Date: 29-12-2025

Day 2 - Querying & Modifying Data

1. Creating Database

CREATE DATABASE INSDB;
USE INSDB;

2. Creating Tables

Customer Table:

```
CREATE TABLE Customers (
    CustomerID INT IDENTITY PRIMARY KEY,
    FirstName VARCHAR(50) NOT NULL,
    LastName VARCHAR(50),
    DateOfBirth DATE,
    Phone VARCHAR(15),
    Email VARCHAR(100) UNIQUE
);
```

Policies Table:

```
CREATE TABLE Policies (
    PolicyID INT IDENTITY PRIMARY KEY,
    PolicyName VARCHAR(50),
    PolicyType VARCHAR(50),
    PremiumAmount INT,
    DurationYears INT
);
```

PolicyAssignments Table:

```
CREATE TABLE PolicyAssignments (
    AssignmentID  INT IDENTITY PRIMARY KEY,
    CustomerID INT,
    PolicyID INT,
    AgentID VARCHAR(50),
    StartDate DATE,
    EndDate DATE,
    FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID),
    FOREIGN KEY (PolicyID) REFERENCES Policies(PolicyID)
);
```

Claims Table:

```
CREATE TABLE Claims (
    ClaimID INT IDENTITY PRIMARY KEY,
    AssignmentID INT,
    ClaimDate DATE,
    ClaimAmount INT,
    ClaimStatus VARCHAR(50),
    FOREIGN KEY (AssignmentID) REFERENCES PolicyAssignments(AssignmentID)
);
```

3. Insertions

```
INSERT INTO Customers
VALUES
('Ajay', 'Rao', '2005-01-29', '6305284031', 'ajayrao1294@gmail.com');
INSERT INTO Customers
VALUES
('Ravi', 'Kumar', '1999-05-15', '9876543210', 'ravikumar@gmail.com');

INSERT INTO Policies
VALUES
('Health Plus', 'Health', 12000, 5),
('Life Secure', 'Life', 15000, 10);

INSERT INTO PolicyAssignments
VALUES
(1, 1, 'AGT101', '2024-01-01', '2029-01-01'),
(2, 2, 'AGT102', '2023-06-01', '2033-06-01');

INSERT INTO Claims
VALUES
(1, '2024-06-15', 50000, 'Approved'),
(2, '2024-08-10', 100000, 'Pending');
```

4. Select Commands

1. Select * from Customers;

	CustomerID	FirstName	LastName	DateOfBirth	Phone	Email
1	1	Ajay	Rao	2005-01-29	6305284031	ajayrao1294@gmail.com
2	2	Ravi	Kumar	1999-05-15	9876543210	ravikumar@gmail.com

2.Select CustomerID, PolicyID, StartDate, EndDate from PolicyAssignments;

	CustomerID	PolicyID	StartDate	EndDate
1	1	1	2024-01-01	2029-01-01
2	2	2	2023-06-01	2033-06-01

3.Select * From Policies WHERE PolicyType='Health';

	PolicyID	PolicyName	PolicyType	PremiumAmount	DurationYears
1	1	Health Plus	Health	12000	5

4.Select * from Policies Where PremiumAmount>10000 and DurationYears=1;

	PolicyID	PolicyName	PolicyType	PremiumAmount	DurationYears
1	1003	Star Plus	Health	16000	1

5.Select DISTINCT City from Agents;

	City
1	Chennai
2	Hyderabad

6.Select * From Policies WHERE PolicyType= 'Health' OR PolicyType='Life' OR PolicyType='Motor';

	PolicyID	PolicyName	PolicyType	PremiumAmount	DurationYears
1	1	Health Plus	Health	12000	5
2	2	Life Secure	Life	15000	10

7.Select * From Policies WHERE PolicyType IN('Health','Life','Motor');

	PolicyID	PolicyName	PolicyType	PremiumAmount	DurationYears
1	1	Health Plus	Health	12000	5
2	2	Life Secure	Life	15000	10

8.Select * from Customers where DateOfBirth > '2001-01-01'and DateOfBirth < '2020-12-31';

	CustomerID	FirstName	LastName	DateOfBirth	Phone	Email
1	1	Ajay	Rao	2005-01-29	6305284031	ajayrao1294@gmail.com

9.Select * from Customers where DateOfBirth BETWEEN '2001-01-01'and '2020-12-31';

	CustomerID	FirstName	LastName	DateOfBirth	Phone	Email
1	1	Ajay	Rao	2005-01-29	6305284031	ajayrao1294@gmail.com

10.Select * from Claims where ClaimStatus='Rejected';

	ClaimID	AssignmentID	ClaimDate	ClaimAmount	ClaimStatus
1	1004	2	2024-05-05	50000	Rejected

11.Select * from Agents where City LIKE '_A%';

	AgentID	AgentName	Phone	City
1	3	Raju	9989723210	Banglore

12. Select Max(ClaimAmount) as HighestCA, Min(ClaimAmount) as LowestCA from Claims;

	HighestCA	LowestCA
1	100000	50000

13.Select TOP 1 * From Claims ORDER BY ClaimDate DESC;

	ClaimID	AssignmentID	ClaimDate	ClaimAmount	ClaimStatus
1	2	2	2024-08-10	100000	Pending

14.UPDATE Policies Set PremiumAmount=PremiumAmount*1.10;

15.DELETE FROM PolicyAssignments WHERE EndDate < GETDATE();

16.Select Count(*) from Claims where ClaimStatus='Rejected';

	(No column name)
1	1

17.SELECT PolicyID, PolicyName, PremiumAmount, PremiumAmount * 0.06 AS LocalTaxes, PremiumAmount + (PremiumAmount * 0.06) AS PremiumAmountWithTax, PremiumAmount/12.0 AS MonthlyPremiumAmount FROM Policies;

	PolicyID	PolicyName	PremiumAmount	LocalTaxes	PremiumAmountWithTax	MonthlyPremiumAmount
1	1	Health Plus	13200	792.00	13992.00	1100.000000
2	2	Life Secure	16500	990.00	17490.00	1375.000000
3	1002	Star Plus	6600	396.00	6996.00	550.000000
4	1003	Star Plus	17600	1056.00	18656.00	1466.666666

18.ALTER TABLE Customers ADD Address VARCHAR(100), City VARCHAR(50);

19.ALTER TABLE Agents ADD DevOfId INT;

20.ALTER TABLE Agents ADD CONSTRAINT FK_Agents_DevOf FOREIGN KEY (DevOfId) REFERENCES Agents(AgentID);

5. Queries using Joins, Group By, Having etc.

1.Select P.* FROM Policies P JOIN PolicyAssignments PA ON P.PolicyID = PA.PolicyID WHERE PA.CustomerID = 5;

2. Select C.CustomerID, C.FirstName, C.LastName, P.PolicyName, P.PolicyType FROM Customers C JOIN PolicyAssignments PA ON C.CustomerID = PA.CustomerID JOIN Policies P ON PA.PolicyID = P.PolicyID;

	CustomerID	FirstName	LastName	PolicyName	PolicyType
1	1	Ajay	Rao	Health Plus	Health
2	2	Ravi	Kumar	Life Secure	Life

3.Select C.FirstName, C.LastName, CL.ClaimAmount, CL.ClaimStatus,CL.ClaimDate FROM Claims CL JOIN PolicyAssignments PA ON CL.AssignmentID = PA.AssignmentID JOIN Customers C ON PA.CustomerID = C.CustomerID;

	FirstName	LastName	ClaimAmount	ClaimStatus	ClaimDate
1	Ajay	Rao	50000	Approved	2024-06-15
2	Ravi	Kumar	100000	Pending	2024-08-10
3	Ravi	Kumar	50000	Rejected	2024-05-05

4.Select C.FirstName, P.PolicyName, A.AgentName, PA.StartDate, PA.EndDate
FROM PolicyAssignments PA JOIN Customers C ON PA.CustomerID = C.CustomerID
JOIN Policies P ON PA.PolicyID = P.PolicyID JOIN Agents A ON CAST(A.AgentID AS
VARCHAR) = PA.AgentID;

FirstName	PolicyName	AgentName	StartDate	EndDate

5. Select C.FirstName, P.PolicyName, CL.ClaimAmount, CL.ClaimStatus,CL.ClaimDate
FROM Claims CL JOIN PolicyAssignments PA ON CL.AssignmentID = PA.AssignmentID
JOIN Customers C ON PA.CustomerID = C.CustomerID JOIN Policies P ON PA.PolicyID =
P.PolicyID;

	FirstName	PolicyName	ClaimAmount	ClaimStatus	ClaimDate
1	Ajay	Health Plus	50000	Approved	2024-06-15
2	Ravi	Life Secure	100000	Pending	2024-08-10
3	Ravi	Life Secure	50000	Rejected	2024-05-05

6.Select C.CustomerID,C.FirstName,C.LastName,P.PolicyName FROM Customers C LEFT
JOIN PolicyAssignments PA ON C.CustomerID = PA.CustomerID
LEFT JOIN Policies P ON PA.PolicyID = P.PolicyID;

	CustomerID	FirstName	LastName	PolicyName
1	1	Ajay	Rao	Health Plus
2	2	Ravi	Kumar	Life Secure

7.Select DISTINCT C.CustomerID,C.FirstName,C.LastName FROM Customers C
LEFT JOIN PolicyAssignments PA ON C.CustomerID = PA.CustomerID
LEFT JOIN Claims CL ON PA.AssignmentID = CL.AssignmentID
WHERE CL.ClaimID IS NULL;

	Results	Messages	
	CustomerID	FirstName	LastName

8.Select C.FirstName, SUM(CL.ClaimAmount) AS TotalClaimAmount FROM Customers C
JOIN PolicyAssignments PA ON C.CustomerID = PA.CustomerID
JOIN Claims CL ON PA.AssignmentID = CL.AssignmentID
GROUP BY C.FirstName;

	Results	Messages
	FirstName	TotalClaimAmount
1	Ajay	50000
2	Ravi	150000

9.Select C.FirstName,SUM(CL.ClaimAmount) AS TotalClaimAmount FROM Customers C
JOIN PolicyAssignments PA ON C.CustomerID = PA.CustomerID
JOIN Claims CL ON PA.AssignmentID = CL.AssignmentID
GROUP BY C.FirstName HAVING SUM(CL.ClaimAmount) > 50000;

	Results	Messages
	FirstName	TotalClaimAmount
1	Ravi	150000

10.Select A.AgentName, COUNT(PA.PolicyID) AS PolicyCount FROM Agents A
LEFT JOIN PolicyAssignments PA ON CAST(A.AgentID AS VARCHAR) = PA.AgentID
GROUP BY A.AgentName;

	Results	Messages
	AgentName	PolicyCount
1	Raju	0
2	Ramesh	0
3	Suresh	0