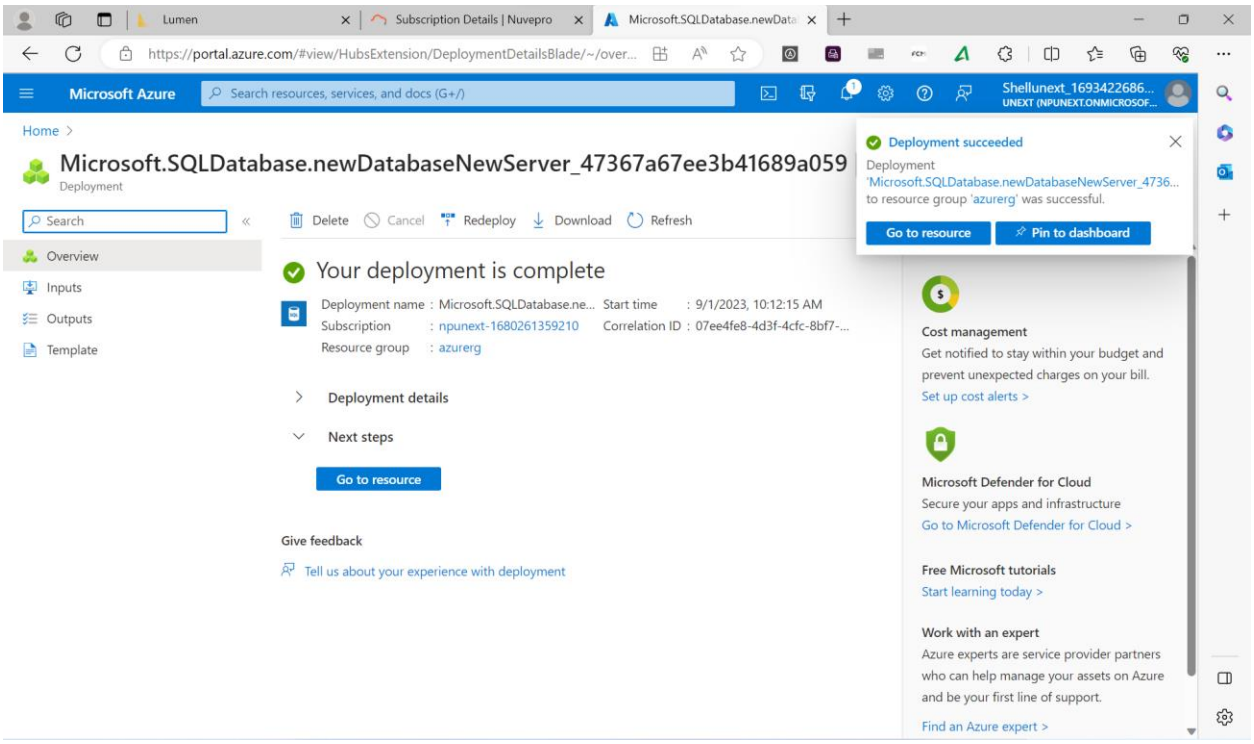
Prerna Singh **DBMS Day-4**

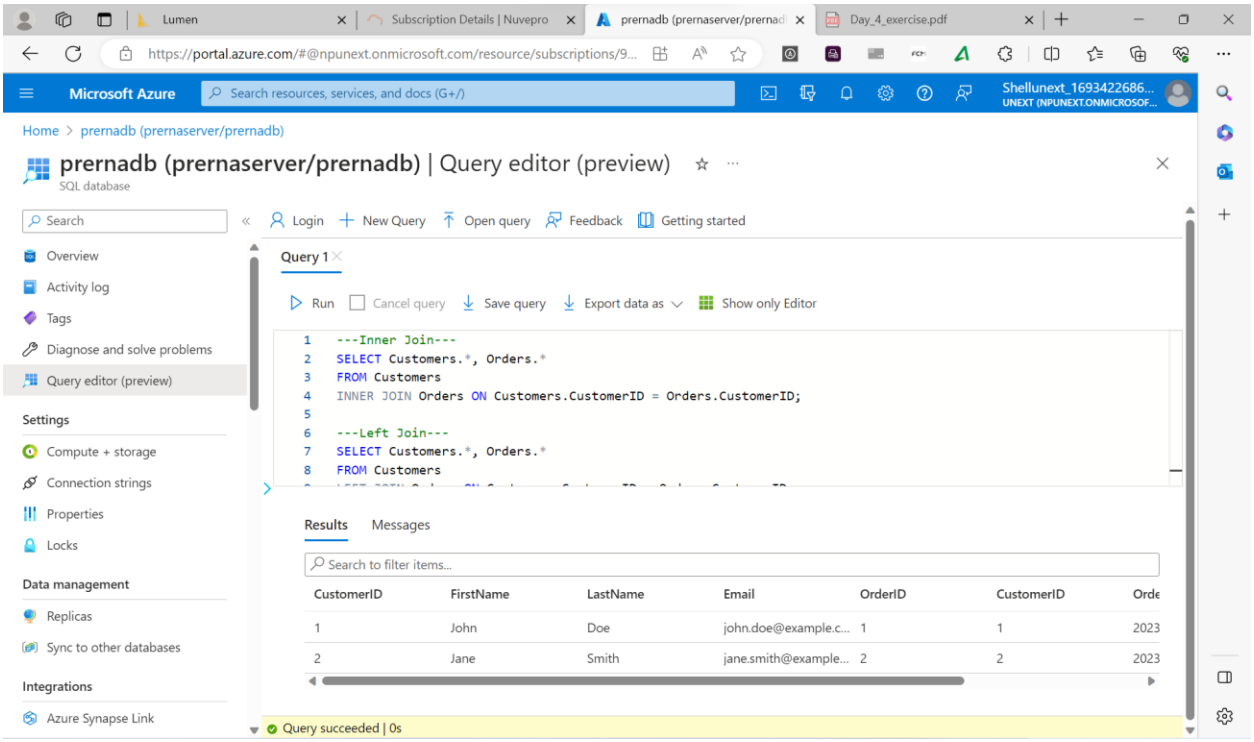
Emp Code- 654870

AZURE SQL



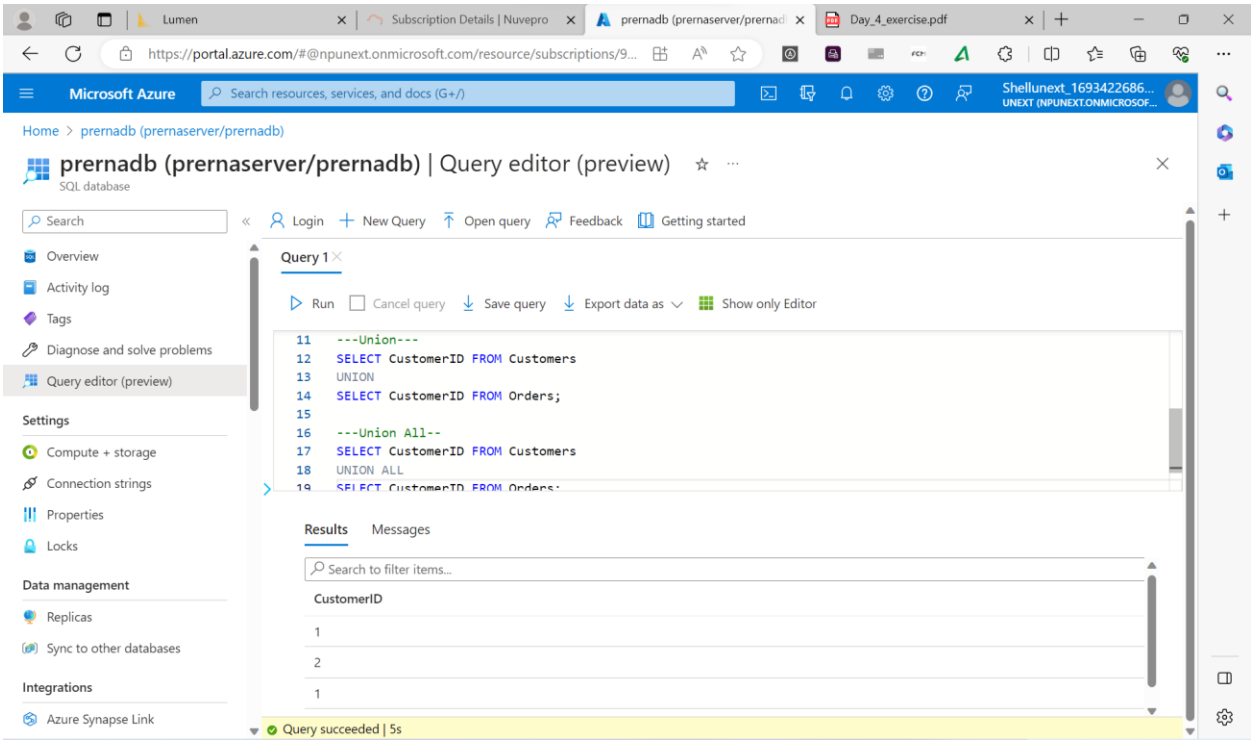

```
CREATE TABLE Customers (
 CustomerID INT PRIMARY KEY,
 FirstName VARCHAR(50),
 LastName VARCHAR(50),
 Email VARCHAR(100)
);

CREATE TABLE Orders (
 OrderID INT PRIMARY KEY,
 CustomerID INT,
 OrderDate DATE,
 TotalAmount DECIMAL(10, 2),
 FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID)
);
```

```
INSERT INTO Customers (CustomerID, FirstName, LastName, Email)
VALUES
 (1, 'John', 'Doe', 'john.doe@example.com'),
 (2, 'Jane', 'Smith', 'jane.smith@example.com')

-- Insert data into the Orders table

INSERT INTO Orders (OrderID, CustomerID, OrderDate, TotalAmount)
VALUES
 (1, 1, '2023-08-01', 50.00),
 (2, 2, '2023-08-15', 75.00)


---Inner Join---
SELECT Customers.*, Orders.*
FROM Customers
INNER JOIN Orders ON Customers.CustomerID = Orders.CustomerID;

---Left Join---
SELECT Customers.*, Orders.*
FROM Customers
LEFT JOIN Orders ON Customers.CustomerID = Orders.CustomerID;
```



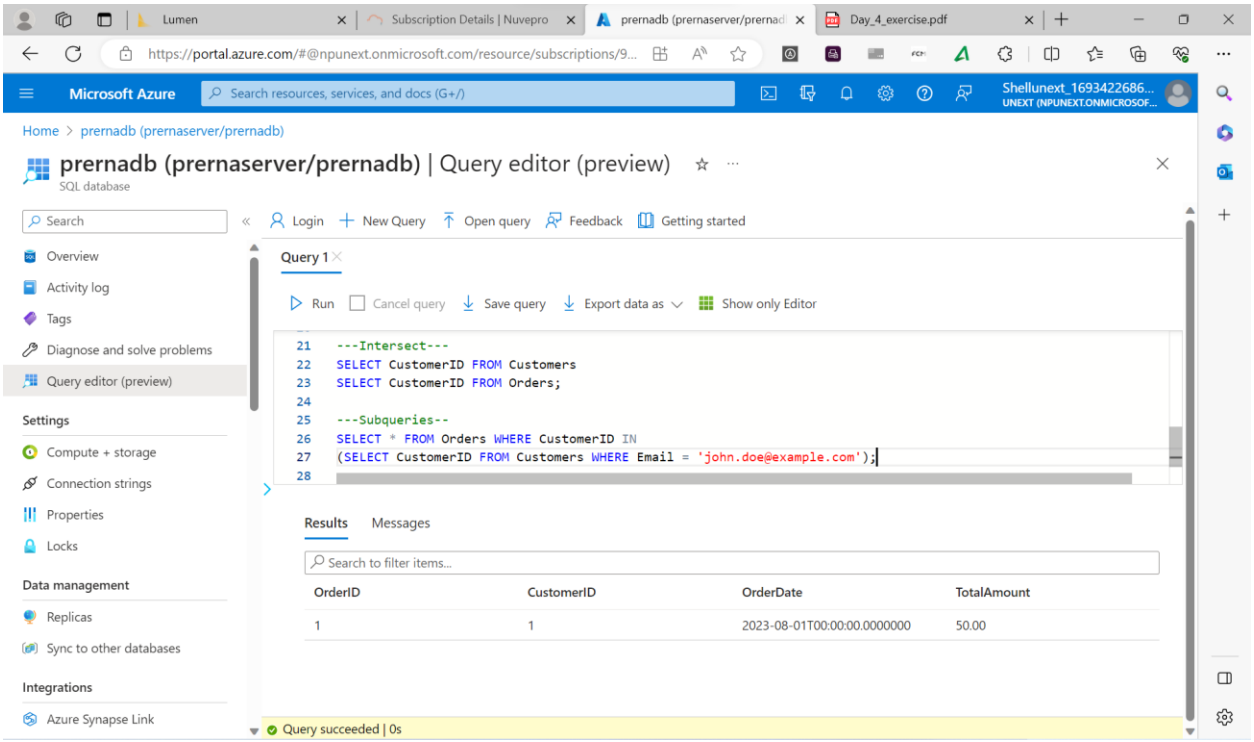
---Union---
SELECT CustomerID FROM Customers
UNION
SELECT CustomerID FROM Orders;

---Union All--
SELECT CustomerID FROM Customers
UNION ALL
SELECT CustomerID FROM Orders;



---Intersect---
SELECT CustomerID FROM Customers
SELECT CustomerID FROM Orders;

---Subqueries--
SELECT * FROM Orders WHERE CustomerID IN
(SELECT CustomerID FROM Customers WHERE Email = 'john.doe@example.com');




```
SELECT * FROM Orders WHERE CustomerID IN
(SELECT CustomerID FROM Customers WHERE Email = 'john.doe@example.com');

SELECT * FROM Customers WHERE CustomerID IN (SELECT CustomerID FROM Orders);

CREATE PROCEDURE GetOrdersByEmail(
@email VARCHAR(100))
AS
 SELECT Orders.*
 FROM Customers
 INNER JOIN Orders ON Customers.CustomerID = Orders.CustomerID
 WHERE Customers.Email = email;\

Exec GetOrdersByEmail @email = 'john.doe@example.com';

--- Functions ---
CREATE FUNCTION CalculateTotalAmount
(
 @OrderID INT
)
RETURNS DECIMAL(10, 2)
AS
```

```
BEGIN
 DECLARE @TotalAmount DECIMAL(10, 2);
 SELECT @TotalAmount = TotalAmount
 FROM Orders
 WHERE OrderID = @OrderID;
 RETURN @TotalAmount;
END;

DECLARE @OrderTotal DECIMAL(10, 2);
SET @OrderTotal = dbo.CalculateTotalAmount(1);
SELECT @OrderTotal AS TotalAmount;


--- Views ---
CREATE VIEW BasicCustomerView AS
SELECT CustomerID, FirstName, LastName
FROM Customers;

CREATE VIEW CustomerOrderView AS
SELECT C.CustomerID, C.FirstName, C.LastName, O.OrderID, O.OrderDate, O.TotalAmount
FROM Customers C
INNER JOIN Orders O ON C.CustomerID = O.CustomerID;

CREATE VIEW CustomerTotalSalesView AS
SELECT C.CustomerID, C.FirstName, C.LastName, SUM(O.TotalAmount) AS TotalSales
FROM Customers C
LEFT JOIN Orders O ON C.CustomerID = O.CustomerID
GROUP BY C.CustomerID, C.FirstName, C.LastName;

--- Indexes ---
CREATE TABLE Products (
 ProductID INT,
 ProductName VARCHAR(100),
 Category VARCHAR(50),
 Price DECIMAL(10, 2),
 StockQuantity INT
);
INSERT INTO Products (ProductID, ProductName, Category, Price, StockQuantity)
VALUES
 (1, 'Product A', 'Electronics', 499.99, 100),
 (2, 'Product B', 'Clothing', 39.99, 250),
 (3, 'Product C', 'Electronics', 899.99, 50);

CREATE CLUSTERED INDEX IX_ProductID ON Products (ProductID);
```

```
CREATE NONCLUSTERED INDEX IX_Category ON Products (Category);
CREATE NONCLUSTERED COLUMNSTORE INDEX CS_Price ON Products (Price);
```

Subqueries Exercise –

```
CREATE TABLE Galleries(ID int primary key,City varchar(20));
CREATE TABLE Paintings(ID int primary key,Names varchar(20),Gallery_ID int, Price int);

INSERT INTO Galleries VALUES
   (1,'Jaipur'),
   (2,'Kolkata'),
   (3,'Madhubani');

INSERT INTO Paintings VALUES
   (1,'Patterns',3,5000),
   (2,'Ringer',1,4500),
   (3,'Gift',1,3200),
   (4,'Violin Lessons',2,6700),
   (5,'Curiosity',2,9800);

CREATE TABLE sales_agents(ID int,last_name varchar(20),first_name varchar(20),gallery_id int,a
gency_fee int);

INSERT INTO sales_agents VALUES
(1,'Brown','Denis',2,2250),
(2,'White','Kate',3,3120),
(3,'Black ','Sarah',2,1640),
(4,'Smith','Helen',1,4500),
(5,'Stewart','Tom',3,2130);

CREATE TABLE Managers(ID int,gallery_id int);
INSERT INTO Managers VALUES
   (1,2),
   (2,3),
   (4,1);

Select id,names,price
from paintings
where concat(names,price)
in (Select concat(names,min(price)) from paintings group by names);

Select Galleries.City,C.Cnt
From Galleries,(Select count(*) as Cnt,gallery_id from paintings group by gallery_id) C
```

```
Where Galleries.ID=C.gallery_id;

Select concat(S.first_name,' ',S.last_name) Full_name,S.agency_fee
From sales_agents S
Where S.agency_fee >= (Select avg(agency_fee)
                       From sales_agents S2
                       Where S2.gallery_id = S.gallery_id);
```