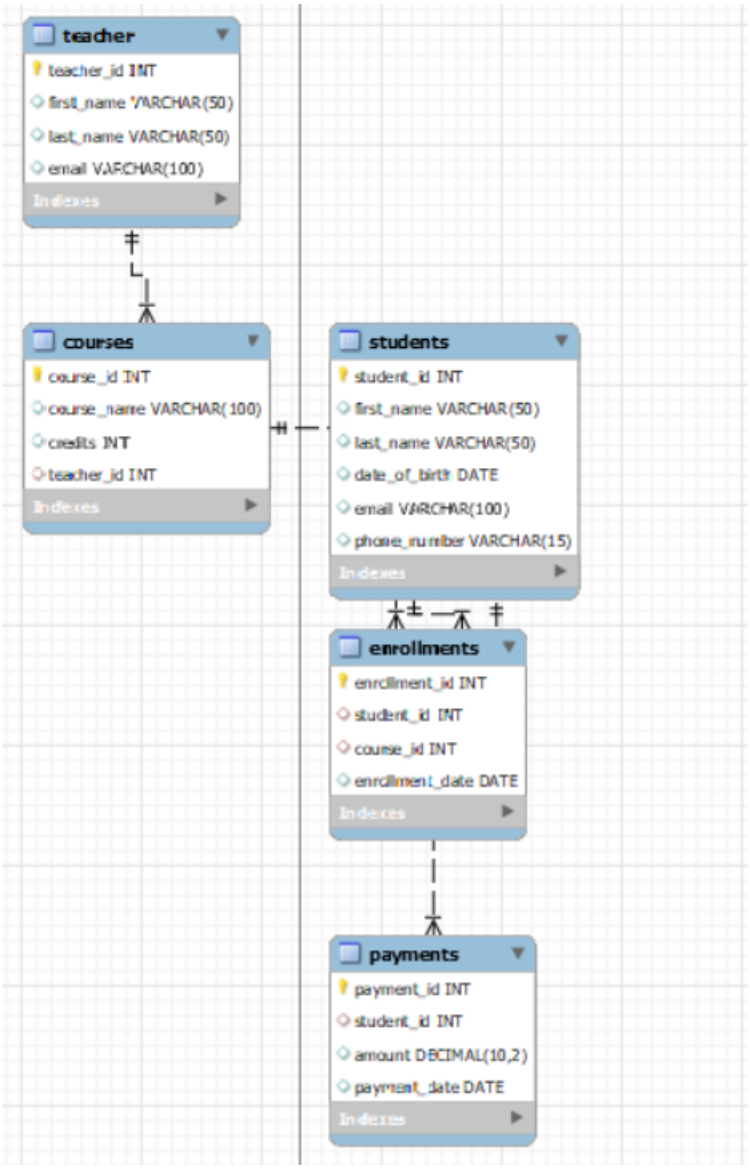
```sql
/* task1*/
CREATE DATABASE SISDB;
USE SISDB;

CREATE TABLE Students (
    student_id INT PRIMARY KEY,
    first_name VARCHAR(50),
    last_name VARCHAR(50),
    date_of_birth DATE,
    email VARCHAR(100),
    phone_number VARCHAR(15)
);

CREATE TABLE Teacher (
    teacher_id INT PRIMARY KEY,
    first_name VARCHAR(50),
    last_name VARCHAR(50),
    email VARCHAR(100)
);

CREATE TABLE Courses (
    course_id INT PRIMARY KEY,
    course_name VARCHAR(100),
    credits INT,
    teacher_id INT,
    FOREIGN KEY (teacher_id) REFERENCES Teacher(teacher_id)
);

CREATE TABLE Enrollments (
    enrollment_id INT PRIMARY KEY,
    student_id INT,
    course_id INT,
    enrollment_date DATE,
    FOREIGN KEY (student_id) REFERENCES Students(student_id) ON DELETE CASCADE,
    FOREIGN KEY (course_id) REFERENCES Courses(course_id)
);

CREATE TABLE Payments (
    payment_id INT PRIMARY KEY,
    student_id INT,
    amount DECIMAL(10, 2),
    payment_date DATE,
    FOREIGN KEY (student_id) REFERENCES Students(student_id) ON DELETE SET NULL
```

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	16:15:27	CREATE DATABASE SISDB	1 row(s) affected	0.015 sec
2	16:15:30	USE SISDB	0 row(s) affected	0.000 sec
3	16:15:32	CREATE TABLE Students (student_id INT PRIMARY KEY, first_name VARCHAR(50), last_name VARCH...	0 row(s) affected	0.047 sec
4	16:15:35	CREATE TABLE Teacher (teacher_id INT PRIMARY KEY, first_name VARCHAR(50), last_name VARCH...	0 row(s) affected	0.344 sec
5	16:15:40	CREATE TABLE Courses (course_id INT PRIMARY KEY, course_name VARCHAR(100), credits INT, t...	0 row(s) affected	0.047 sec
6	16:15:44	CREATE TABLE Enrollments (enrollment_id INT PRIMARY KEY, student_id INT, course_id INT, enroll...	0 row(s) affected	0.078 sec
7	16:15:47	CREATE TABLE Payments (payment_id INT PRIMARY KEY, student_id INT, amount DECIMAL(10, 2), ...	0 row(s) affected	0.063 sec

3.ERD Diagram.



5.

task1_2*

Limit to 1000 rows

```
INSERT INTO Students VALUES
(1, 'David', 'Curran', '1990-01-15', 'davidcurran@email.com', '23514269842'),
(2, 'Steve', 'Smith', '1992-05-20', 'jane.smith@email.com', '9876543210'),
(3, 'Michael', 'Johnson', '1991-08-10', 'michael.johnson@email.com', '5551234567'),
(4, 'Sean', 'Williams', '1993-03-25', 'emily.williams@email.com', '1112223333'),
(5, 'Daniel', 'Vittori', '1989-11-02', 'daniel.brown@email.com', '9998887777'),
(6, 'Olivia', 'Miller', '1995-04-12', 'olivia.miller@email.com', '3334445555'),
(7, 'Ethan', 'Davis', '1994-09-18', 'ethan.davis@email.com', '6667778888'),
(8, 'Ava', 'Jones', '1992-06-30', 'ava.jones@email.com', '4445556666'),
(9, 'Logan', 'Paul', '1990-12-05', 'logan.anderson@email.com', '2223334444'),
(10, 'Sophia', 'Moore', '1993-02-28', 'sophia.moore@email.com', '8889990000');

INSERT INTO Teacher VALUES
(1, 'Professor', 'Smith', 'prof.smith@email.com'),
(2, 'Dr.', 'Johnson', 'dr.johnson@email.com'),
(3, 'Ms.', 'Williams', 'ms.williams@email.com'),
(4, 'Mr.', 'Davis', 'mr.davis@email.com'),
(5, 'Professor', 'Moore', 'prof.moore@email.com'),
(6, 'Dr.', 'Anderson', 'dr.anderson@email.com'),
(7, 'Mrs.', 'Brown', 'mrs.brown@email.com'),
(8, 'Ms.', 'Miller', 'ms.miller@email.com'),
(9, 'Mr.', 'Jones', 'mr.jones@email.com'),
(10, 'Mrs.', 'Doe', 'mrs.doe@email.com');

INSERT INTO Courses VALUES
(101, 'Introduction to Computer Science', 3, 1),
(102, 'Mathematics for Engineers', 4, 2),
(103, 'History of Art', 3, 3),
(104, 'Physics for Beginners', 4, 1),
(105, 'Business Ethics', 3, 2),
(106, 'Literature and Society', 3, 3),
(107, 'Chemistry Fundamentals', 4, 2),
(108, 'Psychology 101', 3, 3),
(109, 'Data Structures', 4, 1),
(110, 'Introduction to Marketing', 3, 2);
```

task1_2*

Limit to 1000 rows

```
INSERT INTO Enrollments VALUES
(1, 1, 101, '2023-01-01'),
(2, 2, 102, '2023-04-02'),
(3, 3, 103, '2023-03-03'),
(4, 4, 104, '2023-02-04'),
(5, 5, 105, '2023-10-05'),
(6, 6, 106, '2023-09-06'),
(7, 7, 107, '2023-02-07'),
(8, 8, 108, '2023-04-08'),
(9, 9, 109, '2023-01-09'),
(10, 10, 110, '2023-03-10'),
(11, 1, 107, '2023-08-05'),
(12, 8, 104, '2023-05-12');

INSERT INTO Payments VALUES
(1, 1, 500.00, '2023-01-01'),
(2, 2, 750.00, '2023-04-02'),
(3, 3, 600.00, '2023-03-03'),
(4, 4, 800.00, '2023-02-04'),
(5, 5, 550.00, '2023-10-05'),
(6, 6, 700.00, '2023-09-06'),
(7, 7, 850.00, '2023-02-07'),
(8, 8, 600.00, '2023-04-08'),
(9, 9, 700.00, '2023-01-09'),
(10, 10, 500.00, '2023-03-10'),
(11, 1, 500.00, '2023-08-01'),
(12, 8, 600.00, '2023-05-12');
```

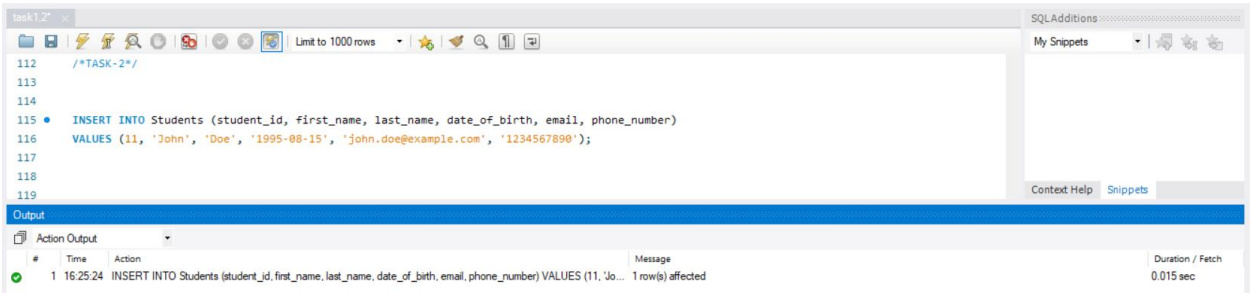
Output

Action Output

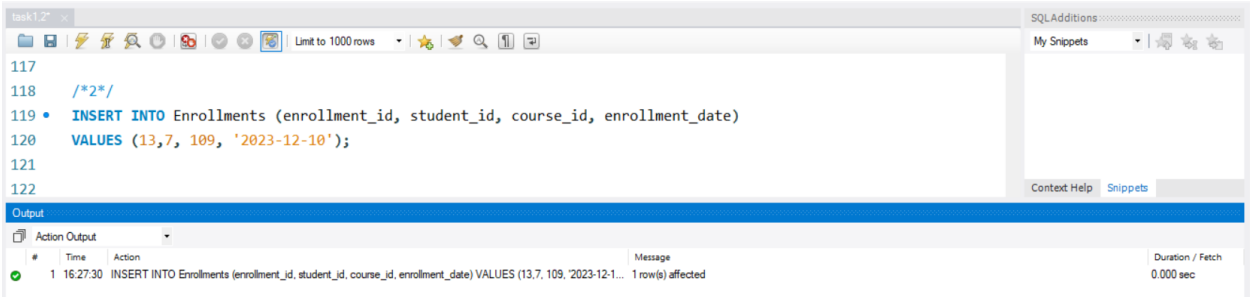
#	Time	Action	Message	Duration / Fetch
1	16:23:19	INSERT INTO Students VALUES (1, 'David', 'Curran', '1990-01-15', 'davidcurran@email.com', '23514269842'), (2,...	10 row(s) affected Records: 10 Duplicates: 0 Warnings: 0	0.015 sec
2	16:23:31	INSERT INTO Teacher VALUES (1, 'Professor', 'Smith', 'prof.smith@email.com'), (2, 'Dr.', 'Johnson', 'dr.johnson@...	10 row(s) affected Records: 10 Duplicates: 0 Warnings: 0	0.047 sec
3	16:23:34	INSERT INTO Courses VALUES (101, 'Introduction to Computer Science', 3, 1), (102, 'Mathematics for Engineers'...	10 row(s) affected Records: 10 Duplicates: 0 Warnings: 0	0.016 sec
4	16:23:38	INSERT INTO Enrollments VALUES (1, 1, 101, '2023-01-01'), (2, 2, 102, '2023-04-02'), (3, 3, 103, '2023-03-03'), (4...	12 row(s) affected Records: 12 Duplicates: 0 Warnings: 0	0.016 sec
5	16:23:42	INSERT INTO Payments VALUES (1, 1, 500.00, '2023-01-01'), (2, 2, 750.00, '2023-04-02'), (3, 3, 600.00, '2023-0...	12 row(s) affected Records: 12 Duplicates: 0 Warnings: 0	0.000 sec

TASK2:

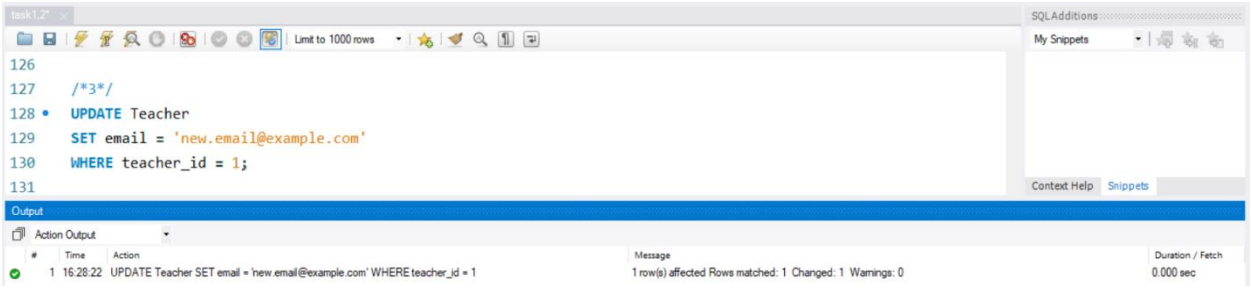
1.


task1.2*
Limit to 1000 rows
SQLAdditions
My Snippets
112 /*TASK-2*/
115 INSERT INTO Students (student_id, first_name, last_name, date_of_birth, email, phone_number)
116 VALUES (11, 'John', 'Doe', '1995-08-15', 'john.doe@example.com', '1234567890');
Context Help
Snippets
Output
Action Output
Time Action Message Duration / Fetch
1 16:25:24 INSERT INTO Students (student_id, first_name, last_name, date_of_birth, email, phone_number) VALUES (11, 'Jo... 1 row(s) affected 0.015 sec

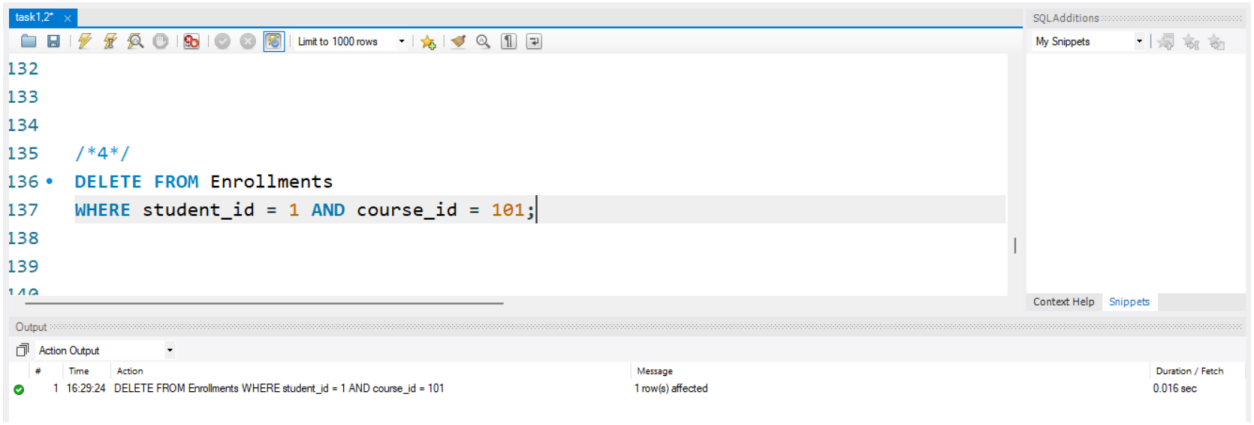
2.


task1.2*
Limit to 1000 rows
SQLAdditions
My Snippets
117
118 /*2*/
119 INSERT INTO Enrollments (enrollment_id, student_id, course_id, enrollment_date)
120 VALUES (13,7, 109, '2023-12-10');
121
122
Context Help
Snippets
Output
Action Output
Time Action Message Duration / Fetch
1 16:27:30 INSERT INTO Enrollments (enrollment_id, student_id, course_id, enrollment_date) VALUES (13,7, 109, '2023-12-1... 1 row(s) affected 0.000 sec

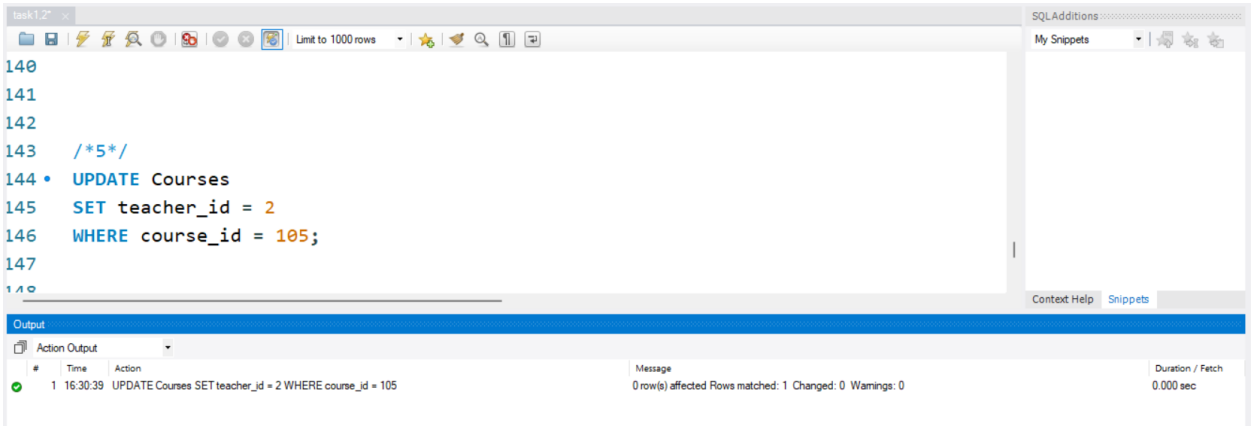
3.


task1.2*
Limit to 1000 rows
SQLAdditions
My Snippets
126
127 /*3*/
128 UPDATE Teacher
129 SET email = 'new.email@example.com'
130 WHERE teacher_id = 1;
131
Context Help
Snippets
Output
Action Output
Time Action Message Duration / Fetch
1 16:28:22 UPDATE Teacher SET email = 'new.email@example.com' WHERE teacher_id = 1 1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0 0.000 sec

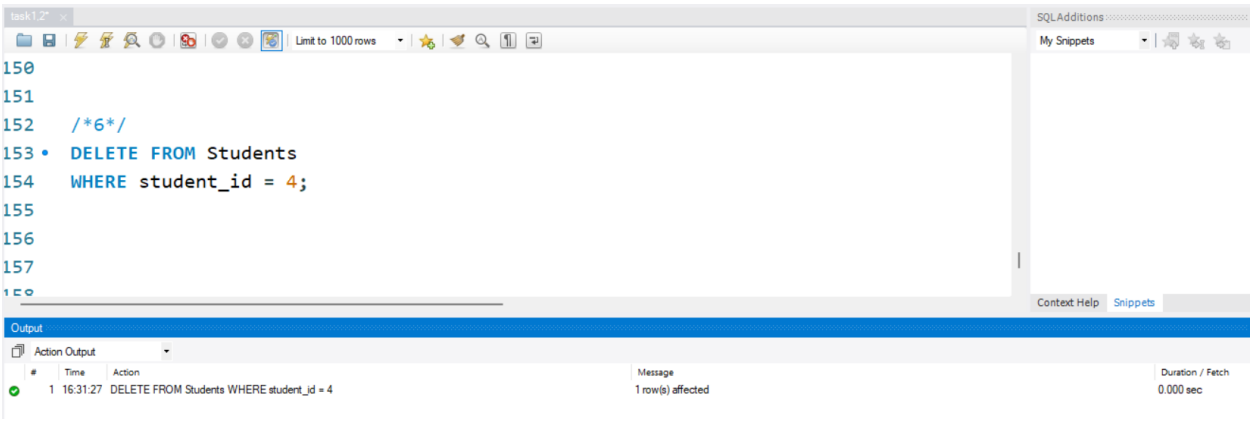
4.


task1.2*
Limit to 1000 rows
SQLAdditions
My Snippets
132
133
134
135 /*4*/
136 • DELETE FROM Enrollments
137 WHERE student_id = 1 AND course_id = 101;
138
139
Context Help
Snippets
Output
Action Output
Time Action Message Duration / Fetch
1 16:29:24 DELETE FROM Enrollments WHERE student_id = 1 AND course_id = 101 1 row(s) affected 0.016 sec

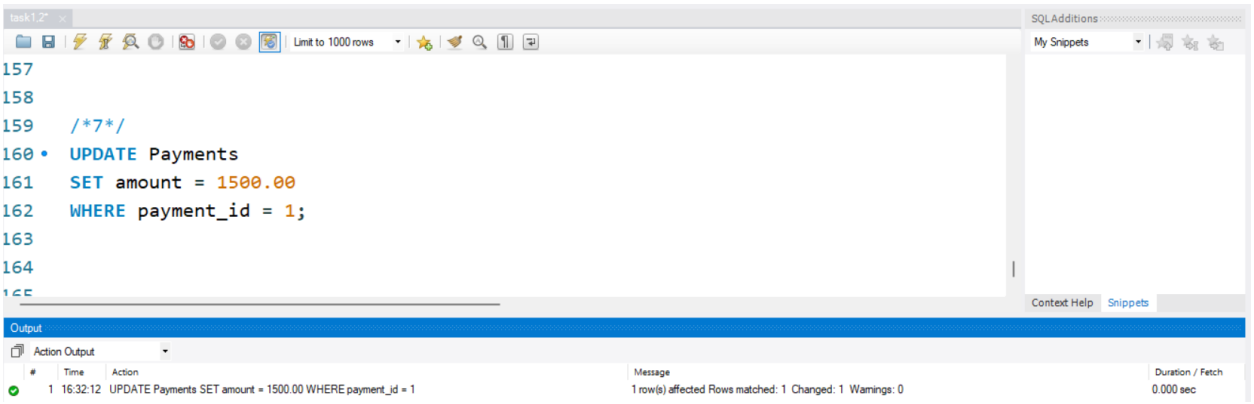
5.


task1.2*
Limit to 1000 rows
SQLAdditions
My Snippets
140
141
142
143 /*5*/
144 • UPDATE Courses
145 SET teacher_id = 2
146 WHERE course_id = 105;
147
Context Help
Snippets
Output
Action Output
Time Action Message Duration / Fetch
1 16:30:39 UPDATE Courses SET teacher_id = 2 WHERE course_id = 105 0 row(s) affected Rows matched: 1 Changed: 0 Warnings: 0 0.000 sec

6.

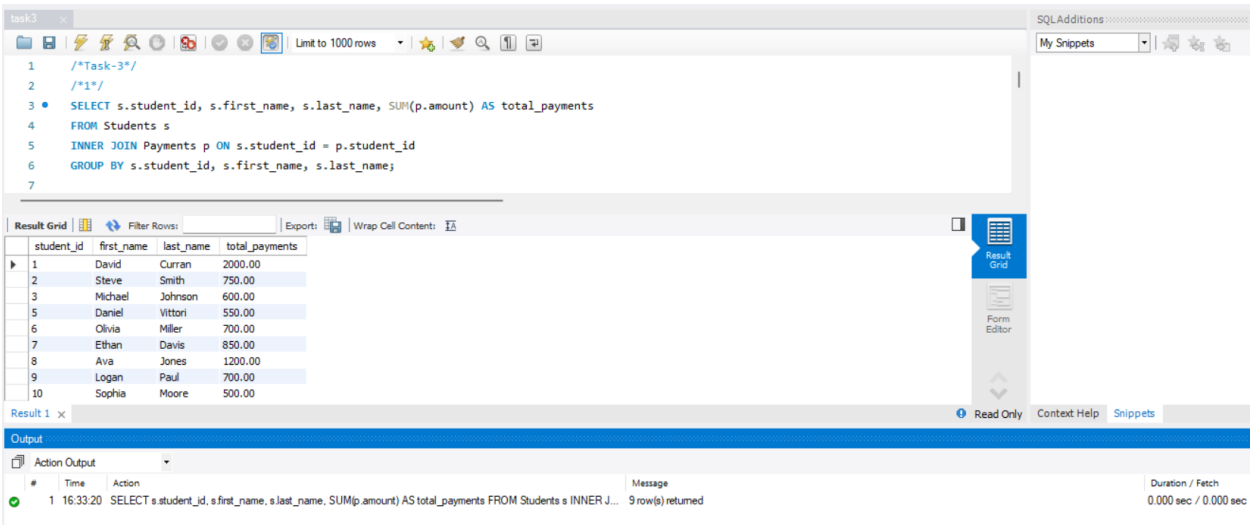

task1.2*
Limit to 1000 rows
SQLAdditions
My Snippets
150
151
152 /*6*/
153 • DELETE FROM Students
154 WHERE student_id = 4;
155
156
157
Context Help
Snippets
Output
Action Output
Time Action Message Duration / Fetch
1 16:31:27 DELETE FROM Students WHERE student_id = 4 1 row(s) affected 0.000 sec

7.

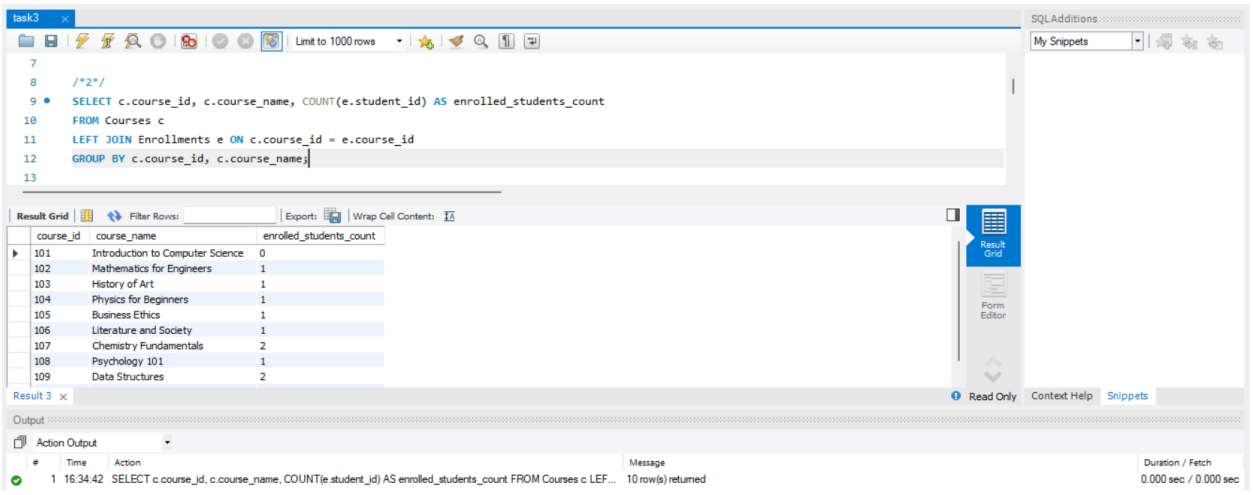

task1.2*
Limit to 1000 rows
SQLAdditions
My Snippets
157
158
159 /*7*/
160 • UPDATE Payments
161 SET amount = 1500.00
162 WHERE payment_id = 1;
163
164
Context Help
Snippets
Output
Action Output
Time Action Message Duration / Fetch
1 16:32:12 UPDATE Payments SET amount = 1500.00 WHERE payment_id = 1 1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0 0.000 sec

TASK3:

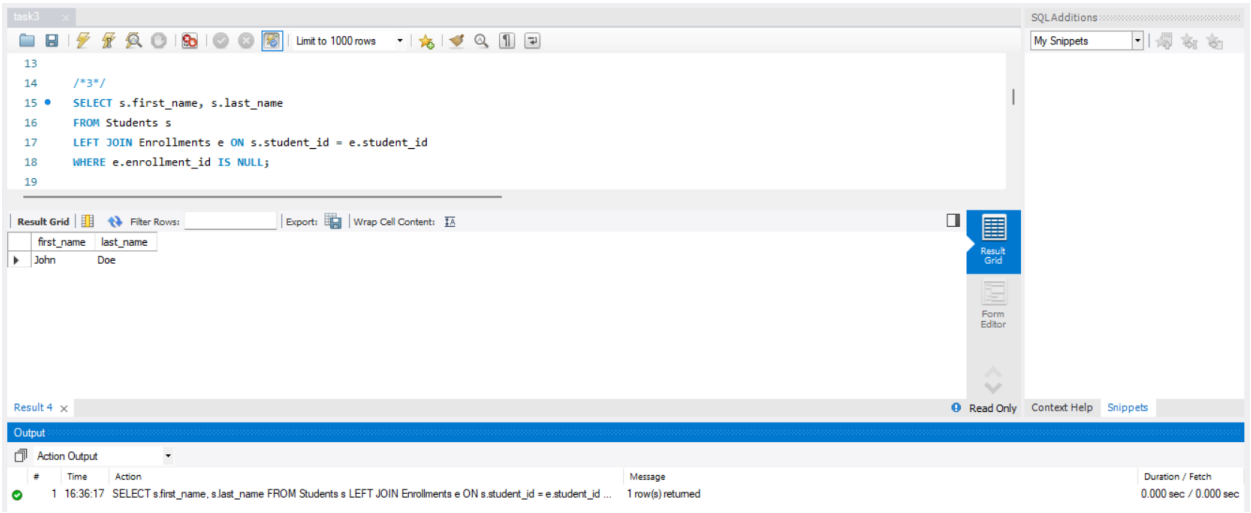
1.


task3
Limit to 1000 rows
SQLAdditions
My Snippets
/*Task-3*/
/*1*/
SELECT s.student_id, s.first_name, s.last_name, SUM(p.amount) AS total_payments
FROM Students s
INNER JOIN Payments p ON s.student_id = p.student_id
GROUP BY s.student_id, s.first_name, s.last_name;
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
student_id | first_name | last_name | total_payments
1 David Curran 2000.00
2 Steve Smith 750.00
3 Michael Johnson 600.00
5 Daniel Vittori 550.00
6 Olivia Miller 700.00
7 Ethan Davis 850.00
8 Ava Jones 1200.00
9 Logan Paul 700.00
10 Sophia Moore 500.00
Result Grid
Form Editor
Result 1
Read Only
Context Help
Snippets
Output
Action Output
| Time | Action | Message | Duration / Fetch
1 16:33:20 SELECT s.student_id, s.first_name, s.last_name, SUM(p.amount) AS total_payments FROM Students s INNER J... 9 row(s) returned 0.000 sec / 0.000 sec

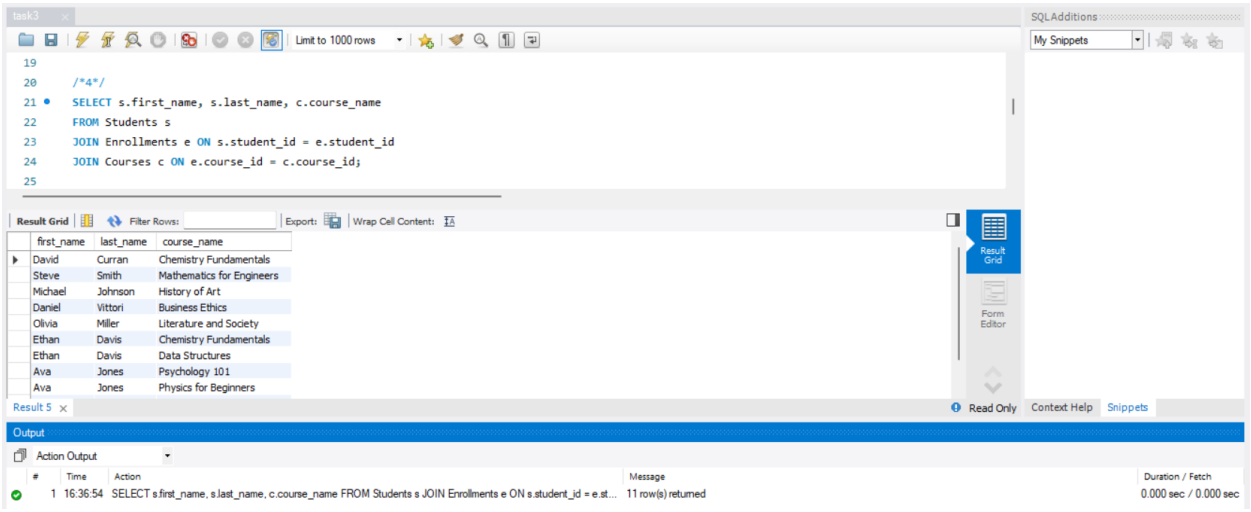
2.


task3
Limit to 1000 rows
SQLAdditions
My Snippets
/*2*/
SELECT c.course_id, c.course_name, COUNT(e.student_id) AS enrolled_students_count
FROM Courses c
LEFT JOIN Enrollments e ON c.course_id = e.course_id
GROUP BY c.course_id, c.course_name;
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
course_id | course_name | enrolled_students_count
101 Introduction to Computer Science 0
102 Mathematics for Engineers 1
103 History of Art 1
104 Physics for Beginners 1
105 Business Ethics 1
106 Literature and Society 1
107 Chemistry Fundamentals 2
108 Psychology 101 1
109 Data Structures 2
Result Grid
Form Editor
Result 3
Read Only
Context Help
Snippets
Output
Action Output
| Time | Action | Message | Duration / Fetch
1 16:34:42 SELECT c.course_id, c.course_name, COUNT(e.student_id) AS enrolled_students_count FROM Courses c LEF... 10 row(s) returned 0.000 sec / 0.000 sec

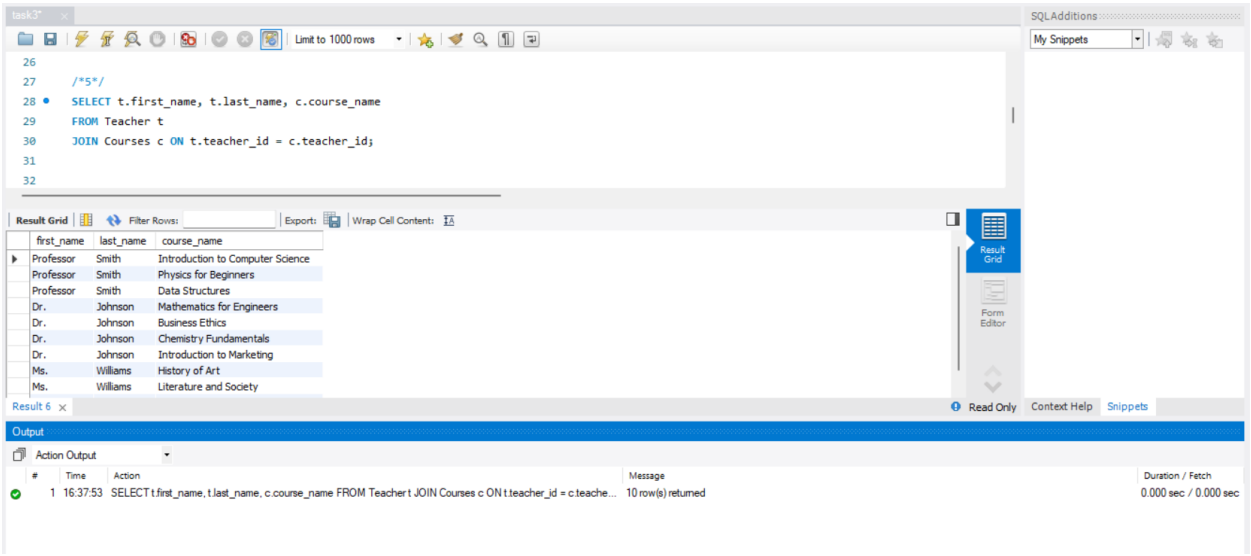
3.


task3
Limit to 1000 rows
SQLAdditions
My Snippets
13
14 /*3*/
15 SELECT s.first_name, s.last_name
16 FROM Students s
17 LEFT JOIN Enrollments e ON s.student_id = e.student_id
18 WHERE e.enrollment_id IS NULL;
19
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
first_name last_name
John Doe
Result Grid
Form Editor
Result 4
Read Only
Context Help
Snippets
Output
Action Output
Time Action Message Duration / Fetch
1 16:36:17 SELECT s.first_name, s.last_name FROM Students s LEFT JOIN Enrollments e ON s.student_id = e.student_id ... 1 row(s) returned 0.000 sec / 0.000 sec

4.


task3
Limit to 1000 rows
SQLAdditions
My Snippets
19
20 /*4*/
21 SELECT s.first_name, s.last_name, c.course_name
22 FROM Students s
23 JOIN Enrollments e ON s.student_id = e.student_id
24 JOIN Courses c ON e.course_id = c.course_id;
25
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
first_name last_name course_name
David Curran Chemistry Fundamentals
Steve Smith Mathematics for Engineers
Michael Johnson History of Art
Daniel Vittori Business Ethics
Olivia Miller Literature and Society
Ethan Davis Chemistry Fundamentals
Ethan Davis Data Structures
Ava Jones Psychology 101
Ava Jones Physics for Beginners
Result Grid
Form Editor
Result 5
Read Only
Context Help
Snippets
Output
Action Output
Time Action Message Duration / Fetch
1 16:36:54 SELECT s.first_name, s.last_name, c.course_name FROM Students s JOIN Enrollments e ON s.student_id = e.st... 11 row(s) returned 0.000 sec / 0.000 sec

5.



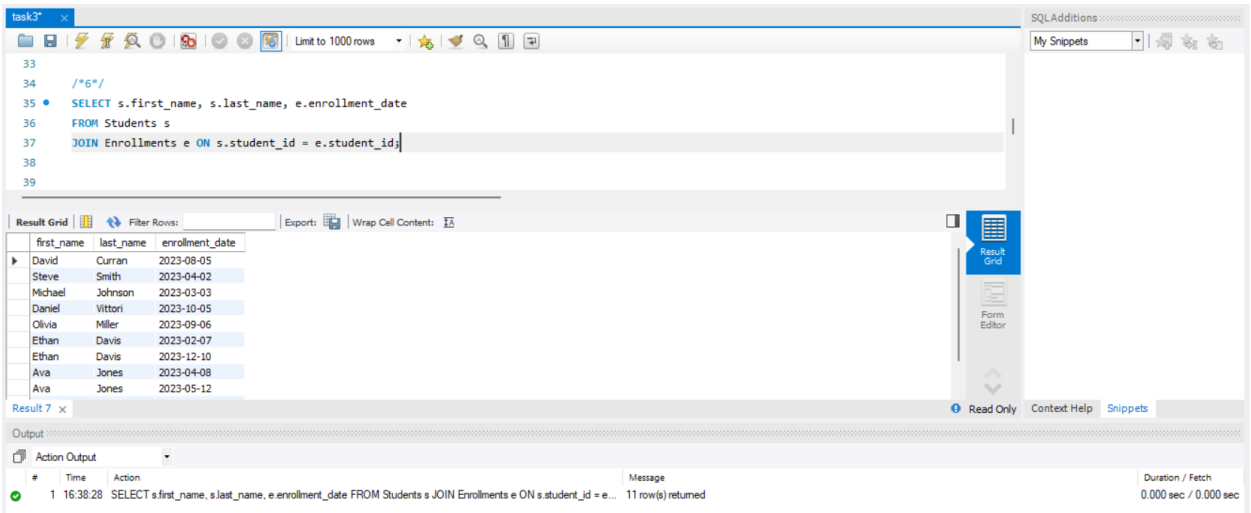
```
/*5*/
SELECT t.first_name, t.last_name, c.course_name
FROM Teacher t
JOIN Courses c ON t.teacher_id = c.teacher_id;
```

first_name	last_name	course_name
Professor	Smith	Introduction to Computer Science
Professor	Smith	Physics for Beginners
Professor	Smith	Data Structures
Dr.	Johnson	Mathematics for Engineers
Dr.	Johnson	Business Ethics
Dr.	Johnson	Chemistry Fundamentals
Dr.	Johnson	Introduction to Marketing
Ms.	Williams	History of Art
Ms.	Williams	Literature and Society

Output

#	Time	Action	Message	Duration / Fetch
1	16:37:53	SELECT t.first_name, t.last_name, c.course_name FROM Teacher t JOIN Courses c ON t.teacher_id = c.teache...	10 row(s) returned	0.000 sec / 0.000 sec

6.



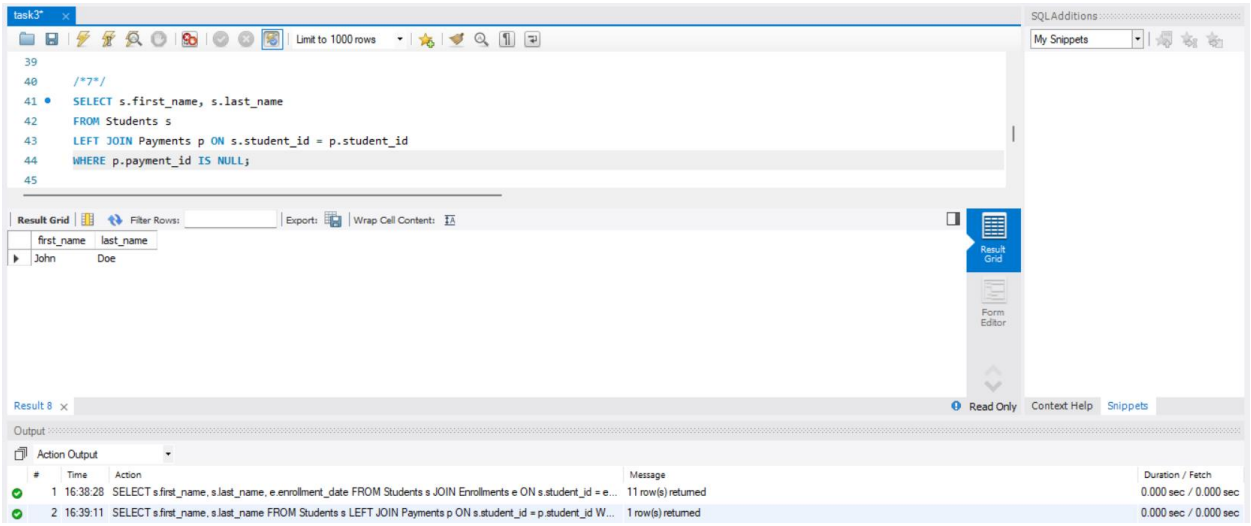
```
/*6*/
SELECT s.first_name, s.last_name, e.enrollment_date
FROM Students s
JOIN Enrollments e ON s.student_id = e.student_id;
```

first_name	last_name	enrollment_date
David	Curran	2023-08-05
Steve	Smith	2023-04-02
Michael	Johnson	2023-03-03
Daniel	Vittori	2023-10-05
Olivia	Miller	2023-09-06
Ethan	Davis	2023-02-07
Ethan	Davis	2023-12-10
Ava	Jones	2023-04-08
Ava	Jones	2023-05-12

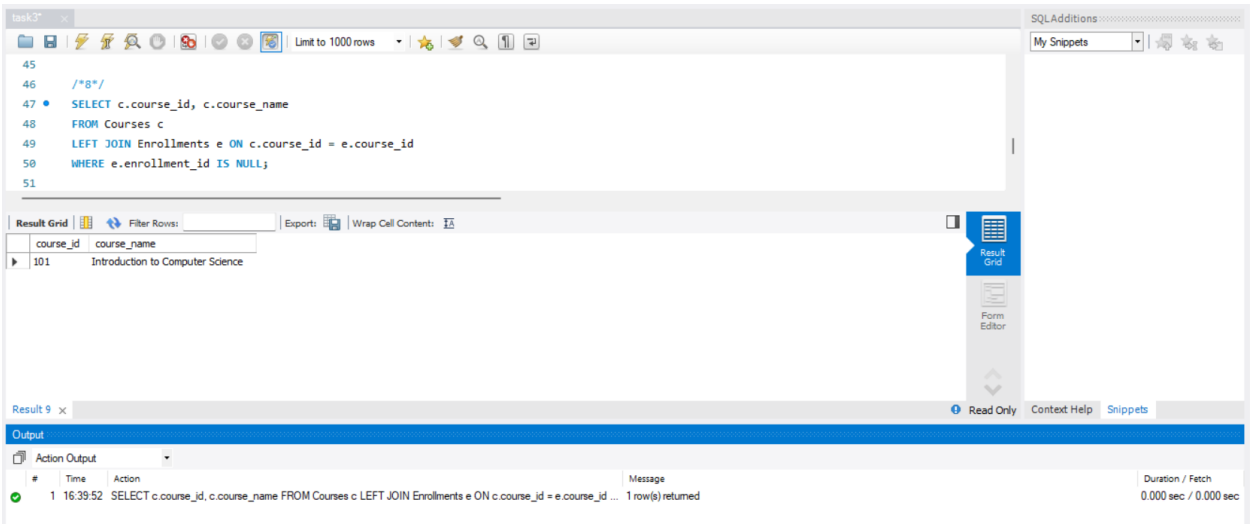
Output

#	Time	Action	Message	Duration / Fetch
1	16:38:28	SELECT s.first_name, s.last_name, e.enrollment_date FROM Students s JOIN Enrollments e ON s.student_id = e...	11 row(s) returned	0.000 sec / 0.000 sec

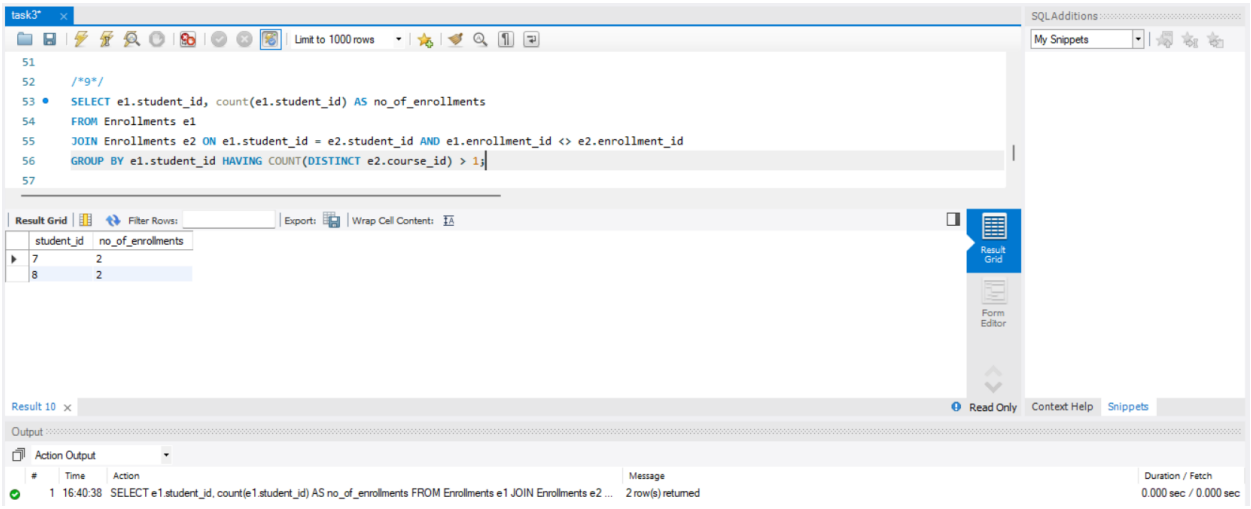
7.


task3*
Limit to 1000 rows
SQL Additions
My Snippets
39
40 /*7*/
41 SELECT s.first_name, s.last_name
42 FROM Students s
43 LEFT JOIN Payments p ON s.student_id = p.student_id
44 WHERE p.payment_id IS NULL;
45
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
first_name last_name
John Doe
Result Grid
Form Editor
Result 8
Read Only
Context Help
Snippets
Output
Action Output
Time Action Message Duration / Fetch
1 16:38:28 SELECT s.first_name, s.last_name, e.enrollment_date FROM Students s JOIN Enrollments e ON s.student_id = e... 11 row(s) returned 0.000 sec / 0.000 sec
2 16:39:11 SELECT s.first_name, s.last_name FROM Students s LEFT JOIN Payments p ON s.student_id = p.student_id W... 1 row(s) returned 0.000 sec / 0.000 sec

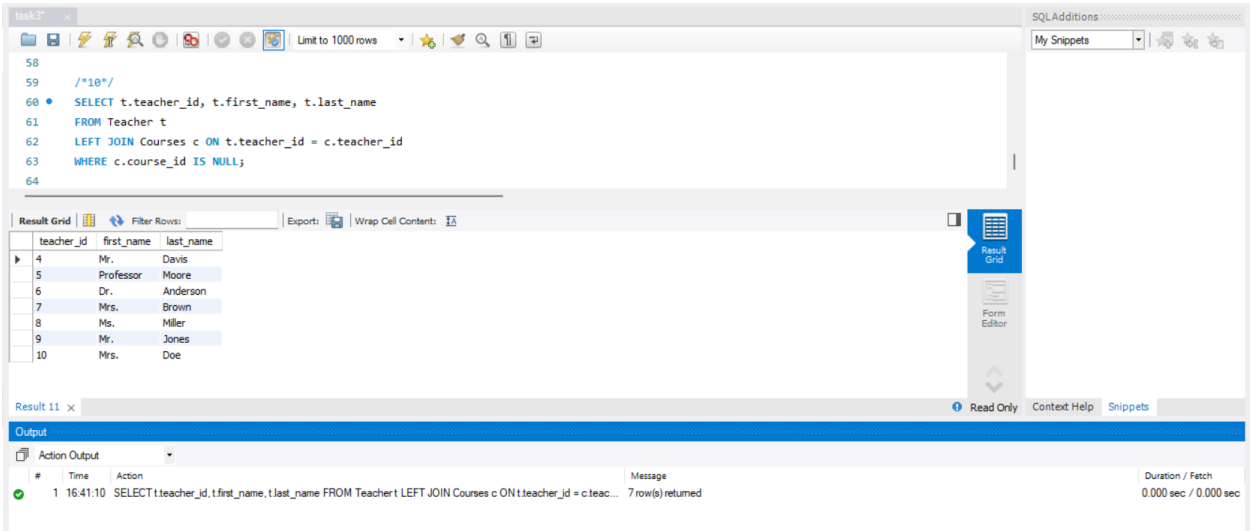
8.


task3*
Limit to 1000 rows
SQL Additions
My Snippets
45
46 /*8*/
47 SELECT c.course_id, c.course_name
48 FROM Courses c
49 LEFT JOIN Enrollments e ON c.course_id = e.course_id
50 WHERE e.enrollment_id IS NULL;
51
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
course_id course_name
101 Introduction to Computer Science
Result Grid
Form Editor
Result 9
Read Only
Context Help
Snippets
Output
Action Output
Time Action Message Duration / Fetch
1 16:39:52 SELECT c.course_id, c.course_name FROM Courses c LEFT JOIN Enrollments e ON c.course_id = e.course_id ... 1 row(s) returned 0.000 sec / 0.000 sec

9.

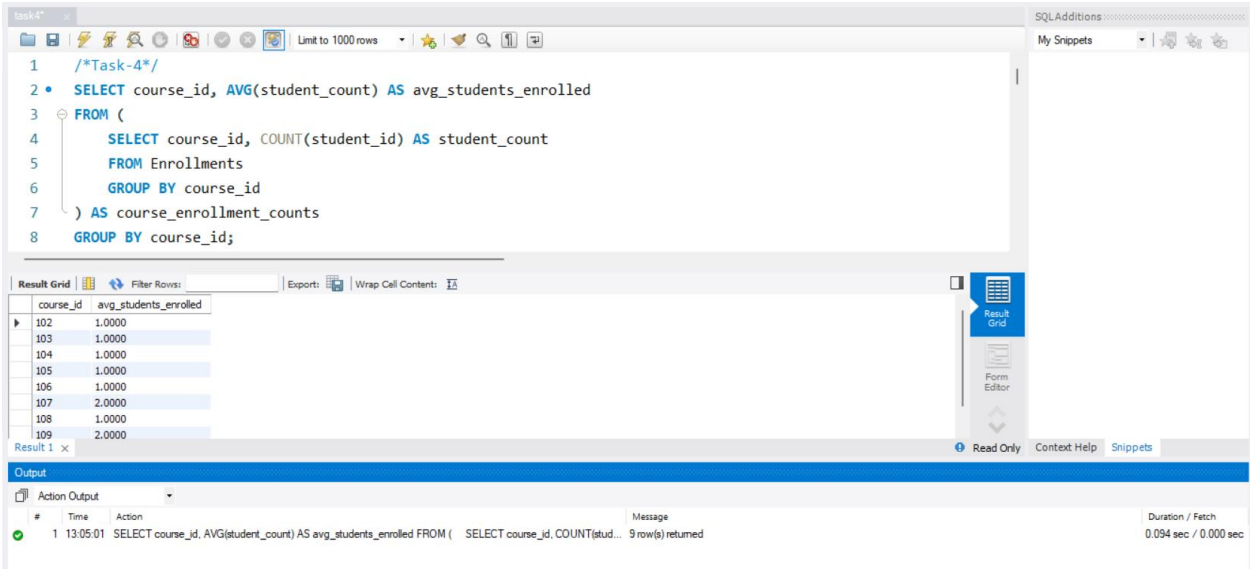

task3*
Limit to 1000 rows
SQLAdditions
My Snippets
/*9*/
SELECT e1.student_id, count(e1.student_id) AS no_of_enrollments
FROM Enrollments e1
JOIN Enrollments e2 ON e1.student_id = e2.student_id AND e1.enrollment_id <> e2.enrollment_id
GROUP BY e1.student_id HAVING COUNT(DISTINCT e2.course_id) > 1;
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
student_id
no_of_enrollments
7
2
8
2
Result Grid
Form Editor
Result 10
Read Only
Context Help
Snippets
Output
Action Output
Time Action Message Duration / Fetch
1 16:40:38 SELECT e1.student_id, count(e1.student_id) AS no_of_enrollments FROM Enrollments e1 JOIN Enrollments e2 ... 2 row(s) returned 0.000 sec / 0.000 sec

10.

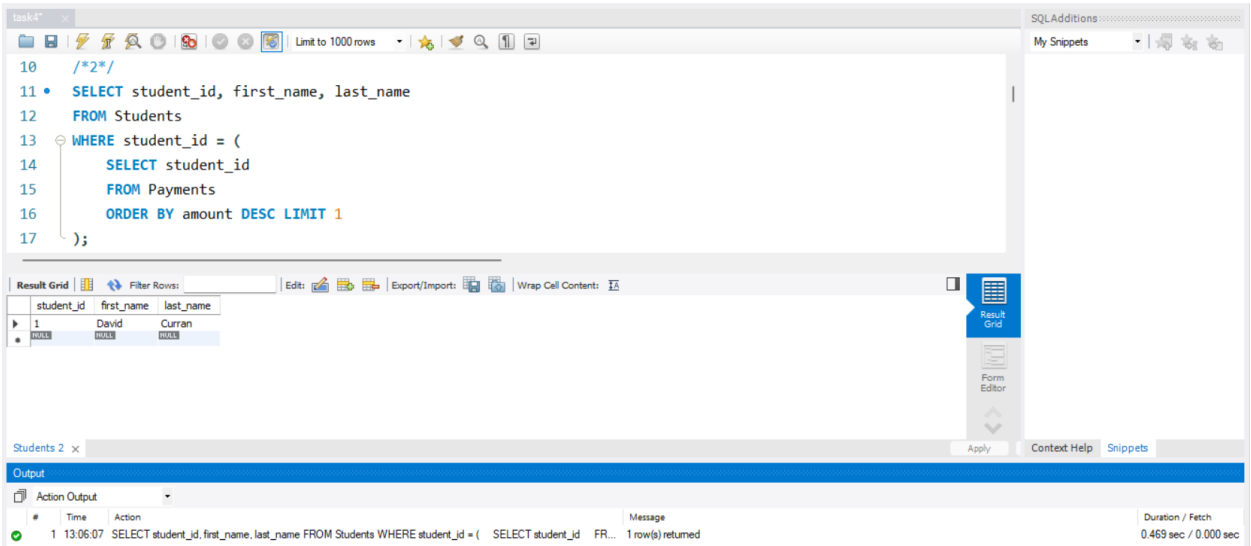

task3*
Limit to 1000 rows
SQLAdditions
My Snippets
/*10*/
SELECT t.teacher_id, t.first_name, t.last_name
FROM Teacher t
LEFT JOIN Courses c ON t.teacher_id = c.teacher_id
WHERE c.course_id IS NULL;
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
teacher_id
first_name
last_name
4
Mr.
Davis
5
Professor
Moore
6
Dr.
Anderson
7
Mrs.
Brown
8
Ms.
Miller
9
Mr.
Jones
10
Mrs.
Doe
Result Grid
Form Editor
Result 11
Read Only
Context Help
Snippets
Output
Action Output
Time Action Message Duration / Fetch
1 16:41:10 SELECT t.teacher_id, t.first_name, t.last_name FROM Teacher t LEFT JOIN Courses c ON t.teacher_id = c.teac... 7 row(s) returned 0.000 sec / 0.000 sec

Task 4:

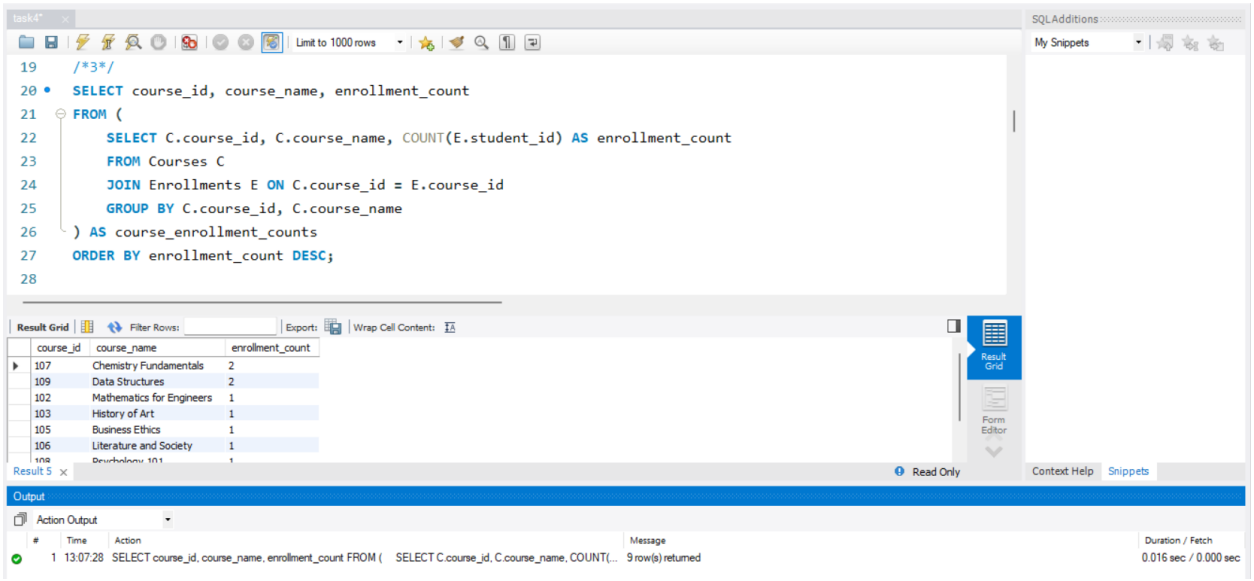
1.


task4*
Limit to 1000 rows
SQLAdditions
My Snippets
1 /*Task-4*/
2 • SELECT course_id, AVG(student_count) AS avg_students_enrolled
3 FROM (
4 SELECT course_id, COUNT(student_id) AS student_count
5 FROM Enrollments
6 GROUP BY course_id
7) AS course_enrollment_counts
8 GROUP BY course_id;
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
course_id avg_students_enrolled
102 1.0000
103 1.0000
104 1.0000
105 1.0000
106 1.0000
107 2.0000
108 1.0000
109 2.0000
Result 1
Read Only
Context Help
Snippets
Output
Action Output
Time Action Message Duration / Fetch
1 13:05:01 SELECT course_id, AVG(student_count) AS avg_students_enrolled FROM (SELECT course_id, COUNT(stud... 9 row(s) returned 0.094 sec / 0.000 sec

2.


task4*
Limit to 1000 rows
SQLAdditions
My Snippets
10 /*2*/
11 • SELECT student_id, first_name, last_name
12 FROM Students
13 WHERE student_id = (
14 SELECT student_id
15 FROM Payments
16 ORDER BY amount DESC LIMIT 1
17);
Result Grid
Filter Rows:
Edit:
Export/Import:
Wrap Cell Content:
student_id first_name last_name
1 David Curran
Students 2
Apply
Context Help
Snippets
Output
Action Output
Time Action Message Duration / Fetch
1 13:06:07 SELECT student_id, first_name, last_name FROM Students WHERE student_id = (SELECT student_id FR... 1 row(s) returned 0.469 sec / 0.000 sec

3.



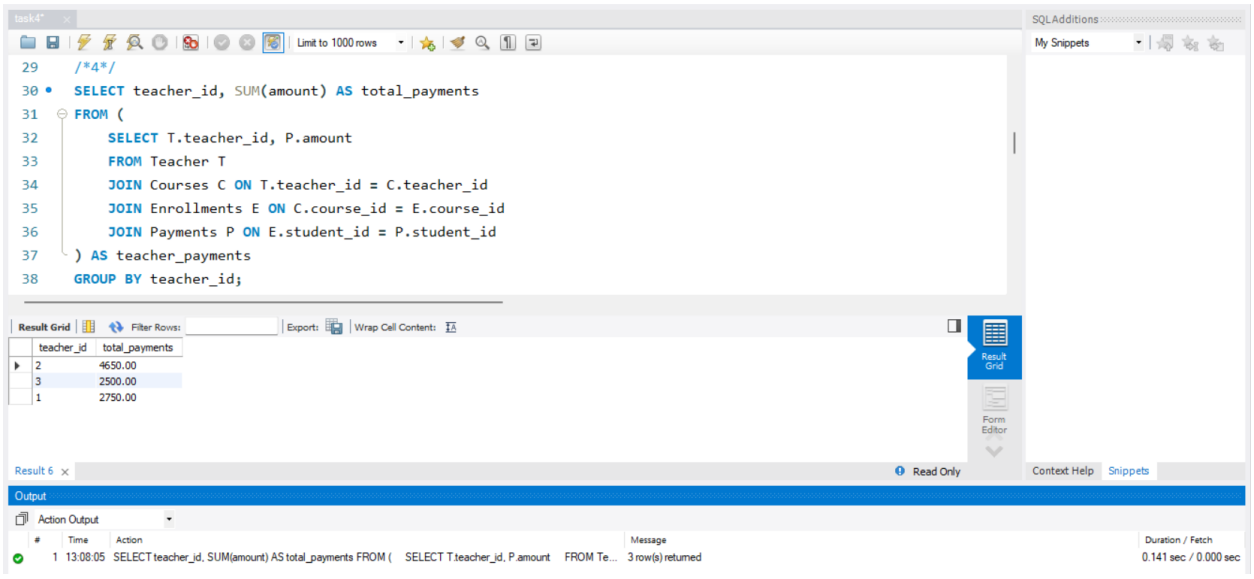
```
/*3*/
SELECT course_id, course_name, enrollment_count
FROM (
    SELECT C.course_id, C.course_name, COUNT(E.student_id) AS enrollment_count
    FROM Courses C
    JOIN Enrollments E ON C.course_id = E.course_id
    GROUP BY C.course_id, C.course_name
) AS course_enrollment_counts
ORDER BY enrollment_count DESC;
```

course_id	course_name	enrollment_count
107	Chemistry Fundamentals	2
109	Data Structures	2
102	Mathematics for Engineers	1
103	History of Art	1
105	Business Ethics	1
106	Literature and Society	1

Output

#	Time	Action	Message	Duration / Fetch
1	13:07:28	SELECT course_id, course_name, enrollment_count FROM (SELECT C.course_id, C.course_name, COUNT(...	9 row(s) returned	0.016 sec / 0.000 sec

4.



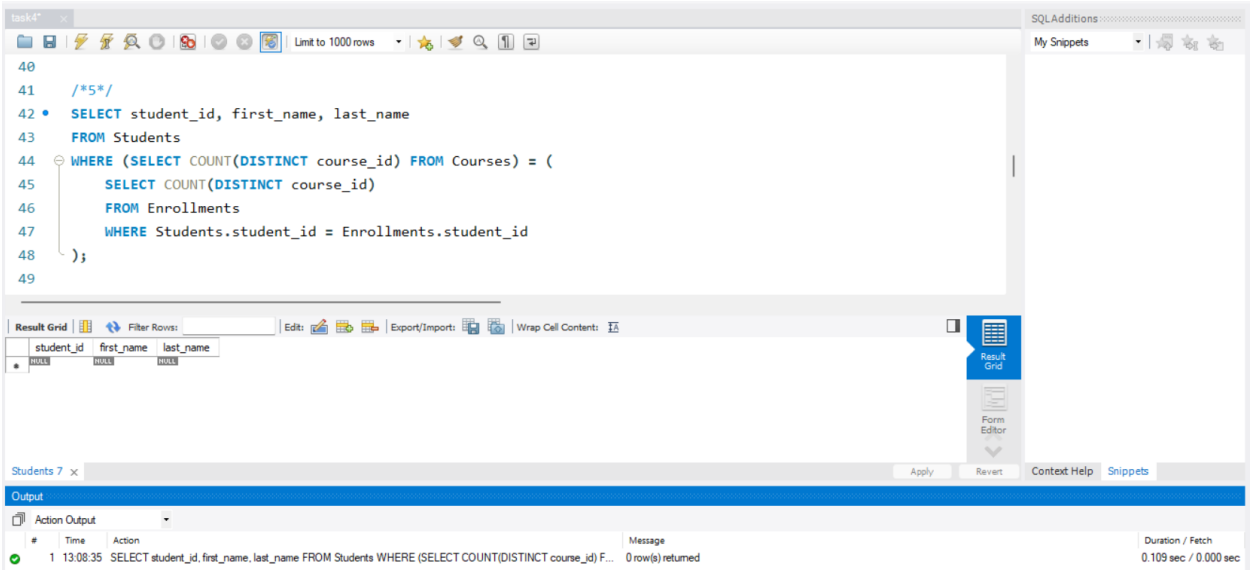
```
/*4*/
SELECT teacher_id, SUM(amount) AS total_payments
FROM (
    SELECT T.teacher_id, P.amount
    FROM Teacher T
    JOIN Courses C ON T.teacher_id = C.teacher_id
    JOIN Enrollments E ON C.course_id = E.course_id
    JOIN Payments P ON E.student_id = P.student_id
) AS teacher_payments
GROUP BY teacher_id;
```

teacher_id	total_payments
2	4650.00
3	2500.00
1	2750.00

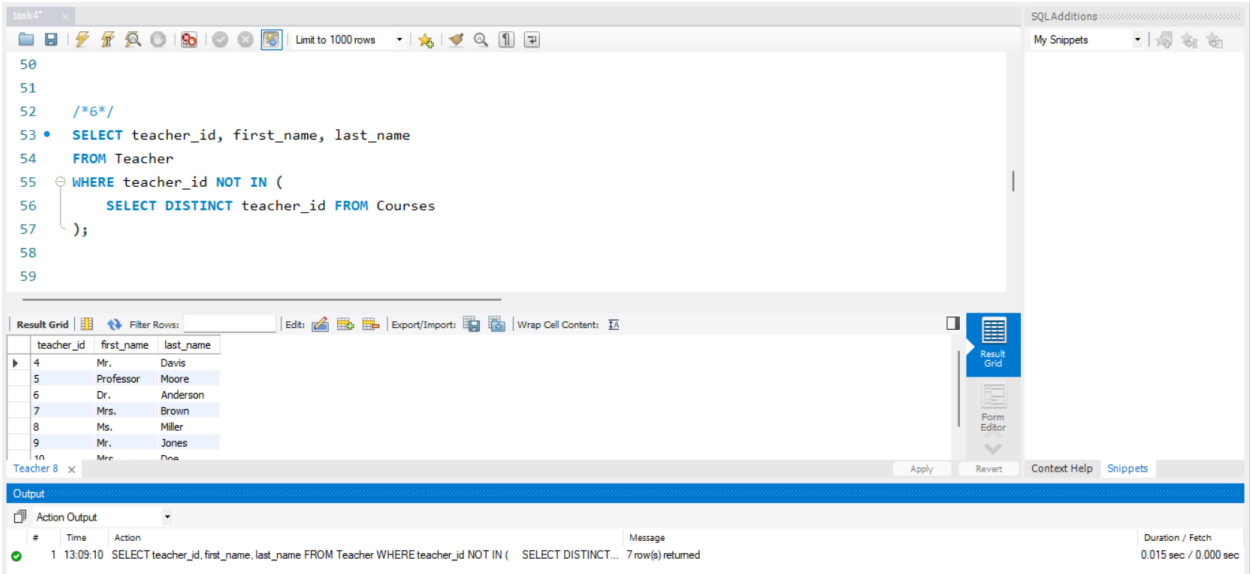
Output

#	Time	Action	Message	Duration / Fetch
1	13:08:05	SELECT teacher_id, SUM(amount) AS total_payments FROM (SELECT T.teacher_id, P.amount FROM Te...	3 row(s) returned	0.141 sec / 0.000 sec

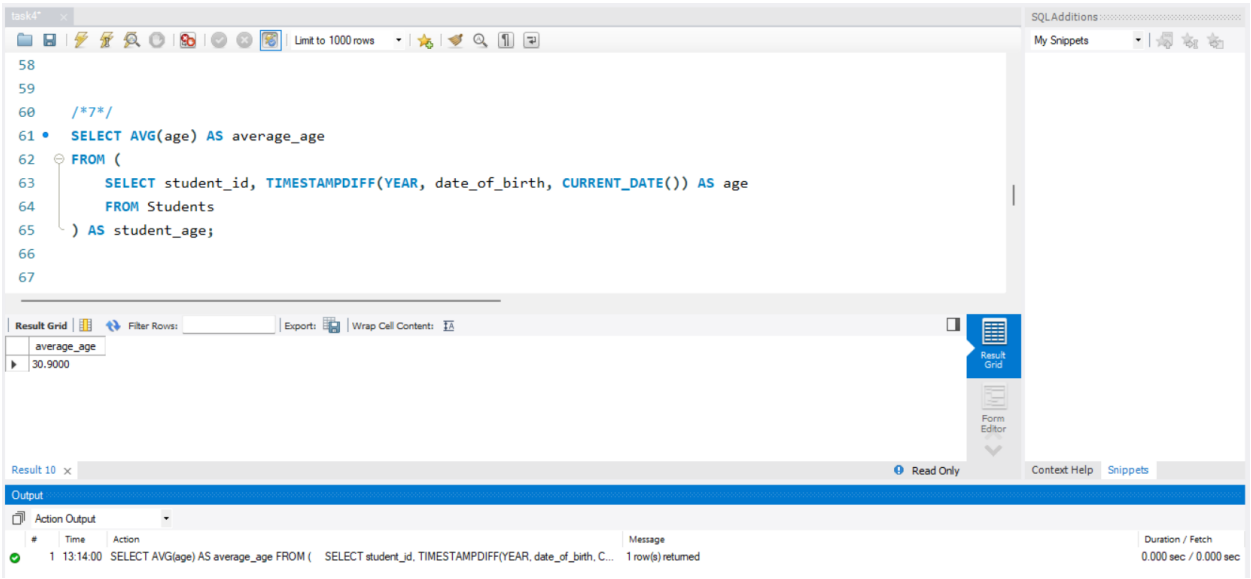
5.


task4*
Limit to 1000 rows
SQLAdditions
My Snippets
40
41 /*5*/
42 • SELECT student_id, first_name, last_name
43 FROM Students
44 WHERE (SELECT COUNT(DISTINCT course_id) FROM Courses) = (
45 SELECT COUNT(DISTINCT course_id)
46 FROM Enrollments
47 WHERE Students.student_id = Enrollments.student_id
48);
49
Result Grid
Filter Rows:
Edit:
Export/Import:
Wrap Cell Content:
student_id
first_name
last_name
NULL
Result Grid
Form Editor
Students 7
Apply
Revert
Context Help
Snippets
Output
Action Output
Time Action Message Duration / Fetch
1 13:08:35 SELECT student_id, first_name, last_name FROM Students WHERE (SELECT COUNT(DISTINCT course_id) F... 0 row(s) returned 0.109 sec / 0.000 sec

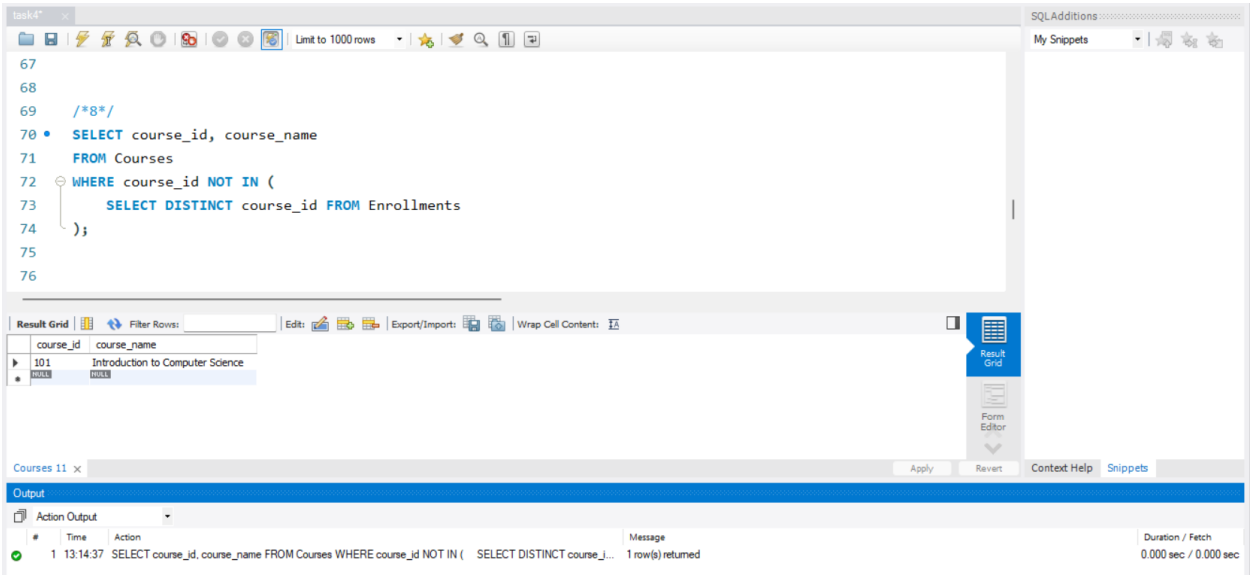
6.


task4*
Limit to 1000 rows
SQLAdditions
My Snippets
50
51
52 /*6*/
53 • SELECT teacher_id, first_name, last_name
54 FROM Teacher
55 WHERE teacher_id NOT IN (
56 SELECT DISTINCT teacher_id FROM Courses
57);
58
59
Result Grid
Filter Rows:
Edit:
Export/Import:
Wrap Cell Content:
teacher_id first_name last_name
4 Mr. Davis
5 Professor Moore
6 Dr. Anderson
7 Mrs. Brown
8 Ms. Miller
9 Mr. Jones
Result Grid
Form Editor
Teacher 8
Apply
Revert
Context Help
Snippets
Output
Action Output
Time Action Message Duration / Fetch
1 13:09:10 SELECT teacher_id, first_name, last_name FROM Teacher WHERE teacher_id NOT IN (SELECT DISTINCT... 7 row(s) returned 0.015 sec / 0.000 sec

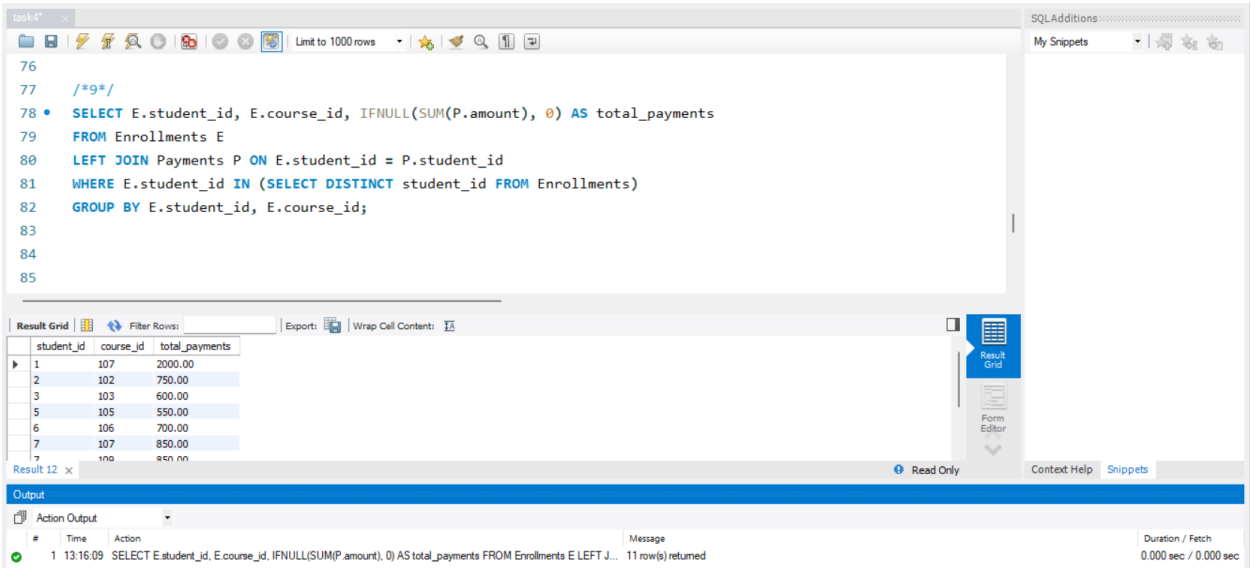
7.


task4*
Limit to 1000 rows
SQLAdditions
My Snippets
58
59
60 /*7*/
61 • SELECT AVG(age) AS average_age
62 FROM (
63 SELECT student_id, TIMESTAMPDIFF(YEAR, date_of_birth, CURRENT_DATE()) AS age
64 FROM Students
65) AS student_age;
66
67
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
average_age
30.9000
Result Grid
Form Editor
Result 10
Read Only
Context Help
Snippets
Output
Action Output
Time Action Message Duration / Fetch
1 13:14:00 SELECT AVG(age) AS average_age FROM (SELECT student_id, TIMESTAMPDIFF(YEAR, date_of_birth, C... 1 row(s) returned 0.000 sec / 0.000 sec

8.


task4*
Limit to 1000 rows
SQLAdditions
My Snippets
67
68
69 /*8*/
70 • SELECT course_id, course_name
71 FROM Courses
72 WHERE course_id NOT IN (
73 SELECT DISTINCT course_id FROM Enrollments
74);
75
76
Result Grid
Filter Rows:
Edit:
Export/Import:
Wrap Cell Content:
course_id course_name
101 Introduction to Computer Science
NULL NULL
Result Grid
Form Editor
Courses 11
Apply
Revert
Context Help
Snippets
Output
Action Output
Time Action Message Duration / Fetch
1 13:14:37 SELECT course_id, course_name FROM Courses WHERE course_id NOT IN (SELECT DISTINCT course_i... 1 row(s) returned 0.000 sec / 0.000 sec

9.



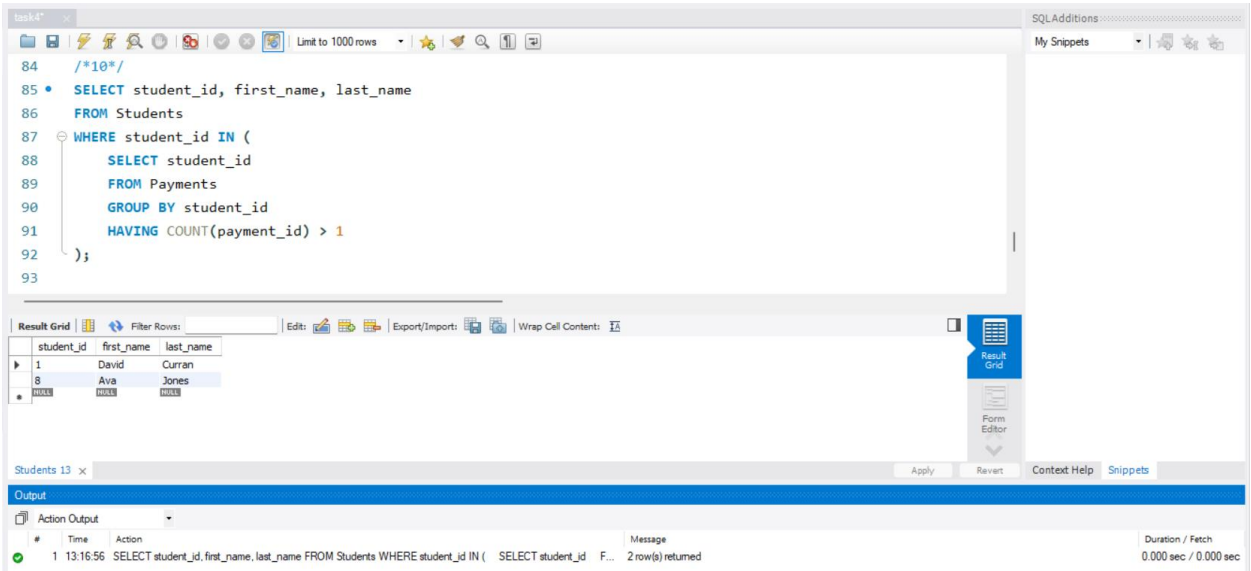
```
/*9*/
SELECT E.student_id, E.course_id, IFNULL(SUM(P.amount), 0) AS total_payments
FROM Enrollments E
LEFT JOIN Payments P ON E.student_id = P.student_id
WHERE E.student_id IN (SELECT DISTINCT student_id FROM Enrollments)
GROUP BY E.student_id, E.course_id;
```

student_id	course_id	total_payments
1	107	2000.00
2	102	750.00
3	103	600.00
5	105	550.00
6	106	700.00
7	107	850.00

Output

#	Time	Action	Message	Duration / Fetch
1	13:16:09	SELECT E.student_id, E.course_id, IFNULL(SUM(P.amount), 0) AS total_payments FROM Enrollments E LEFT J...	11 row(s) returned	0.000 sec / 0.000 sec

10.



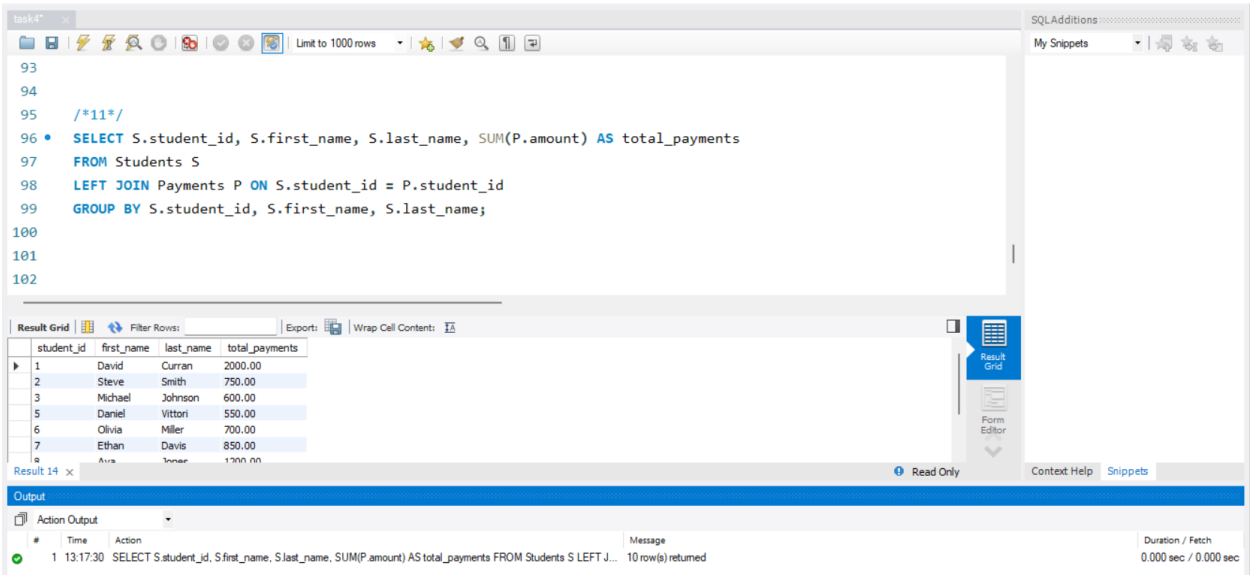
```
/*10*/
SELECT student_id, first_name, last_name
FROM Students
WHERE student_id IN (
    SELECT student_id
    FROM Payments
    GROUP BY student_id
    HAVING COUNT(payment_id) > 1
);
```

student_id	first_name	last_name
1	David	Curran
8	Ava	Jones

Output

#	Time	Action	Message	Duration / Fetch
1	13:16:56	SELECT student_id, first_name, last_name FROM Students WHERE student_id IN (SELECT student_id F...	2 row(s) returned	0.000 sec / 0.000 sec

11.



```
/*11*/
SELECT S.student_id, S.first_name, S.last_name, SUM(P.amount) AS total_payments
FROM Students S
LEFT JOIN Payments P ON S.student_id = P.student_id
GROUP BY S.student_id, S.first_name, S.last_name;
```

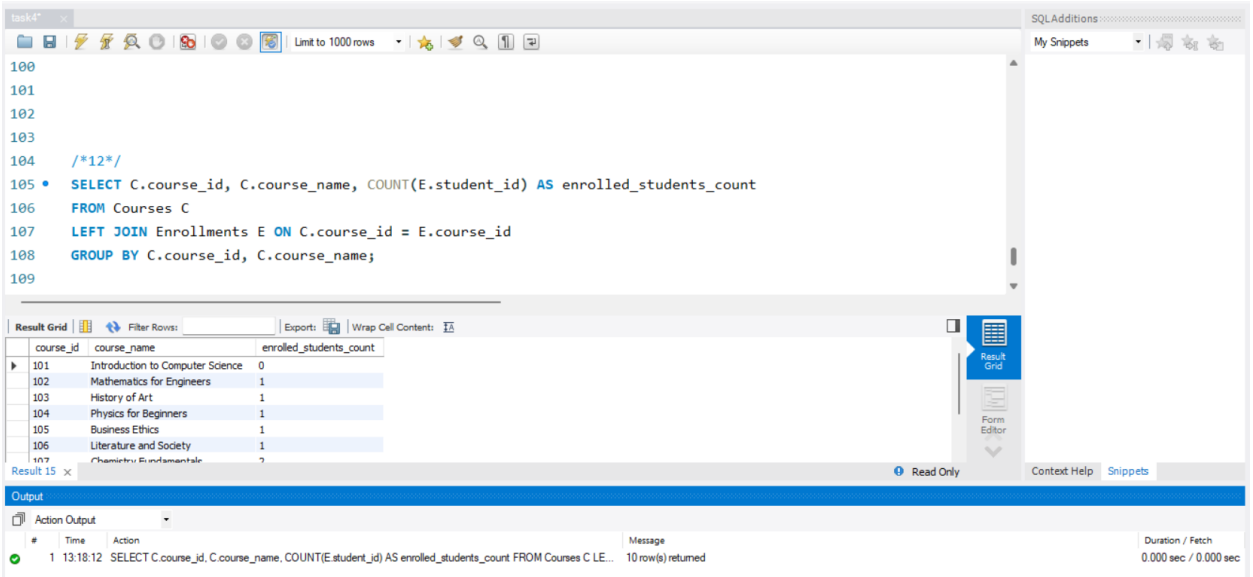
student_id	first_name	last_name	total_payments
1	David	Curran	2000.00
2	Steve	Smith	750.00
3	Michael	Johnson	600.00
5	Daniel	Vittori	550.00
6	Olivia	Miller	700.00
7	Ethan	Davis	850.00

Result 14 | Read Only

Output

#	Time	Action	Message	Duration / Fetch
1	13:17:30	SELECT S.student_id, S.first_name, S.last_name, SUM(P.amount) AS total_payments FROM Students S LEFT J...	10 row(s) returned	0.000 sec / 0.000 sec

12.



```
/*12*/
SELECT C.course_id, C.course_name, COUNT(E.student_id) AS enrolled_students_count
FROM Courses C
LEFT JOIN Enrollments E ON C.course_id = E.course_id
GROUP BY C.course_id, C.course_name;
```

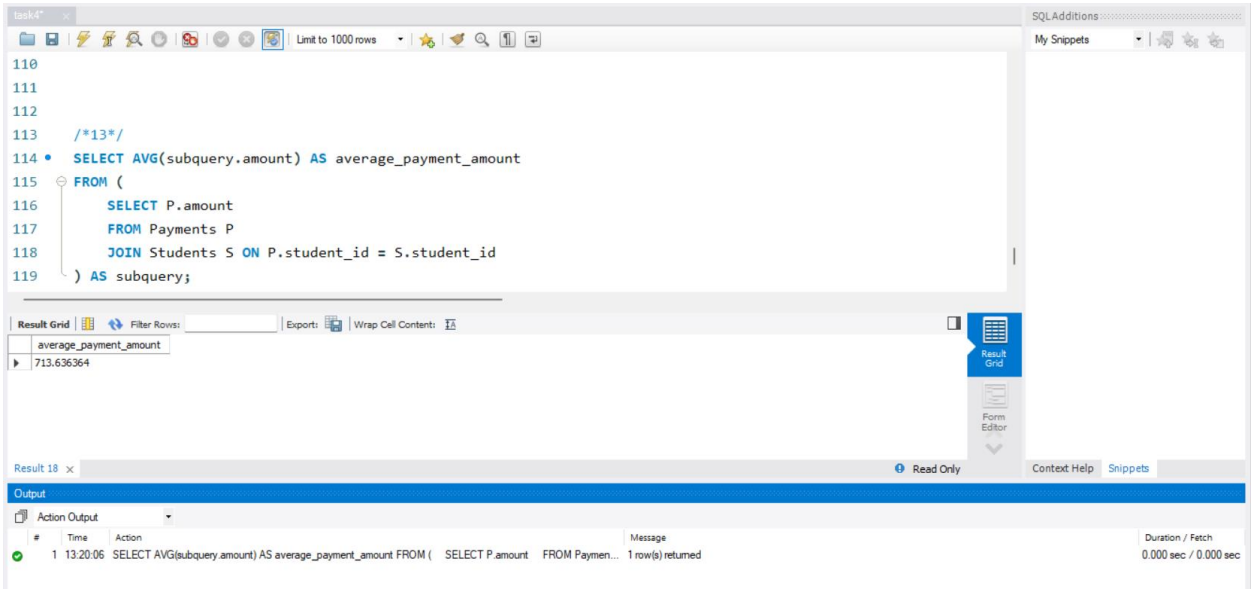
course_id	course_name	enrolled_students_count
101	Introduction to Computer Science	0
102	Mathematics for Engineers	1
103	History of Art	1
104	Physics for Beginners	1
105	Business Ethics	1
106	Literature and Society	1

Result 15 | Read Only

Output

#	Time	Action	Message	Duration / Fetch
1	13:18:12	SELECT C.course_id, C.course_name, COUNT(E.student_id) AS enrolled_students_count FROM Courses C LE...	10 row(s) returned	0.000 sec / 0.000 sec

13.


task4*
Limit to 1000 rows
SQLAdditions
My Snippets
110
111
112
113 /*13*/
114 • SELECT AVG(subquery.amount) AS average_payment_amount
115 FROM (
116 SELECT P.amount
117 FROM Payments P
118 JOIN Students S ON P.student_id = S.student_id
119) AS subquery;
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
average_payment_amount
713.636364
Result Grid
Form Editor
Result 18
Read Only
Context Help
Snippets
Output
Action Output
Time Action Message Duration / Fetch
1 13:20:06 SELECT AVG(subquery.amount) AS average_payment_amount FROM (SELECT P.amount FROM Paymen... 1 row(s) returned 0.000 sec / 0.000 sec