DAY-2 Assignment (29-12-2025)--Querying & Modifying Data

1.
```
Create database InsuranceDB;
  use InsuranceDB;
```

2.
```
--CREATE TABLE COMMANDS FOR ALL THE TABLES WITH CONSTRAINTS,
RELATIONSHIPS ETC.

create table customers(
customer_id int identity(1,1) primary key,
first_name varchar(50),
last_name varchar(50),
dob date,
phone varchar(10),
email varchar(50) unique
);


create table policies(
policy_id int identity(1,1) primary key,
policy_name varchar(50),
policy_type varchar(50),
premium_amount decimal(10,2),
duration_year int
);



create table agents(
agent_id int identity primary key,
agent_name varchar(50),
phone varchar(10),
city varchar(100)
);


create table policyAssignments(
assignment_id int identity(1,1) primary key,
customer_id int,
policy_id int,
agent_id int,
startdate date,
end_date date
constraint custumer_fk foreign key(customer_id) references
customers(customer_id),
constraint policy_fk foreign key(policy_id) references
policies(policy_id),
constraint agent_fk foreign key(agent_id) references agents(agent_id)
);
```

```sql
create table claims(
claims_id int  identity(1,1) primary key,
assignment_id int,
claim_date date,
claim_amount decimal(10,2),
claim_status varchar(50),
constraint assign_fk foreign key(assignment_id) references
policyAssignments(assignment_id)
);

3.--Insertion of customers data
insert into customers values('Sneha', 'Reddy', '1998-08-15',
'9123456789', 'sneha@gmail.com');
insert into customers values('Ajay','Kumar',
'1996-04-24','9857458745','ajay07@gmail.com');
insert into customers (first_name, last_name, dob, phone, email)
values('Rahul', 'Verma', '1997-11-12', '9012345678',
'rahul.verma@gmail.com'),
('Priya', 'Sharma', '1999-02-05', '9098765432',
'priya.sharma@gmail.com'),
('Amit', 'Singh', '1995-06-18', '9887766554', 'amit.singh@gmail.com');



--Insertion of policies data
INSERT INTO policies (policy_name, policy_type, premium_amount,
duration_year)
VALUES ('Health Secure', 'Health', 15000.00, 5),
('Life Shield', 'Life', 25000.00, 10),
('Family Health Plus', 'Health', 18000.00, 7),
('Term Life Pro', 'Life', 30000.00, 15),
('Vehicle Secure', 'Motor', 12000.00, 3);


-- Insertion of agents data
INSERT INTO agents (agent_name, phone, city)
VALUES ('Ramesh Rao', '9876543210', 'Hyderabad'),
('Anita Sharma', '9988776655', 'Bangalore'),
('Suresh Patel', '9011223344', 'Ahmedabad'),
('Kavya Nair', '9090909090', 'Kochi'),
('Vikram Singh', '9888899999', 'Delhi');


--Insertion of policyAssignments data
INSERT INTO policyAssignments (customer_id, policy_id, agent_id,
startdate,end_date)
VALUES(1, 6, 6, '2023-01-01', '2028-01-01'),
(2, 7, 7, '2022-06-15', '2032-06-15'),
(3, 8, 8, '2023-03-01', '2028-03-01'),
```

```
(4, 9, 9, '2023-07-10', '2028-07-10'),
(5,10,10,'2024-01-15', '2029-01-15');



SELECT assignment_id FROM policyAssignments;

--Insertion of claims data
INSERT INTO claims (assignment_id, claim_date, claim_amount,
claim_status)
VALUES(19, '2024-02-10', 50000.00, 'Approved'),
(20, '2024-05-20', 30000.00, 'Pending'),
(21, '2024-03-15', 20000.00, 'Approved'),
(22, '2024-04-18', 12000.00, 'Pending'),
(23, '2024-06-05', 18000.00, 'Rejected'

4.1.select * from customers;
```

Results Messages

	customer_id	first_name	last_name	dob	phone	email
1	1	Ajay	Kumar	1996-04-24	9857458745	ajay07@gmail.com
2	2	Sneha	Reddy	1998-08-15	9123456789	sneha@gmail.com
3	3	Rahul	Verma	1997-11-12	9012345678	rahul.verma@gmail.com
4	4	Priya	Sharma	1999-02-05	9098765432	priya.sharma@gmail.com
5	5	Amit	Singh	1995-06-18	9887766554	amit.singh@gmail.com

```
select * from policies;
```

Results Messages

	policy_id	policy_name	policy_type	premium_amount	duration_year
1	6	Family Health Plus	Health	18000.00	7
2	7	Term Life Pro	Life	30000.00	15
3	8	Vehicle Secure	Motor	12000.00	3
4	9	Health Secure	Health	15000.00	5
5	10	Life Shield	Life	25000.00	10

```
select * from policyAssignments;
```

Results Messages

	assignment_id	customer_id	policy_id	agent_id	startdate	end_date
1	19	1	6	6	2023-01-01	2028-01-01
2	20	2	7	7	2022-06-15	2032-06-15
3	21	3	8	8	2023-03-01	2028-03-01
4	22	4	9	9	2023-07-10	2028-07-10
5	23	5	10	10	2024-01-15	2029-01-15

```
select * from claims;
```

Results | Messages

	claims_id	assignment_id	claim_date	claim_amount	claim_status
1	16	19	2024-02-10	50000.00	Approved
2	17	20	2024-05-20	30000.00	Pending
3	18	21	2024-03-15	20000.00	Approved
4	19	22	2024-04-18	12000.00	Pending
5	20	23	2024-06-05	18000.00	Rejected

```
select * from agents;
```

Results | Messages

	agent_id	agent_name	phone	city
1	6	Suresh Patel	9011223344	Ahmedabad
2	7	Kavya Nair	9090909090	Kochi
3	8	Vikram Singh	9888899999	Delhi
4	9	Ramesh Rao	9876543210	Hyderabad
5	10	Anita Sharma	9988776655	Bangalore

2.
```
select customer_id,policy_id,startdate,end_date from policyAssignments;
```

Results | Messages

	customer_id	policy_id	startdate	end_date
1	1	6	2023-01-01	2028-01-01
2	2	7	2022-06-15	2032-06-15
3	3	8	2023-03-01	2028-03-01
4	4	9	2023-07-10	2028-07-10
5	5	10	2024-01-15	2029-01-15

3.
```
select * from policies where policy_type='Health';
```

Results | Messages

	policy_id	policy_name	policy_type	premium_amount	duration_year
1	6	Family Health Plus	Health	18000.00	7
2	9	Health Secure	Health	15000.00	5

4. `select * from policies where premium_amount>10000 and duration_year>1;`

Results | Messages

	policy_id	policy_name	policy_type	premium_amount	duration_year
1	6	Family Health Plus	Health	18000.00	7
2	7	Term Life Pro	Life	30000.00	15
3	8	Vehicle Secure	Motor	12000.00	3
4	9	Health Secure	Health	15000.00	5
5	10	Life Shield	Life	25000.00	10

5. `select distinct city from agents;`

Results | Messages

	city
1	Ahmedabad
2	Bangalore
3	Delhi
4	Hyderabad
5	Kochi

6. `select * from policies where policy_type='Health' or policy_type='life' or policy_type='motor';`

Results | Messages

	policy_id	policy_name	policy_type	premium_amount	duration_year
1	6	Family Health Plus	Health	18000.00	7
2	7	Term Life Pro	Life	30000.00	15
3	8	Vehicle Secure	Motor	12000.00	3
4	9	Health Secure	Health	15000.00	5
5	10	Life Shield	Life	25000.00	10

7. `select * from policies where policy_type in ('Health','life','motor');`

Results | Messages

	policy_id	policy_name	policy_type	premium_amount	duration_year
1	6	Family Health Plus	Health	18000.00	7
2	7	Term Life Pro	Life	30000.00	15
3	8	Vehicle Secure	Motor	12000.00	3
4	9	Health Secure	Health	15000.00	5
5	10	Life Shield	Life	25000.00	10

8. `select * from customers where dob>='2001-01-01' and dob<='2020-12-31';`

Results | Messages

	customer_id	first_name	last_name	dob	phone	email

9. `select * from customers where dob between '2001-01-01' and '2020-12-31';`

Results | Messages

	customer_id	first_name	last_name	dob	phone	email

10. `select * from claims where claim_status='rejected';`

Results | Messages

	claims_id	assignment_id	claim_date	claim_amount	claim_status
1	20	23	2024-06-05	18000.00	Rejected

11.
```sql
select * from agents where city like '_a%';
```

Results | Messages

	agent_id	agent_name	phone	city
1	10	Anita Sharma	9988776655	Bangalore

12.
```sql
select max(claim_amount) as highest_claim,min(claim_amount) as
lowest_claim
    from claims;
```

Results | Messages

	highest_claim	lowest_claim
1	50000.00	12000.00

13.
```sql
select * from claims
   where claim_date = (select max(claim_date) from claims);
```

Results | Messages

	claims_id	assignment_id	claim_date	claim_amount	claim_status
1	20	23	2024-06-05	18000.00	Rejected

14.
```sql
update policies set premium_amount = premium_amount * 1.10
    where policy_type = 'Health';
```

```
(2 rows affected)

Completion time: 2025-12-29T18:53:51.5725095+05:30
```

```
select * from policies
```

Results | Messages

	policy_id	policy_name	policy_type	premium_amount	duration_year
1	6	Family Health Plus	Health	19800.00	7
2	7	Term Life Pro	Life	30000.00	15
3	8	Vehicle Secure	Motor	12000.00	3
4	9	Health Secure	Health	16500.00	5
5	10	Life Shield	Life	25000.00	10

15.
```
delete from policyAssignments where end_date<cast(getdate() as date);
```

```
(0 rows affected)

Completion time: 2025-12-29T18:58:38.6217087+05:30
```

```
Select * from policyAssignments
```

Results | Messages

	assignment_id	customer_id	policy_id	agent_id	startdate	end_date
1	19	1	6	6	2023-01-01	2028-01-01
2	20	2	7	7	2022-06-15	2032-06-15
3	21	3	8	8	2023-03-01	2028-03-01
4	22	4	9	9	2023-07-10	2028-07-10
5	23	5	10	10	2024-01-15	2029-01-15

16.
```
select count(*) as rejected_count from claims
    where claim_status='rejected';
```

Results | Messages

	rejected_count
1	1

17.
```sql
select policy_id,policy_name,premium_amount,
premium_amount * 0.06 as local_taxes,
premium_amount + (premium_amount * 0.06) as premium_amount_with_tax,
(premium_amount + (premium_amount * 0.06)) / 12 as
monthly_premium_amount from policies;
```

Results | Messages

	policy_id	policy_name	premium_amount	local_taxes	premium_amount_with_tax	monthly_premium_amount
1	6	Family Health Plus	19800.00	1188.0000	20988.0000	1749.0000000
2	7	Term Life Pro	30000.00	1800.0000	31800.0000	2650.0000000
3	8	Vehicle Secure	12000.00	720.0000	12720.0000	1060.0000000
4	9	Health Secure	16500.00	990.0000	17490.0000	1457.5000000
5	10	Life Shield	25000.00	1500.0000	26500.0000	2208.3333333

18.
```sql
alter table customers
add address varchar(50),city varchar(50);

select * from customers
```

Results | Messages

	customer_id	first_name	last_name	dob	phone	email	address	city
1	1	Ajay	Kumar	1996-04-24	9857458745	ajay07@gmail.com	NULL	NULL
2	2	Sneha	Reddy	1998-08-15	9123456789	sneha@gmail.com	NULL	NULL
3	3	Rahul	Verma	1997-11-12	9012345678	rahul.verma@gmail.com	NULL	NULL
4	4	Priya	Sharma	1999-02-05	9098765432	priya.sharma@gmail.com	NULL	NULL
5	5	Amit	Singh	1995-06-18	9887766554	amit.singh@gmail.com	NULL	NULL

19.
```sql
alter table agents
add DevOfId int;
```

```
Commands completed successfully.

Completion time: 2025-12-29T19:09:25.8315988+05:30
```

```
select * from agents
```

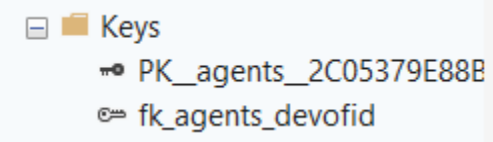
Results | Messages

	agent_id	agent_name	phone	city	DevOfId
1	6	Suresh Patel	9011223344	Ahmedabad	NULL
2	7	Kavya Nair	9090909090	Kochi	NULL
3	8	Vikram Singh	9888899999	Delhi	NULL
4	9	Ramesh Rao	9876543210	Hyderabad	NULL
5	10	Anita Sharma	9988776655	Bangalore	NULL

20.
```
alter table agents
    add constraint fk_agents_devofid
    foreign key (DevOfId) references agents(agent_id);
```

```
Commands completed successfully.

Completion time: 2025-12-29T19:11:38.3917534+05:30
```



```
--QUERIES USING JOINS, GROUP BY, HAVING ETC.

5.1) select p.policy_id, p.policy_name, p.policy_type, p.premium_amount
     from policies p
     JOIN policyAssignments pa on pa.policy_id = p.policy_id
     where pa.customer_id = 5;
```

	policy_id	policy_name	policy_type	premium_amount
1	10	Life Shield	Life	25000.00

```
2.  select c.customer_id, c.first_name + ' ' + c.last_name as
   CustomerName,p.policy_name, p.policy_type,p.premium_amount
    from customers c
    JOIN policyAssignments pa on c.customer_id = pa.customer_id
    JOIN policies p on pa.policy_id = p.policy_id;
```

Results Messages

	customer_id	CustomerName	policy_name	policy_type	premium_amount
1	1	Ajay Kumar	Family Health Plus	Health	19800.00
2	2	Sneha Reddy	Term Life Pro	Life	30000.00
3	3	Rahul Verma	Vehicle Secure	Motor	12000.00
4	4	Priya Sharma	Health Secure	Health	16500.00
5	5	Amit Singh	Life Shield	Life	25000.00

```
3. select c.customer_id, c.first_name + ' ' + c.last_name as
   CustomerName,cl.claim_date,cl.claim_amount,cl.claim_status
   from customers c
   JOIN policyAssignments pa on c.customer_id = pa.customer_id
   JOIN claims cl on pa.assignment_id = cl.assignment_id;
```

Results Messages

	customer_id	CustomerName	claim_date	claim_amount	claim_status
1	1	Ajay Kumar	2024-02-10	50000.00	Approved
2	2	Sneha Reddy	2024-05-20	30000.00	Pending
3	3	Rahul Verma	2024-03-15	20000.00	Approved
4	4	Priya Sharma	2024-04-18	12000.00	Pending
5	5	Amit Singh	2024-06-05	18000.00	Rejected

4.
```sql
select
c.first_name,p.policy_name,a.agent_name,pa.startdate,pa.end_date
from customers c
join policyAssignments pa on pa.customer_id=c.customer_id
join policies p on pa.policy_id=p.policy_id
join agents a on pa.agent_id=a.agent_id;
```

Results | Messages

	first_name	policy_name	agent_name	startdate	end_date
1	Ajay	Family Health Plus	Suresh Patel	2023-01-01	2028-01-01
2	Sneha	Term Life Pro	Kavya Nair	2022-06-15	2032-06-15
3	Rahul	Vehicle Secure	Vikram Singh	2023-03-01	2028-03-01
4	Priya	Health Secure	Ramesh Rao	2023-07-10	2028-07-10
5	Amit	Life Shield	Anita Sharma	2024-01-15	2029-01-15

5.
```sql
select c.first_name,p.policy_name,cl.claim_amount,
cl.claim_status,cl.claim_date
from customers c
join policyAssignments pa on pa.customer_id=c.customer_id
join policies p on pa.policy_id=p.policy_id
join claims cl on cl.assignment_id = pa.assignment_id;
```

Results | Messages

	first_name	policy_name	claim_amount	claim_status	claim_date
1	Ajay	Family Health Plus	50000.00	Approved	2024-02-10
2	Sneha	Term Life Pro	30000.00	Pending	2024-05-20
3	Rahul	Vehicle Secure	20000.00	Approved	2024-03-15
4	Priya	Health Secure	12000.00	Pending	2024-04-18
5	Amit	Life Shield	18000.00	Rejected	2024-06-05

6.
```sql
select c.customer_id, c.first_name + ' ' + c.last_name as
CustomerName,p.policy_name,p.policy_type, p.premium_amount
from customers c
LEFT JOIN policyAssignments pa on  c.customer_id = pa.customer_id
LEFT JOIN policies p on pa.policy_id = p.policy_id;
```

Results | Messages

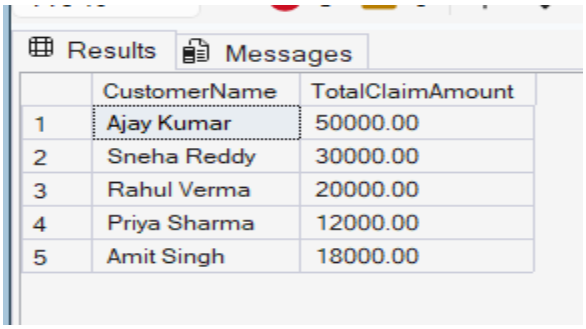
	customer_id	CustomerName	policy_name	policy_type	premium_amount
1	1	Ajay Kumar	Family Health Plus	Health	19800.00
2	2	Sneha Reddy	Term Life Pro	Life	30000.00
3	3	Rahul Verma	Vehicle Secure	Motor	12000.00
4	4	Priya Sharma	Health Secure	Health	16500.00
5	5	Amit Singh	Life Shield	Life	25000.00

7.
```sql
select distinct c.customer_id,c.first_name,c.last_name
from customers c
LEFT JOIN policyAssignments pa on c.customer_id = pa.customer_id
LEFT JOIN claims cl on pa.assignment_id = cl.assignment_id
where cl.claims_id IS NULL;
```

Results | Messages

	customer_id	first_name	last_name

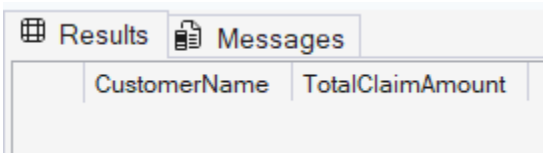
8.
```sql
select  c.first_name + ' ' + c.last_name as CustomerName,
SUM(cl.claim_amount) as TotalClaimAmount
from customers c
JOIN policyAssignments pa on c.customer_id = pa.customer_id
JOIN claims cl on pa.assignment_id = cl.assignment_id
group by c.customer_id, c.first_name, c.last_name;
```



Results | Messages

	CustomerName	TotalClaimAmount
1	Ajay Kumar	50000.00
2	Sneha Reddy	30000.00
3	Rahul Verma	20000.00
4	Priya Sharma	12000.00
5	Amit Singh	18000.00

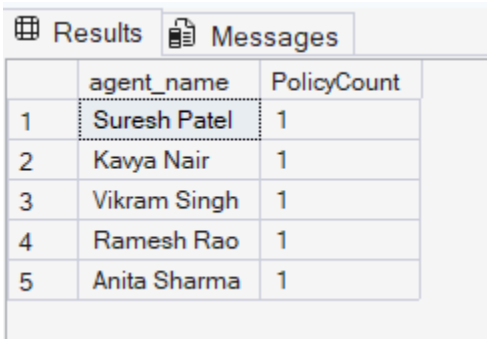
9.
```sql
select  c.first_name + ' ' + c.last_name as CustomerName,
 SUM(cl.claim_amount) as TotalClaimAmount
from customers c
JOIN policyAssignments pa on c.customer_id = pa.customer_id
JOIN claims cl on pa.assignment_id = cl.assignment_id
group by c.customer_id, c.first_name, c.last_name
having SUM(cl.claim_amount) > 50000;
```



Results | Messages

CustomerName	TotalClaimAmount

10.
```sql
select a.agent_name,COUNT(pa.policy_id) as PolicyCount
from agents a
LEFT JOIN policyAssignments pa on a.agent_id = pa.agent_id
group by a.agent_id, a.agent_name;
```



Results | Messages

	agent_name	PolicyCount
1	Suresh Patel	1
2	Kavya Nair	1
3	Vikram Singh	1
4	Ramesh Rao	1
5	Anita Sharma	1