Assignment

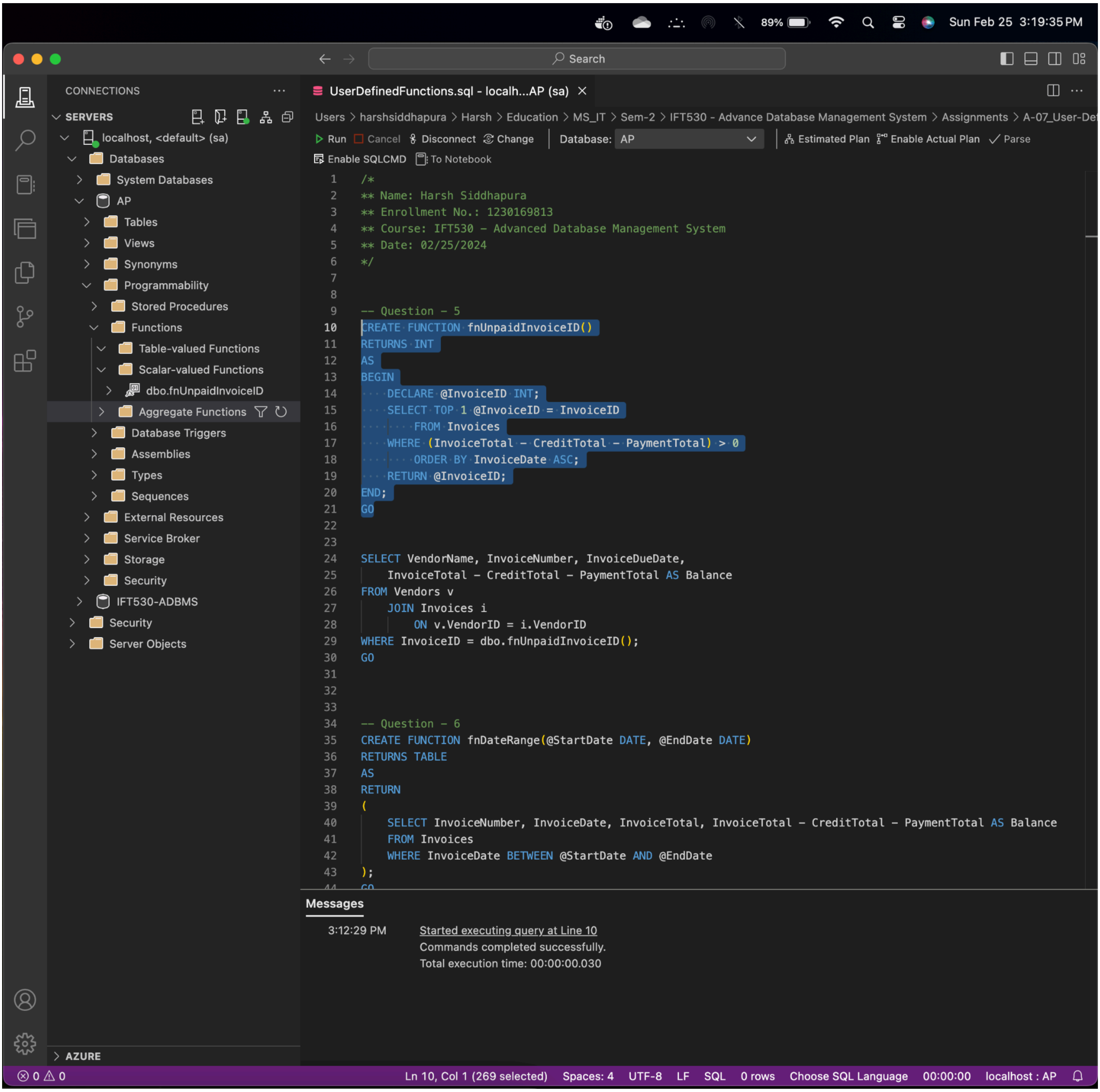
User Defined Functions

Harsh Siddhapura

1230169813

02/18/2024

QUESTION - 5



```sql
/*
** Name: Harsh Siddhapura
** Enrollment No.: 1230169813
** Course: IFT530 - Advanced Database Management System
** Date: 02/25/2024
*/


-- Question - 5
CREATE FUNCTION fnUnpaidInvoiceID()
RETURNS INT
AS
BEGIN
    DECLARE @InvoiceID INT;
    SELECT TOP 1 @InvoiceID = InvoiceID
        FROM Invoices
    WHERE (InvoiceTotal - CreditTotal - PaymentTotal) > 0
        ORDER BY InvoiceDate ASC;
    RETURN @InvoiceID;
END;
GO

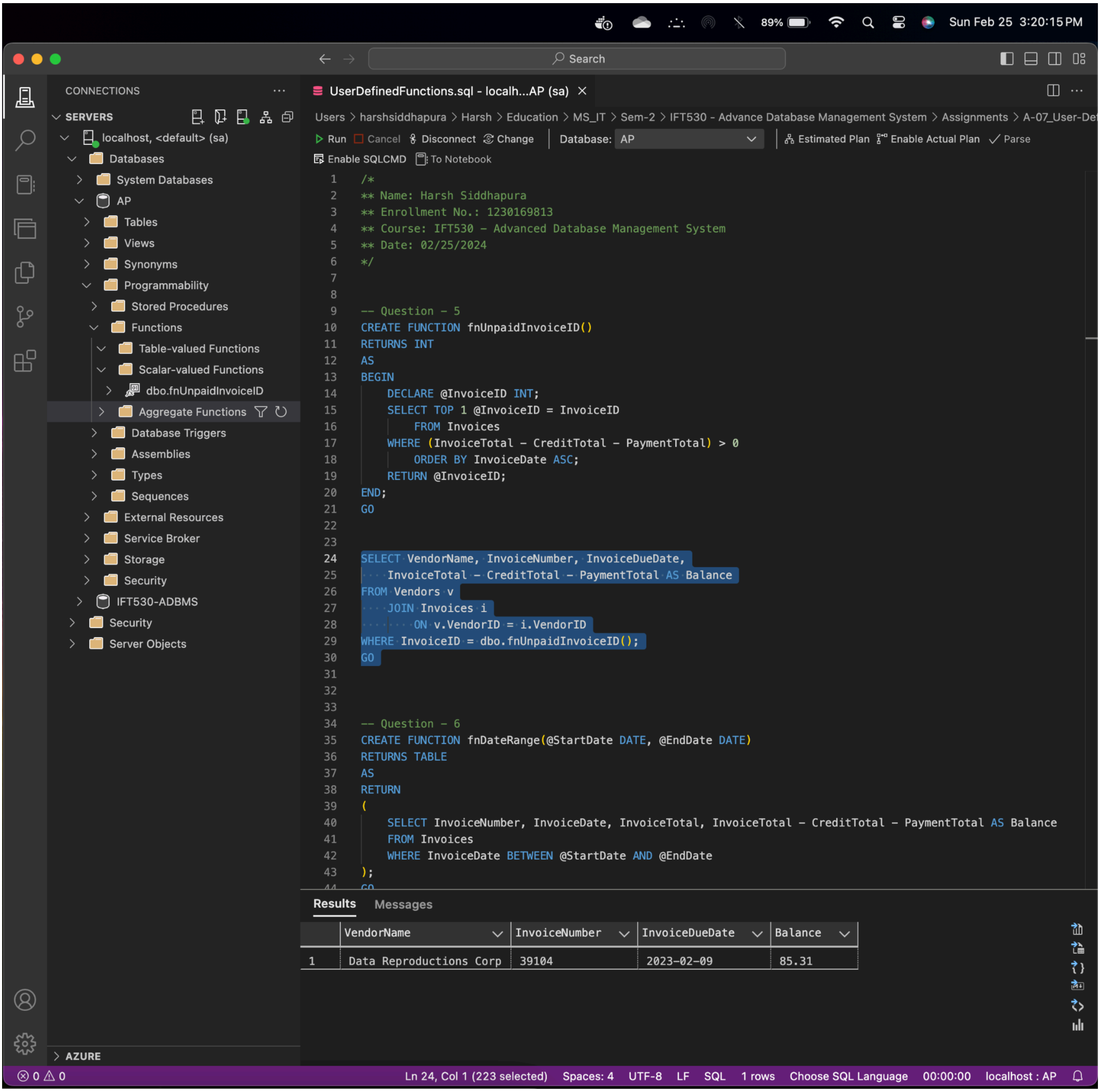

SELECT VendorName, InvoiceNumber, InvoiceDueDate,
    InvoiceTotal - CreditTotal - PaymentTotal AS Balance
FROM Vendors v
    JOIN Invoices i
        ON v.VendorID = i.VendorID
WHERE InvoiceID = dbo.fnUnpaidInvoiceID();
GO



-- Question - 6
CREATE FUNCTION fnDateRange(@StartDate DATE, @EndDate DATE)
RETURNS TABLE
AS
RETURN
(
    SELECT InvoiceNumber, InvoiceDate, InvoiceTotal, InvoiceTotal - CreditTotal - PaymentTotal AS Balance
    FROM Invoices
    WHERE InvoiceDate BETWEEN @StartDate AND @EndDate
);
GO
```

Messages

```
3:12:29 PM    Started executing query at Line 10
              Commands completed successfully.
              Total execution time: 00:00:00.030
```



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** Name: Harsh Siddhapura
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** Date: 02/25/2024
*/


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        ORDER BY InvoiceDate ASC;
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END;
GO


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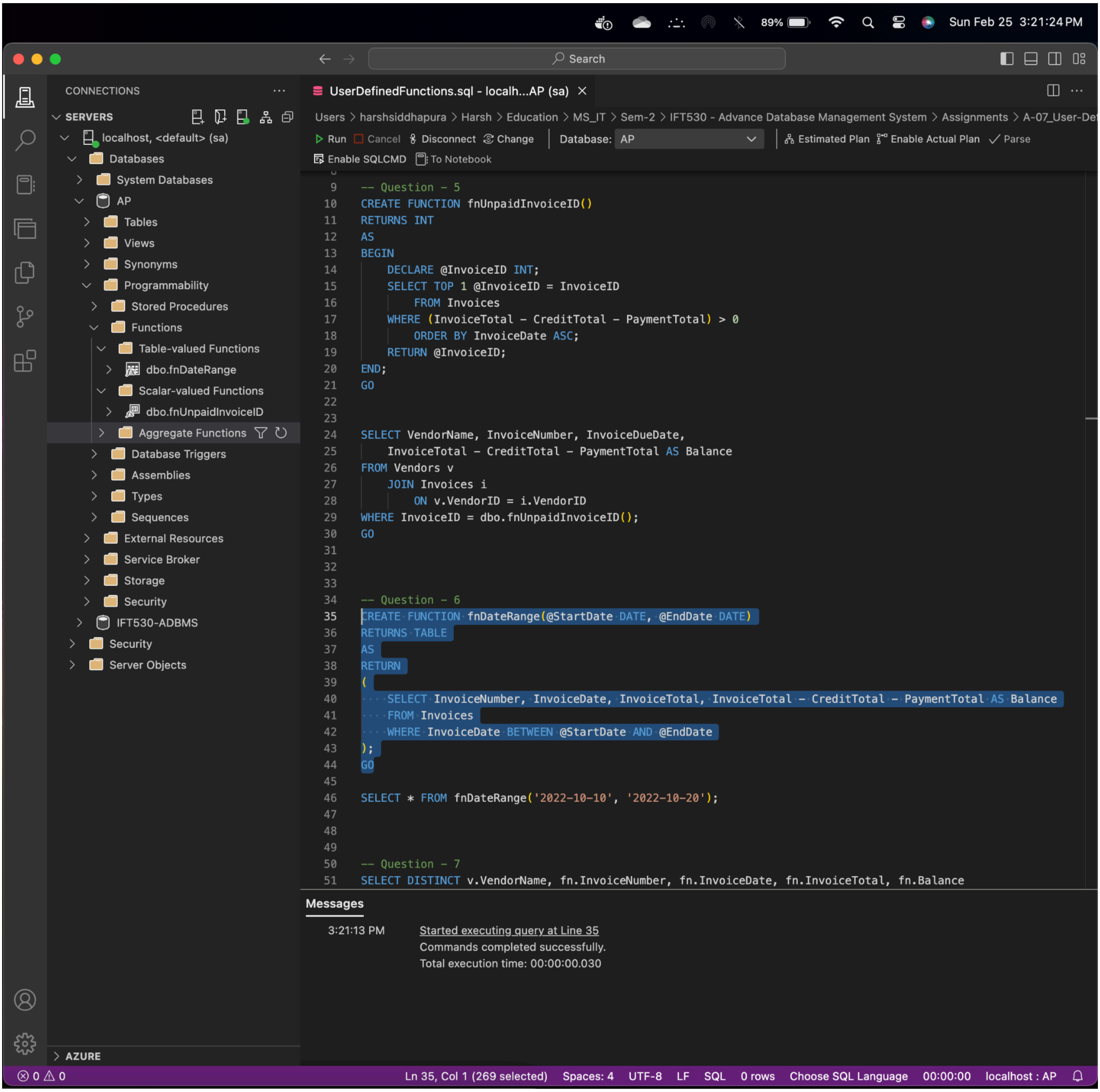
FROM Vendors v
    JOIN Invoices i
        ON v.VendorID = i.VendorID
WHERE InvoiceID = dbo.fnUnpaidInvoiceID();
GO



-- Question - 6
CREATE FUNCTION fnDateRange(@StartDate DATE, @EndDate DATE)
RETURNS TABLE
AS
RETURN
(
    SELECT InvoiceNumber, InvoiceDate, InvoiceTotal, InvoiceTotal - CreditTotal - PaymentTotal AS Balance
    FROM Invoices
    WHERE InvoiceDate BETWEEN @StartDate AND @EndDate
);
GO
```

	VendorName	InvoiceNumber	InvoiceDueDate	Balance
1	Data Reproductions Corp	39104	2023-02-09	85.31

QUESTION - 6



```sql
-- Question - 5
CREATE FUNCTION fnUnpaidInvoiceID()
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AS
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    DECLARE @InvoiceID INT;
    SELECT TOP 1 @InvoiceID = InvoiceID
        FROM Invoices
    WHERE (InvoiceTotal - CreditTotal - PaymentTotal) > 0
        ORDER BY InvoiceDate ASC;
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CREATE FUNCTION fnDateRange(@StartDate DATE, @EndDate DATE)
RETURNS TABLE
AS
RETURN
(
    SELECT InvoiceNumber, InvoiceDate, InvoiceTotal, InvoiceTotal - CreditTotal - PaymentTotal AS Balance
    FROM Invoices
    WHERE InvoiceDate BETWEEN @StartDate AND @EndDate
);
GO

SELECT * FROM fnDateRange('2022-10-10', '2022-10-20');



-- Question - 7
SELECT DISTINCT v.VendorName, fn.InvoiceNumber, fn.InvoiceDate, fn.InvoiceTotal, fn.Balance
```
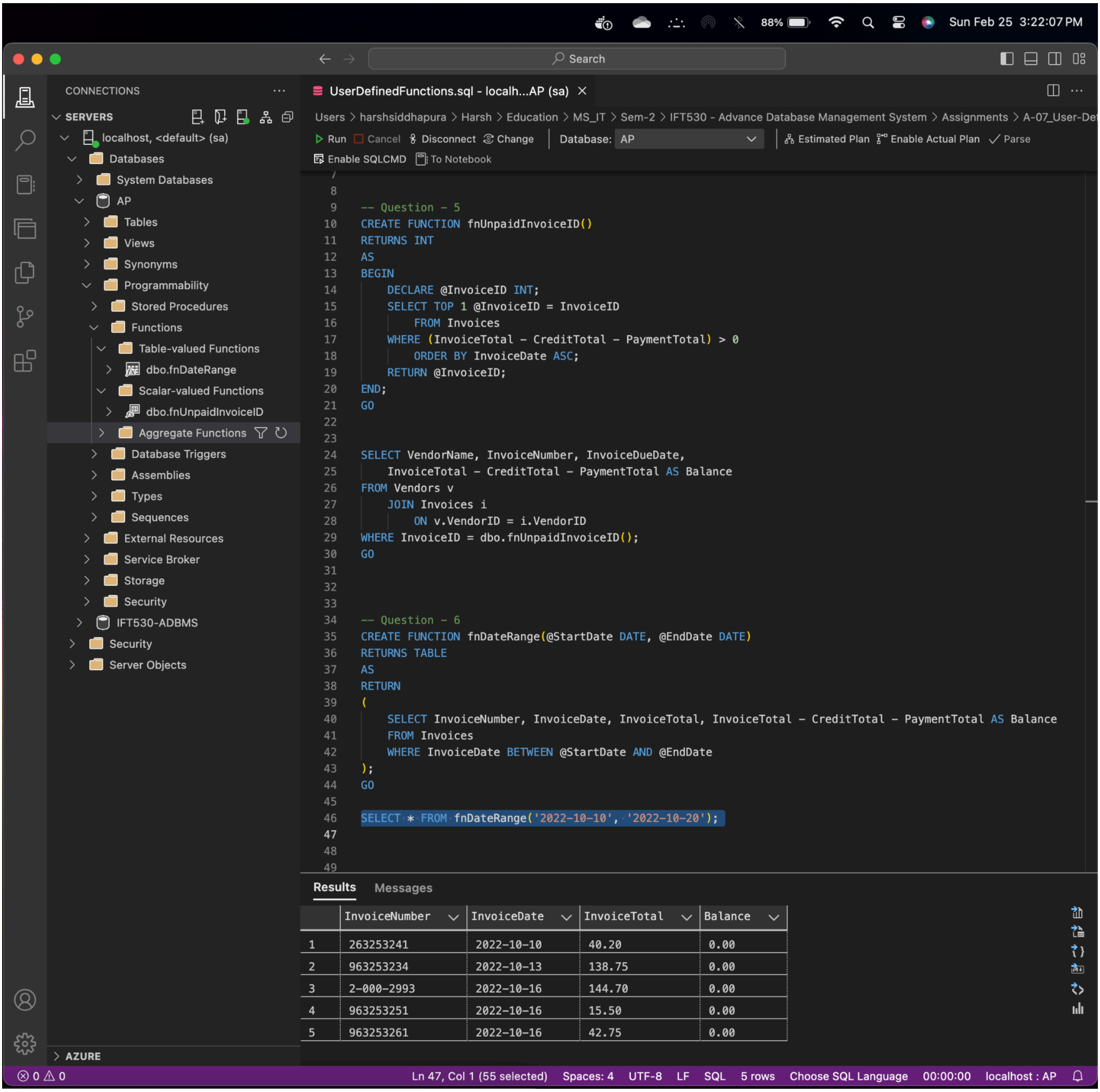

```
3:21:13 PM    Started executing query at Line 35
              Commands completed successfully.
              Total execution time: 00:00:00.030
```



```sql

-- Question - 5
CREATE FUNCTION fnUnpaidInvoiceID()
RETURNS INT
AS
BEGIN
    DECLARE @InvoiceID INT;
    SELECT TOP 1 @InvoiceID = InvoiceID
        FROM Invoices
    WHERE (InvoiceTotal - CreditTotal - PaymentTotal) > 0
        ORDER BY InvoiceDate ASC;
    RETURN @InvoiceID;
END;
GO


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    InvoiceTotal - CreditTotal - PaymentTotal AS Balance
FROM Vendors v
    JOIN Invoices i
        ON v.VendorID = i.VendorID
WHERE InvoiceID = dbo.fnUnpaidInvoiceID();
GO



-- Question - 6
CREATE FUNCTION fnDateRange(@StartDate DATE, @EndDate DATE)
RETURNS TABLE
AS
RETURN
(
    SELECT InvoiceNumber, InvoiceDate, InvoiceTotal, InvoiceTotal - CreditTotal - PaymentTotal AS Balance
    FROM Invoices
    WHERE InvoiceDate BETWEEN @StartDate AND @EndDate
);
GO

SELECT * FROM fnDateRange('2022-10-10', '2022-10-20');


```
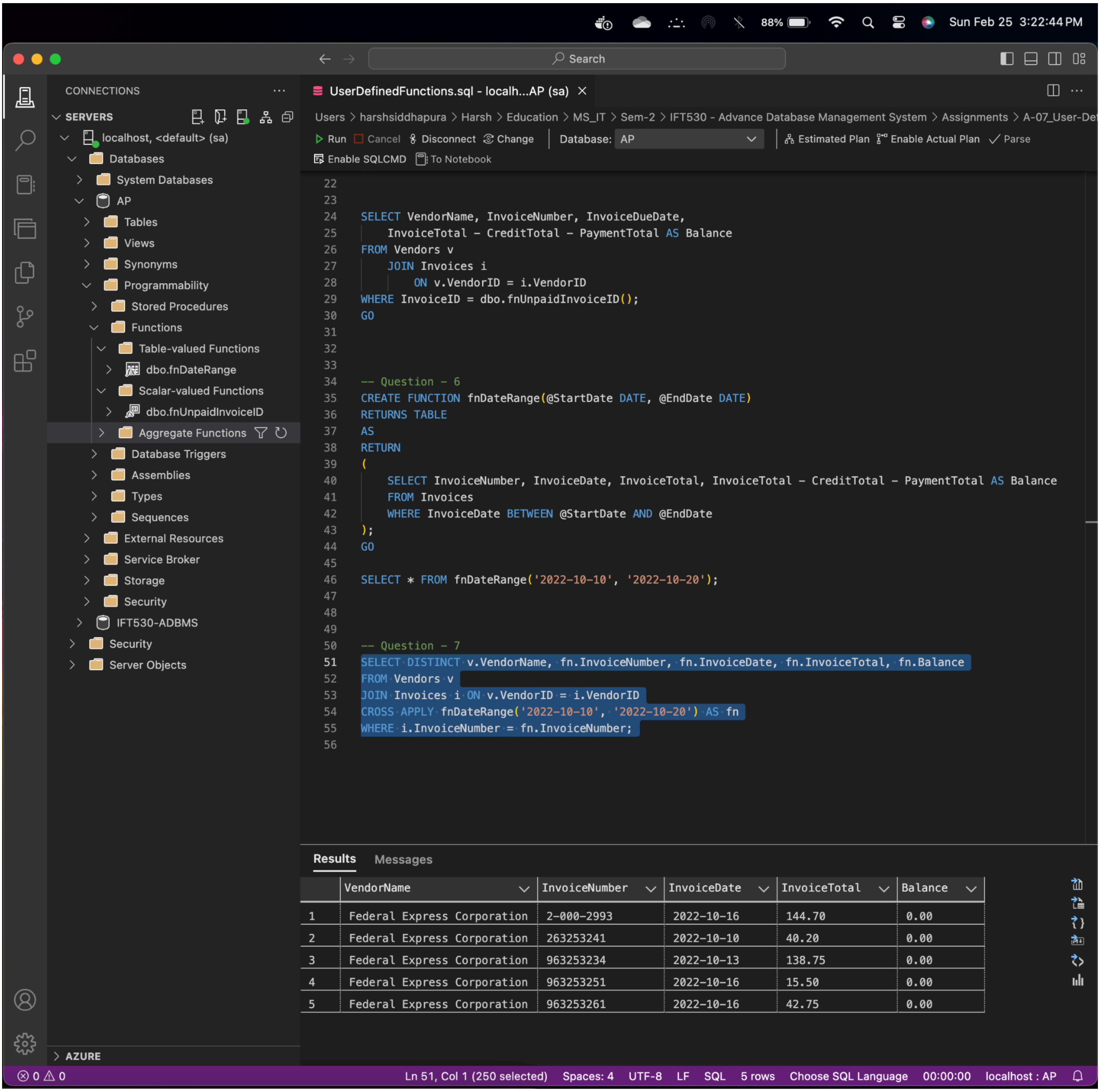

	InvoiceNumber	InvoiceDate	InvoiceTotal	Balance
1	263253241	2022-10-10	40.20	0.00
2	963253234	2022-10-13	138.75	0.00
3	2-000-2993	2022-10-16	144.70	0.00
4	963253251	2022-10-16	15.50	0.00
5	963253261	2022-10-16	42.75	0.00

QUESTION - 7



```sql


SELECT VendorName, InvoiceNumber, InvoiceDueDate,
    InvoiceTotal - CreditTotal - PaymentTotal AS Balance
FROM Vendors v
    JOIN Invoices i
        ON v.VendorID = i.VendorID
WHERE InvoiceID = dbo.fnUnpaidInvoiceID();
GO



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CREATE FUNCTION fnDateRange(@StartDate DATE, @EndDate DATE)
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AS
RETURN
(
    SELECT InvoiceNumber, InvoiceDate, InvoiceTotal, InvoiceTotal - CreditTotal - PaymentTotal AS Balance
    FROM Invoices
    WHERE InvoiceDate BETWEEN @StartDate AND @EndDate
);
GO

SELECT * FROM fnDateRange('2022-10-10', '2022-10-20');



-- Question - 7
SELECT DISTINCT v.VendorName, fn.InvoiceNumber, fn.InvoiceDate, fn.InvoiceTotal, fn.Balance
FROM Vendors v
JOIN Invoices i ON v.VendorID = i.VendorID
CROSS APPLY fnDateRange('2022-10-10', '2022-10-20') AS fn
WHERE i.InvoiceNumber = fn.InvoiceNumber;

```

	VendorName	InvoiceNumber	InvoiceDate	InvoiceTotal	Balance
1	Federal Express Corporation	2-000-2993	2022-10-16	144.70	0.00
2	Federal Express Corporation	263253241	2022-10-10	40.20	0.00
3	Federal Express Corporation	963253234	2022-10-13	138.75	0.00
4	Federal Express Corporation	963253251	2022-10-16	15.50	0.00
5	Federal Express Corporation	963253261	2022-10-16	42.75	0.00

SCRIPT

```
/*

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** Enrollment No.: 1230169813

** Course: IFT530 - Advanced Database Management System

** Date: 02/25/2024

*/


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        ORDER BY InvoiceDate ASC;

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END;

GO


SELECT VendorName, InvoiceNumber, InvoiceDueDate,

    InvoiceTotal - CreditTotal - PaymentTotal AS Balance

FROM Vendors v

    JOIN Invoices i
```

```
        ON v.VendorID = i.VendorID

WHERE InvoiceID = dbo.fnUnpaidInvoiceID();

GO



-- Question - 6

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RETURNS TABLE

AS

RETURN

(

    SELECT InvoiceNumber, InvoiceDate, InvoiceTotal, InvoiceTotal - CreditTotal - PaymentTotal AS Balance

    FROM Invoices

    WHERE InvoiceDate BETWEEN @StartDate AND @EndDate

);

GO



SELECT * FROM fnDateRange('2022-10-10', '2022-10-20');




-- Question - 7

SELECT DISTINCT v.VendorName, fn.InvoiceNumber, fn.InvoiceDate, fn.InvoiceTotal, fn.Balance

FROM Vendors v

JOIN Invoices i ON v.VendorID = i.VendorID

CROSS APPLY fnDateRange('2022-10-10', '2022-10-20') AS fn

WHERE i.InvoiceNumber = fn.InvoiceNumber;
```