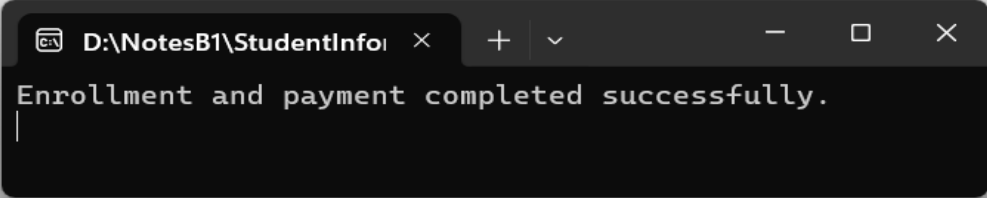


TRANSACTION MANAGEMENT

1)Enrolling students:

```
//Transaction management when enrolling students
Database.EnrollStudentWithPayment(121, 15, DateTime.Now, 2500.00m, DateTime.Now);
Console.ReadLine();
```



Enrollment and payment completed successfully.

Enrollment table : [student id - 121, enrollment id – 12]

Enrollment ID: 2,	Student ID: 102,	Course ID: 19,	Enrollment Date: 10-02-2025 00:00:00
Enrollment ID: 3,	Student ID: 103,	Course ID: 20,	Enrollment Date: 22-05-2024 00:00:00
Enrollment ID: 4,	Student ID: 104,	Course ID: 15,	Enrollment Date: 05-08-2025 00:00:00
Enrollment ID: 5,	Student ID: 105,	Course ID: 12,	Enrollment Date: 18-06-2024 00:00:00
Enrollment ID: 6,	Student ID: 106,	Course ID: 11,	Enrollment Date: 12-10-2025 00:00:00
Enrollment ID: 7,	Student ID: 107,	Course ID: 14,	Enrollment Date: 25-03-2024 00:00:00
Enrollment ID: 8,	Student ID: 108,	Course ID: 13,	Enrollment Date: 01-12-2025 00:00:00
Enrollment ID: 10,	Student ID: 110,	Course ID: 17,	Enrollment Date: 20-11-2025 00:00:00
Enrollment ID: 11,	Student ID: 112,	Course ID: 13,	Enrollment Date: 29-01-2025 00:00:00
Enrollment ID: 12,	Student ID: 121,	Course ID: 15,	Enrollment Date: 06-04-2025 00:00:00

Payment table: [student id - 121, payment id – 14]

PaymentID: 1,	StudentID: 101,	Amount: 700.00,	Payment Date: 20-07-2024 00:00:00
PaymentID: 2,	StudentID: 102,	Amount: 600.00,	Payment Date: 15-02-2025 00:00:00
PaymentID: 3,	StudentID: 103,	Amount: 550.00,	Payment Date: 01-06-2024 00:00:00
PaymentID: 4,	StudentID: 104,	Amount: 580.00,	Payment Date: 10-08-2025 00:00:00
PaymentID: 5,	StudentID: 105,	Amount: 620.00,	Payment Date: 01-07-2024 00:00:00
PaymentID: 6,	StudentID: 106,	Amount: 530.00,	Payment Date: 15-10-2025 00:00:00
PaymentID: 7,	StudentID: 107,	Amount: 570.00,	Payment Date: 01-04-2024 00:00:00
PaymentID: 8,	StudentID: 108,	Amount: 590.00,	Payment Date: 10-12-2025 00:00:00
PaymentID: 10,	StudentID: 110,	Amount: 540.00,	Payment Date: 25-11-2025 00:00:00
PaymentID: 11,	StudentID: 106,	Amount: 250.00,	Payment Date: 10-02-2025 00:00:00
PaymentID: 12,	StudentID: 107,	Amount: 200.00,	Payment Date: 05-03-2025 00:00:00
PaymentID: 13,	StudentID: 121,	Amount: 1500.00,	Payment Date: 14-01-2025 00:00:00
PaymentID: 14,	StudentID: 121,	Amount: 2500.00,	Payment Date: 06-04-2025 00:00:00

Enrollment table : [student id - 121, enrollment id – 12]

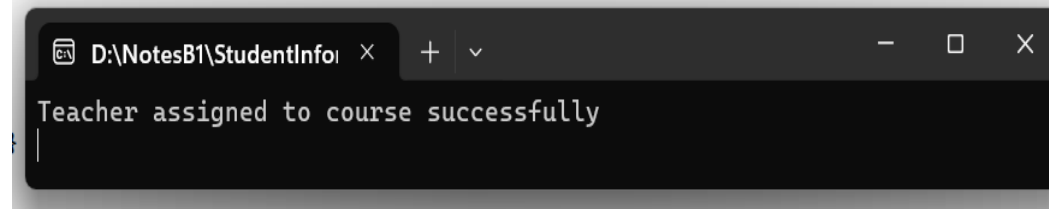
Payment table: [student id - 121, payment id – 14]

	enrollment_id	student_id	course_id	enrollment_date
1	2	102	19	2025-02-10
2	3	103	20	2024-05-22
3	4	104	15	2025-08-05
4	5	105	12	2024-06-18
5	6	106	11	2025-10-12
6	7	107	14	2024-03-25
7	8	108	13	2025-12-01
8	10	110	17	2025-11-20
9	11	112	13	2025-01-29
10	12	121	15	2025-04-06

	payment_id	student_id	amount	payment_date
1	1	101	700.00	2024-07-20
2	2	102	600.00	2025-02-15
3	3	103	550.00	2024-06-01
4	4	104	580.00	2025-08-10
5	5	105	620.00	2024-07-01
6	6	106	530.00	2025-10-15
7	7	107	570.00	2024-04-01
8	8	108	590.00	2025-12-10
9	10	110	540.00	2025-11-25
10	11	106	250.00	2025-02-10
11	12	107	200.00	2025-03-05
12	13	121	1500.00	2025-01-14
13	14	121	2500.00	2025-04-06

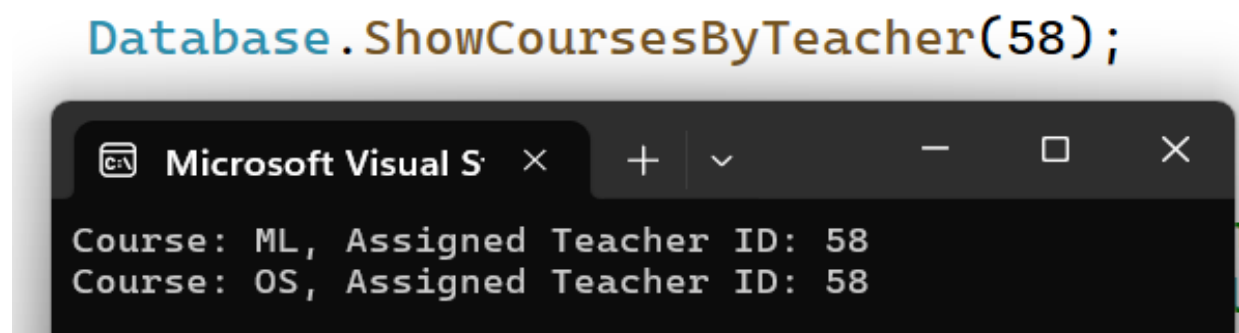
2)Assigning teacher:

```
//Transaction management when assigning teachers  
Database.AssignTeacherToCourseTransactional(58, 17); // teacher_id, course_id  
Console.ReadLine();
```

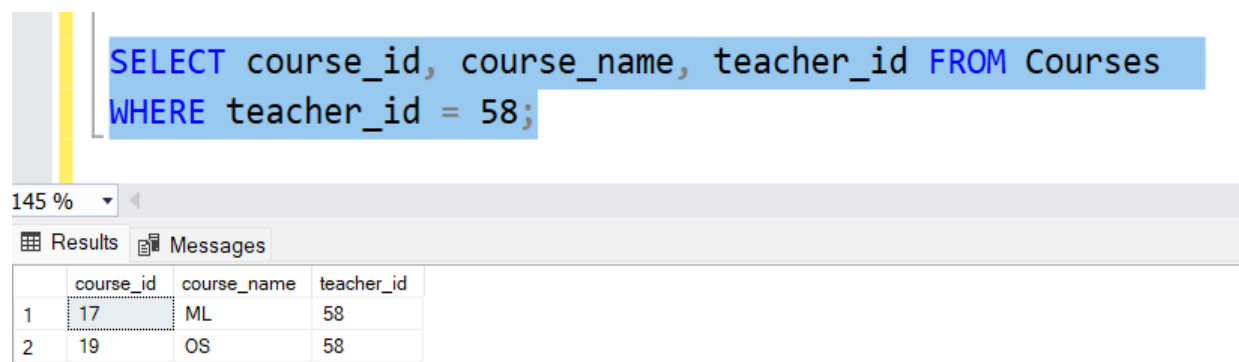


Teacher id 58 is now assigned to course id 17

C# output:



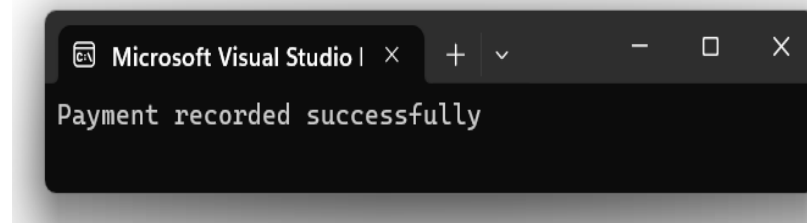
SQL Server Output:



3) Recording payments independently

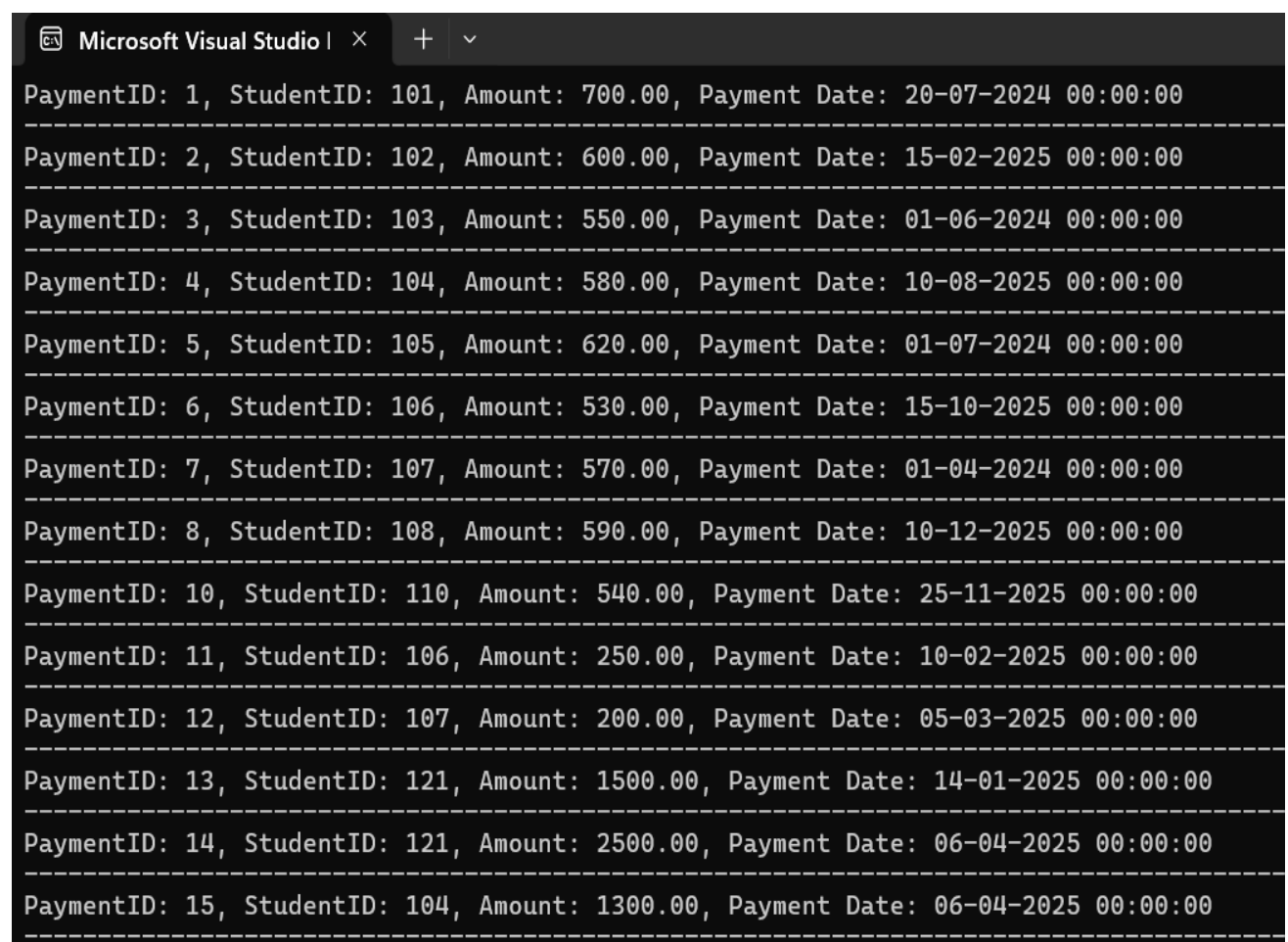
Payment table:

```
//Transaction management when recording payments  
Database.RecordPaymentTransactional(104, 1300.00m, DateTime.Now); //student_id
```



Output in C#:

Student id - 104, payment id - 15, Amount - 1300

A screenshot of a Microsoft Visual Studio window showing a list of payment records. The title bar shows 'Microsoft Visual Studio |' followed by window control buttons. The main content area displays a list of 15 payment records, each on a new line, separated by dashed lines. The records include PaymentID, StudentID, Amount, and Payment Date.

PaymentID: 1,	StudentID: 101,	Amount: 700.00,	Payment Date: 20-07-2024 00:00:00
PaymentID: 2,	StudentID: 102,	Amount: 600.00,	Payment Date: 15-02-2025 00:00:00
PaymentID: 3,	StudentID: 103,	Amount: 550.00,	Payment Date: 01-06-2024 00:00:00
PaymentID: 4,	StudentID: 104,	Amount: 580.00,	Payment Date: 10-08-2025 00:00:00
PaymentID: 5,	StudentID: 105,	Amount: 620.00,	Payment Date: 01-07-2024 00:00:00
PaymentID: 6,	StudentID: 106,	Amount: 530.00,	Payment Date: 15-10-2025 00:00:00
PaymentID: 7,	StudentID: 107,	Amount: 570.00,	Payment Date: 01-04-2024 00:00:00
PaymentID: 8,	StudentID: 108,	Amount: 590.00,	Payment Date: 10-12-2025 00:00:00
PaymentID: 10,	StudentID: 110,	Amount: 540.00,	Payment Date: 25-11-2025 00:00:00
PaymentID: 11,	StudentID: 106,	Amount: 250.00,	Payment Date: 10-02-2025 00:00:00
PaymentID: 12,	StudentID: 107,	Amount: 200.00,	Payment Date: 05-03-2025 00:00:00
PaymentID: 13,	StudentID: 121,	Amount: 1500.00,	Payment Date: 14-01-2025 00:00:00
PaymentID: 14,	StudentID: 121,	Amount: 2500.00,	Payment Date: 06-04-2025 00:00:00
PaymentID: 15,	StudentID: 104,	Amount: 1300.00,	Payment Date: 06-04-2025 00:00:00

SQL Server Output:

Student id - 104, payment id - 15, Amount - 1300

	payment_id	student_id	amount	payment_date
1	1	101	700.00	2024-07-20
2	2	102	600.00	2025-02-15
3	3	103	550.00	2024-06-01
4	4	104	580.00	2025-08-10
5	5	105	620.00	2024-07-01
6	6	106	530.00	2025-10-15
7	7	107	570.00	2024-04-01
8	8	108	590.00	2025-12-10
9	10	110	540.00	2025-11-25
10	11	106	250.00	2025-02-10
11	12	107	200.00	2025-03-05
12	13	121	1500.00	2025-01-14
13	14	121	2500.00	2025-04-06
14	15	104	1300.00	2025-04-06