

Date: 29-12-2025

Day 2 :- Querying & Modifying Data Assignment

1.Create Database

```
CREATE DATABASE InsuranceDB;  
USE InsuranceDB;
```

```
Commands completed successfully.
```

```
Completion time: 2025-12-29T17:22:28.1776546+05:30
```

2. Create table commands for all the tables with constraints, relationships etc.

Customers:

```
create table customers(customerId int primary key,firstname varchar(50) ,lastname  
varchar(50),dob date,phone varchar(20),email varchar(50));
```

policies:

```
create table policies(policyId int primary key,policyName varchar(20) not  
null,policyType varchar(20),premiumAmount decimal(20,2),durationYears int );
```

agents:

```
create table agents(agentId int primary key,agentName varchar(20) not null,phone  
varchar(20),city varchar(20));
```

policyAssignment:

```
create table policyAssignment(assignmentId int primary key,customerId int references  
customers(customerId),policyId int references policies(policyId),agentId int references  
agents(agentId),startDate date,endDate date);
```

claims:

```
create table claims(claimId int primary key,assignmentId int references
policyAssignment(assignmentId),claimDate date, claimAmount
decimal(20,2),claimStatus varchar(10));
```

3. Insert commands for all tables.

```
INSERT INTO customers VALUES
```

```
(1,'Ravi','Kumar','1995-06-12','9876543210','ravi@gmail.com'),
(2,'Anita','Sharma','1992-03-25','9123456780','anita@gmail.com'),
(3,'Suresh','Reddy','1988-11-10','9988776655','suresh@gmail.com'),
(4,'Priya','Singh','1996-08-14','9012345678','priya@gmail.com'),
(5,'Amit','Verma','1990-01-30','9090909090','amit@gmail.com'),
(6,'Neha','Gupta','1994-12-05','9888888888','neha@gmail.com'),
(7,'Kiran','Patel','1987-07-19','9777777777','kiran@gmail.com'),
(8,'Pooja','Nair','1993-05-22','9666666666','pooja@gmail.com'),
(9,'Rahul','Das','1991-09-09','9555555555','rahul@gmail.com'),
(10,'Sneha','Iyer','1997-04-03','9444444444','sneha@gmail.com');
```

```
INSERT INTO policies VALUES
```

```
(101,'Life Secure','Life',25000.00,20),
(102,'Health Plus','Health',18000.00,10),
(103,'Car Protect','Vehicle',12000.00,5),
(104,'Home Shield','Property',15000.00,15),
(105,'Travel Safe','Travel',8000.00,2),
(106,'Child Future','Life',20000.00,18),
```

(107,'Senior Care','Health',22000.00,8),
(108,'Bike Guard','Vehicle',6000.00,3),
(109,'Term Life','Life',30000.00,25),
(110,'Family Health','Health',28000.00,12);

INSERT INTO agents VALUES

(201,'Arjun','9000011111','Hyderabad'),
(202,'Meena','9000022222','Bangalore'),
(203,'Rahul','9000033333','Chennai'),
(204,'Suman','9000044444','Delhi'),
(205,'Rohit','9000055555','Mumbai'),
(206,'Anjali','9000066666','Pune'),
(207,'Vikas','9000077777','Kolkata'),
(208,'Divya','9000088888','Kochi'),
(209,'Nitin','9000099999','Jaipur'),
(210,'Swathi','9000000000','Vizag');

INSERT INTO policyAssignment VALUES

(301,1,101,201,'2022-01-01','2042-01-01'),
(302,2,102,202,'2023-05-10','2033-05-10'),
(303,3,103,203,'2024-02-15','2029-02-15'),
(304,4,104,204,'2021-07-01','2036-07-01'),
(305,5,105,205,'2023-11-20','2025-11-20'),

```
(306,6,106,206,'2020-03-18','2038-03-18'),  
(307,7,107,207,'2022-09-25','2030-09-25'),  
(308,8,108,208,'2024-01-10','2027-01-10'),  
(309,9,109,209,'2019-06-05','2044-06-05'),  
(310,10,110,210,'2023-04-12','2035-04-12');
```

```
INSERT INTO claims VALUES
```

```
(401,301,'2023-02-15',40000.00,'Approved'),  
(402,302,'2024-01-20',50000.00,'Approved'),  
(403,303,'2024-08-05',15000.00,'Pending'),  
(404,304,'2022-12-10',30000.00,'Rejected'),  
(405,305,'2024-05-18',10000.00,'Approved'),  
(406,306,'2021-06-25',45000.00,'Approved'),  
(407,307,'2023-11-02',25000.00,'Pending'),  
(408,308,'2024-03-14',8000.00,'Approved'),  
(409,309,'2020-10-30',60000.00,'Rejected'),  
(410,310,'2024-09-01',35000.00,'Pending');
```

4)

1.View all Customers

```
SELECT * FROM customers;
```

	customerId	firstname	lastname	dob	phone	email
1	1	Ravi	Kumar	1995-06-12	9876543210	ravi@gmail.com
2	2	Anita	ξ Click to select the whole column			anita@gmail.com
3	3	Suresh	Reddy	1988-11-10	9988776655	suresh@gmail.com
4	4	Priya	Singh	1996-08-14	9012345678	priya@gmail.com
5	5	Amit	Verma	1990-01-30	9090909090	amit@gmail.com
6	6	Neha	Gupta	1994-12-05	9888888888	neha@gmail.com
7	7	Kiran	Patel	1987-07-19	9777777777	kiran@gmail.com
8	8	Pooja	Nair	1993-05-22	9666666666	pooja@gmail.com
9	9	Rahul	Das	1991-09-09	9555555555	rahul@gmail.com
10	10	Sneha	Iyer	1997-04-03	9444444444	sneha@gmail.com

2.View PolicyAssignment columns

SELECT customerId, policyId, startDate, endDate FROM policyAssignment;

	customerId	policyId	startDate	endDate
1	1	101	2022-01-01	2042-01-01
2	2	102	2023-05-10	2033-05-10
3	3	103	2024-02-15	2029-02-15
4	4	104	2021-07-01	2036-07-01
5	5	105	2023-11-20	2025-11-20
6	6	106	2020-03-18	2038-03-18
7	7	107	2022-09-25	2030-09-25
8	8	108	2024-01-10	2027-01-10
9	9	109	2019-06-05	2044-06-05
10	10	110	2023-04-12	2035-04-12

3.Health Policies

SELECT * FROM policies WHERE policyType='Health';

	policyId	policyName	policyType	premiumAmount	durationYears
1	102	Health Plus	Health	18000.00	10
2	107	Senior Care	Health	22000.00	8
3	110	Family Health	Health	28000.00	12

4.Premium >10000 and Duration=1

SELECT * FROM policies WHERE premiumAmount>10000 AND durationYears=1;

policyId	policyName	policyType	premiumAmount	durationYears
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5.Unique Agent Cities

SELECT DISTINCT city FROM agents;

	city
1	Bangalore
2	Chennai
3	Delhi
4	Hyderabad
5	Jaipur
6	Kochi
7	Kolkata
8	Mumbai
9	Pune
10	Vizag

6. List policies of type Life, Health, Motor use OR clause.

SELECT * FROM policies WHERE policyType='Life' OR policyType='Health' OR policyType='Motor';

	policyId	policyName	policyType	premiumAmount	durationYears
1	101	Life Secure	Life	25000.00	20
2	102	Health Plus	Health	18000.00	10
3	106	Child Future	Life	20000.00	18
4	107	Senior Care	Health	22000.00	8
5	109	Term Life	Life	30000.00	25
6	110	Family Health	Health	28000.00	12

7. List policies of type Life, Health, Motor use IN operator

SELECT * FROM policies WHERE policyType IN ('Life','Health','Motor');

	policyId	policyName	policyType	premiumAmount	durationYears
1	101	Life Secure	Life	25000.00	20
2	102	Health Plus	Health	18000.00	10
3	106	Child Future	Life	20000.00	18
4	107	Senior Care	Health	22000.00	8
5	109	Term Life	Life	30000.00	25
6	110	Family Health	Health	28000.00	12

8. Customers DOB range (>= <=)

SELECT * FROM customers WHERE dob>='2001-01-01' AND dob<='2020-12-31';

customerId	firstname	lastname	dob	phone	email
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9. Customers DOB range (BETWEEN)

SELECT * FROM customers WHERE dob BETWEEN '2001-01-01' AND '2020-12-31';

customerId	firstname	lastname	dob	phone	email
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10. Rejected Claims

SELECT * FROM claims WHERE claimStatus='Rejected';

	claimId	assignmentId	claimDate	claimAmount	claimStatus
Click to select all grid cells			2022-12-10	30000.00	Rejected
2	409	309	2020-10-30	60000.00	Rejected

11. Agents city second letter 'a'

SELECT * FROM agents WHERE city LIKE '_a%';

	agentId	agentName	phone	city
1	202	Meena	9000022222	Bangalore
2	209	Nitin	9000099999	Jaipur

12.Max & Min Claim

SELECT MAX(claimAmount) AS MaxClaim, MIN(claimAmount) AS MinClaim FROM claims;

	MaxClaim	MinClaim
1	60000.00	8000.00

13.Latest Claim

SELECT * FROM claims WHERE claimDate = (SELECT MAX(claimDate) FROM claims);

	claimId	assignmentId	claimDate	claimAmount	claimStatus
1	410	310	2024-09-01	35000.00	Pending

14.Increase Health Premium 10%

UPDATE policies SET premiumAmount=premiumAmount*1.1 WHERE policyType='Health';

(3 rows affected)

Completion time: 2025-12-29T17:33:29.4939790+05:30

15.Delete expired PolicyAssignments

DELETE FROM policyAssignment WHERE endDate < GETDATE();

OR

DELETE FROM claims

WHERE assignmentId IN (

SELECT assignmentId

FROM policyAssignment

WHERE endDate < GETDATE()

);


```
DELETE FROM policyAssignment
```

```
WHERE endDate < GETDATE();
```

```
(1 row affected)
```

```
(1 row affected)
```

```
Completion time: 2025-12-29T17:37:01.8571653+05:30
```

16.Rejected Claims Count

```
SELECT COUNT(*) FROM claims WHERE claimStatus='Rejected';
```

	(No column name)
1	2

17.Computed Premium Fields

```
SELECT policyId, policyName, premiumAmount,  
premiumAmount*0.06 AS LocalTaxes,  
premiumAmount*1.06 AS PremiumAmountWithTax,  
premiumAmount/12 AS MonthlyPremiumAmount  
FROM policies;
```

	policyId	policyName	premiumAmount	LocalTaxes	PremiumAmountWithTax	MonthlyPremiumAmount
1	101	Life Secure	25000.00	1500.0000	26500.0000	2083.333333
2	102	Health Plus	19800.00	1188.0000	20988.0000	1650.000000
3	103	Car Protect	12000.00	720.0000	12720.0000	1000.000000
4	104	Home Shield	15000.00	900.0000	15900.0000	1250.000000
5	105	Travel Safe	8000.00	480.0000	8480.0000	666.666666
6	106	Child Future	20000.00	1200.0000	21200.0000	1666.666666
7	107	Senior Care	24200.00	1452.0000	25652.0000	2016.666666
8	108	Bike Guard	6000.00	360.0000	6360.0000	500.000000
9	109	Term Life	30000.00	1800.0000	31800.0000	2500.000000
10	110	Family Health	30800.00	1848.0000	32648.0000	2566.666666

18.Add Address & City to Customers

```
ALTER TABLE customers ADD address VARCHAR(100), city VARCHAR(50);
```

Commands completed successfully.

Completion time: 2025-12-29T17:39:15.7416747+05:30

19.Add DevOfId to Agents

```
ALTER TABLE agents ADD devOfId INT;
```

Commands completed successfully.

Completion time: 2025-12-29T17:40:08.9142170+05:30

20. Recursive FK on Agents

```
ALTER TABLE agents ADD CONSTRAINT fk_dev FOREIGN KEY(devOfId) REFERENCES
agents(agentId);
```

Commands completed successfully.

Completion time: 2025-12-29T17:40:08.9142170+05:30

5)

1.Policies for Customer 5

```
SELECT * FROM policyAssignment WHERE customerId=5;
```

assignmentId	customerId	policyId	agentId	startDate	endDate
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2. Customers with Policies

```
SELECT c.firstname, p.policyName FROM customers c JOIN policyAssignment pa ON  
c.customerId=pa.customerId JOIN policies p ON pa.policyId=p.policyId;
```

	firstname	policyName
1	Ravi	Life Secure
2	Anita	Health Plus
3	Suresh	Car Protect
4	Priya	Home Shield
5	Neha	Child Future
6	Kiran	Senior Care
7	Pooja	Bike Guard
8	Rahul	Term Life
9	Sneha	Family Health

3. Claims with Customer Name

```
SELECT c.firstname, cl.* FROM customers c JOIN policyAssignment pa ON  
c.customerId=pa.customerId JOIN claims cl ON pa.assignmentId=cl.assignmentId;
```

	firstname	claimId	assignmentId	claimDate	claimAmount	claimStatus
1	Ravi	401	301	2023-02-15	40000.00	Approved
2	Anita	402	302	2024-01-20	50000.00	Approved
3	Suresh	403	303	2024-08-05	15000.00	Pending
4	Priya	404	304	2022-12-10	30000.00	Rejected
5	Neha	406	306	2021-06-25	45000.00	Approved
6	Kiran	407	307	2023-11-02	25000.00	Pending
7	Pooja	408	308	2024-03-14	8000.00	Approved
8	Rahul	409	309	2020-10-30	60000.00	Rejected
9	Sneha	410	310	2024-09-01	35000.00	Pending

4. Customer, Policy, Agent, Dates

```
SELECT c.firstname, p.policyName, a.agentName, pa.startDate, pa.endDate FROM  
policyAssignment pa JOIN customers c ON pa.customerId=c.customerId JOIN policies p ON  
pa.policyId=p.policyId JOIN agents a ON pa.agentId=a.agentId;
```

	firstname	policyName	agentName	startDate	endDate
1	Ravi	Life Secure	Arjun	2022-01-01	2042-01-01
2	Anita	Health Plus	Meena	2023-05-10	2033-05-10
3	Suresh	Car Protect	Rahul	2024-02-15	2029-02-15
4	Priya	Home Shield	Suman	2021-07-01	2036-07-01
5	Neha	Child Future	Anjali	2020-03-18	2038-03-18
6	Kiran	Senior Care	Vikas	2022-09-25	2030-09-25
7	Pooja	Bike Guard	Divya	2024-01-10	2027-01-10
8	Rahul	Term Life	Nitin	2019-06-05	2044-06-05
9	Sneha	Family Health	Swathi	2023-04-12	2035-04-12

5.Claims Report

SELECT c.firstname, p.policyName, cl.claimAmount, cl.claimStatus, cl.claimDate FROM claims cl JOIN policyAssignment 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	Ravi	Life Secure	40000.00	Approved	2023-02-15
2	Anita	Health Plus	50000.00	Approved	2024-01-20
3	Suresh	Car Protect	15000.00	Pending	2024-08-05
4	Priya	Home Shield	30000.00	Rejected	2022-12-10
5	Neha	Child Future	45000.00	Approved	2021-06-25
6	Kiran	Senior Care	25000.00	Pending	2023-11-02
7	Pooja	Bike Guard	8000.00	Approved	2024-03-14
8	Rahul	Term Life	60000.00	Rejected	2020-10-30
9	Sneha	Family Health	35000.00	Pending	2024-09-01

6.Customers with or without policies

SELECT c.* FROM customers c LEFT JOIN policyAssignment pa ON c.customerId=pa.customerId;

	customerId	firstname	lastname	dob	phone	email	address	city
1	1	Ravi	Kumar	1995-06-12	9876543210	ravi@gmail.com	NULL	NULL
2	2	Anita	Sharma	1992-03-25	9123456780	anita@gmail.com	NULL	NULL
3	3	Suresh	Reddy	1988-11-10	9988776655	suresh@gmail.com	NULL	NULL
4	4	Priya	Singh	1996-08-14	9012345678	priya@gmail.com	NULL	NULL
5	5	Amit	Verma	1990-01-30	9090909090	amit@gmail.com	NULL	NULL
6	6	Neha	Gupta	1994-12-05	9888888888	neha@gmail.com	NULL	NULL
7	7	Kiran	Patel	1987-07-19	9777777777	kiran@gmail.com	NULL	NULL
8	8	Pooja	Nair	1993-05-22	9666666666	pooja@gmail.com	NULL	NULL
9	9	Rahul	Das	1991-09-09	9555555555	rahul@gmail.com	NULL	NULL
10	10	Sneha	Iyer	1997-04-03	9444444444	sneha@gmail.com	NULL	NULL

7. Customers with NO claims

SELECT c.* FROM customers c WHERE c.customerId NOT IN (SELECT pa.customerId FROM policyAssignment pa JOIN claims cl ON pa.assignmentId=cl.assignmentId);

	customerId	firstname	lastname	dob	phone	email	address	city
1	5	Amit	Verma	1990-01-30	9090909090	amit@gmail.com	NULL	NULL

8. Customer total claim amount

SELECT c.firstname, SUM(cl.claimAmount) AS TotalClaim FROM customers c JOIN policyAssignment pa ON c.customerId=pa.customerId JOIN claims cl ON pa.assignmentId=cl.assignmentId GROUP BY c.firstname;

	firstname	TotalClaim
1	Anita	50000.00
2	Kiran	25000.00
3	Neha	45000.00
4	Pooja	8000.00
5	Priya	30000.00
6	Rahul	60000.00
7	Ravi	40000.00
8	Sneha	35000.00
9	Suresh	15000.00

9. Customers claim >50000

SELECT c.firstname, SUM(cl.claimAmount) AS TotalClaim FROM customers c JOIN policyAssignment pa ON c.customerId=pa.customerId JOIN claims cl ON pa.assignmentId=cl.assignmentId GROUP BY c.firstname HAVING SUM(cl.claimAmount)>50000;

	firstname	TotalClaim
1	Rahul	60000.00

10. Agent wise policy count

SELECT a.agentName, COUNT(pa.policyId) AS PolicyCount FROM agents a JOIN policyAssignment pa ON a.agentId=pa.agentId GROUP BY a.agentName;

	agentName	PolicyCount
1	Anjali	1
2	Arjun	1
3	Diya	1
4	Meena	1
5	Nitin	1
6	Rahul	1
7	Suman	1
8	Swathi	1
9	Vikas	1