Lab-8

1. Create a view to show details of all flights that are departing on a specific date.

```
271    -- 1.
272
273    CREATE VIEW flights_on_date AS
274    SELECT * FROM flights
275    WHERE DATE(scheduled_departure) = '2024-06-06';
276    SELECT * FROM flights_on_date;
277
```

Data Output Messages Notifications

Showing rows: 1 to 1

flight_id integer	flight_number character varying (10)	airline_id integer	origin_airport character varying (50)	destination_country character varying (50)	created_at date	actual_departure timestamp without time zone	scheduled_departure timestamp without time zone	departure_airport_id character varying (10)	arrival_airport_id character varying (10)
1	1 KC2501	1	Almaty	Turkey	2024-06-05	2024-06-05 08:00:00	2024-06-06 08:30:00	ALA	IST

2. Create a view that shows bookings for flights scheduled to depart within the next week.

```
278    -- 2
279
280    CREATE VIEW bookings_next_week AS
281    SELECT b.*, f.scheduled_departure FROM bookings b
282    JOIN flights f ON b.flight_id = f.flight_id
283    WHERE f.scheduled_departure BETWEEN '2024-06-06' AND '2024-06-06'::date + INTERVAL '7 days';
284    SELECT * FROM bookings_next_week;
285
```

Data Output Messages Notifications

booking_id integer	passenger_id integer	flight_id integer	platform character varying (50)	price numeric (10,2)	check_result character varying (50)	created_at date	scheduled_departure timestamp without time zone
1	1	1	1	Web	250.00	Checked	2024-05-20	2024-06-06 08:30:00
2	2	2	2	Mobile	180.00	Pending	2024-05-25	2024-06-10 10:00:00

3. Create a view to show the top 5 most popular flight routes based on the number of bookings.

```
286    -- 3.
287
288    CREATE VIEW popular_routes AS
289    SELECT f.destination_country,COUNT(b.booking_id) as booking_count FROM flights f
290    JOIN bookings b ON f.flight_id = b.flight_id
291    GROUP BY f.destination_country
292    ORDER BY booking_count DESC
293    LIMIT 5;
294    SELECT * FROM popular_routes;
295
```

Data Output Messages Notifications

destination_country character varying (50)	booking_count bigint
1	Kazakhstan	4
2	Germany	3
3	Turkey	2
4	UAE	2
5	Georgia	2

4.Create a view that lists all flights for a specific airline.

```sql
-- 4
CREATE VIEW airline_flights AS
SELECT f.*, a.name as airline_name FROM flights f
JOIN airlines a ON f.airline_id = a.airline_id
WHERE a.name = 'SCAT Airlines';
SELECT * FROM airline_flights;
```

Data Output   Messages   Notifications

Showing rows: 1 to 2   Page No: 1

flight_id integer	flight_number character varying (10)	airline_id integer	origin_airport character varying (50)	destination_country character varying (50)	created_at date	actual_departure timestamp without time zone	scheduled_departure timestamp without time zone	departure_airport_id character varying (10)	arrival_airport_id character varying (10)	airline_name character varying (100)
1	2	DV3302	2	Astana	Russia	2024-06-10	2024-06-10 10:15:00	2024-06-10 10:00:00	NQZ	SVO	SCAT Airlines
2	12	DV4512	2	Almaty	Russia	2024-08-01	2024-08-01 15:55:00	2024-08-01 15:30:00	ALA	SVO	SCAT Airlines

5.Modify the view created in task 4 to show only flights departing within the next 7 days for a specific airline.

```sql
-- 5.
CREATE OR REPLACE VIEW airline_flights_next_week AS
SELECT f.*, a.name as airline_name FROM flights f
JOIN airlines a ON f.airline_id = a.airline_id
WHERE a.name = 'SCAT Airlines'
AND f.scheduled_departure BETWEEN '2024-08-01' AND '2024-08-01'::date + INTERVAL '7 days';
SELECT * FROM airline_flights_next_week;
```

Data Output   Messages   Notifications

Showing rows: 1 to 1   Page No: 1

flight_id integer	flight_number character varying (10)	airline_id integer	origin_airport character varying (50)	destination_country character varying (50)	created_at date	actual_departure timestamp without time zone	scheduled_departure timestamp without time zone	departure_airport_id character varying (10)	arrival_airport_id character varying (10)	airline_name character varying (100)
1	12	DV4512	2	Almaty	Russia	2024-08-01	2024-08-01 15:55:00	2024-08-01 15:30:00	ALA	SVO	SCAT Airlines

6.Create a view to show flights that are delayed by more than 24 hours.

```sql
-- 6
CREATE OR REPLACE VIEW delayed_flights AS
SELECT flight_id,flight_number,departure_airport_id,arrival_airport_id,scheduled_departure,actual_departure,
FLOOR(EXTRACT(EPOCH FROM (actual_departure - scheduled_departure))/3600) || ' hours ' ||
FLOOR(MOD(EXTRACT(EPOCH FROM (actual_departure - scheduled_departure)), 3600)/60) || ' minutes' as delay_time
FROM flights
WHERE (actual_departure - scheduled_departure) > INTERVAL '24 hours';
SELECT * FROM delayed_flights;
```

Data Output   Messages   Notifications

flight_id integer	flight_number character varying (10)	departure_airport_id character varying (10)	arrival_airport_id character varying (10)	scheduled_departure timestamp without time zone	actual_departure timestamp without time zone	delay_time text
1	9	AF1209	CDG	JFK	2024-07-15 08:45:00	2024-07-16 09:10:00	24 hours 25 minut...
2	11	KC3411	NQZ	IST	2024-07-25 13:15:00	2024-07-26 13:40:00	24 hours 25 minut...

7.Create a view in which you can display the full name and country of origin of passengers who made bookings on Leffler-Thompson platform. Then show the list of that passengers.

```sql
-- 7.
CREATE VIEW platform_passengers AS
SELECT DISTINCT p.first_name || ' ' || p.last_name as full_name,p.country_of_citizenship FROM passengers p
JOIN bookings b ON p.passenger_id = b.passenger_id
WHERE b.platform = 'Web';
SELECT * FROM platform_passengers;
```

Data Output   Messages   Notifications

full_name text	country_of_citizenship character varying (50)
1	Emma Wilson	UK
2	Michael Brown	USA
3	Бауыржан Тлеубек...	Kazakhstan
4	Дмитрий Иванов	Russia
5	Ербол Тастанов	Kazakhstan
6	Мадина Калиева	Philippines
7	Назгуль Ергалиева	Kazakhstan

8. Create a view that shows top 10 most visited countries.

```
330   -- 8
331
332   CREATE VIEW popular_destinations AS
333   SELECT f.destination_country, COUNT(b.booking_id) as visit_count FROM flights f
334   JOIN bookings b ON f.flight_id = b.flight_id
335   GROUP BY f.destination_country
336   ORDER BY visit_count DESC
337   LIMIT 10;
338   SELECT * FROM popular_destinations;
339
```

Data Output   Messages   Notifications

	destination_country character varying (50)	visit_count bigint
1	Kazakhstan	4
2	Germany	3
3	Russia	2
4	Turkey	2
5	Georgia	2
6	UAE	2
7	USA	1
8	France	1
9	South Korea	1
10	UK	1

9.Update any of the created views by adding new information in the view table. Show results.

```
340   --9.
341
342   CREATE OR REPLACE VIEW airline_flights AS
343   SELECT f.*, a.name as airline_name, a.country as airline_country FROM flights f
344   JOIN airlines a ON f.airline_id = a.airline_id
345   WHERE a.name = 'SCAT Airlines';
346   SELECT * FROM airline_flights;
347
```

Data Output   Messages   Notifications

Showing rows: 1 to 2   Page No: 1   of 1

	flight_id integer	flight_number character varying (10)	airline_id integer	origin_airport character varying (50)	destination_country character varying (50)	created_at date	actual_departure timestamp without time zone	scheduled_departure timestamp without time zone	departure_airport_id character varying (10)	arrival_airport_id character varying (10)	airline_name character varying (100)	airline_country character varying (50)
1	2	DV3302	2	Astana	Russia	2024-06-10	2024-06-10 10:15:00	2024-06-10 10:00:00	NQZ	SVO	SCAT Airlines	Kazakhstan
2	12	DV4512	2	Almaty	Russia	2024-08-01	2024-08-01 15:55:00	2024-08-01 15:30:00	ALA	SVO	SCAT Airlines	Kazakhstan

10.Drop all existing views.

```
347   |
348   --10
349
350   DROP VIEW IF EXISTS flights_on_date, bookings_next_week, popular_routes, airline_flights, airline_flights_next_week, delayed_flights,platform_passengers, popular_destinations;
351   SELECT table_name FROM information_schema.views WHERE table_schema = 'public';
```

Data Output   Messages   Notifications

table_name name