

# Lab 8

DROP VIEW IF EXISTS {name};

Task 1

```
CREATE VIEW vw_flight_details AS
SELECT
    f.flight_id,
    f.flight_no,
    f.scheduled_departure,
    f.scheduled_arrival,
    dep.airport_name AS departure_airport,
    arr.airport_name AS arrival_airport,
    a.airline_name,
    a.airline_code,
    f.status
FROM flights AS f
JOIN airport AS dep
    ON f.departure_airport_id = dep.airport_id
JOIN airport AS arr
    ON f.arrival_airport_id = arr.airport_id
JOIN airline AS a
    ON f.airline_id = a.airline_id;

SELECT *
FROM vw_flight_details
WHERE scheduled_departure::date = '2023-12-21';
```

	flight_id	flight_no	scheduled_departure	scheduled_arrival	departure_airport	arrival_airport	airline_name
1	893	MM-11	2023-12-21	2023-05-05	Pitalito Airport	Tom Price Airport	NQX
2	257	EG-ASN	2023-12-21	2023-09-05	Ocean Falls Seaplane B...	Darchula Airport	YDQ
3	722	CN-65	2023-12-21	2023-11-03	Fort Worth Alliance Airp...	Lime Acres Finsch Mine Airp...	HOU

Task 2

2023-03-19 → 2024-03-17

```
CREATE OR REPLACE VIEW vw_bookings_next_week AS
SELECT
    bf.booking_flight_id,
    bf.booking_id,
    bf.flight_id,
    f.flight_no,
    f.scheduled_departure,
    f.scheduled_arrival
FROM booking_flight AS bf
JOIN flights AS f
```

```

    ON bf.flight_id = f.flight_id
WHERE f.scheduled_departure::date
      BETWEEN DATE '2023-12-01' AND DATE '2023-12-08';

f.scheduled_departure::date
      BETWEEN CURRENT_DATE AND CURRENT_DATE + INTERVAL '7 days'

SELECT * FROM vw_bookings_next_week;

```

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	booking_flight_id integer	booking_id integer	flight_id integer	flight_no character varying (50)	scheduled_departure date	scheduled_arrival date
1	29	82	43	CM-OU	2023-12-01	2023-03-21
2	33	225	220	FR-I	2023-12-04	2023-06-01
3	175	200	372	CO-MET	2023-12-07	2024-01-15
4	223	232	144	US-CA	2023-12-08	2023-12-02
5	274	455	144	US-CA	2023-12-08	2023-12-02
6	288	468	331	PG-MPM	2023-12-08	2023-08-26
7	353	391	866	DZ-08	2023-12-01	2024-02-04
8	571	152	969	CN-54	2023-12-05	2023-10-16
9	622	157	203	IT-62	2023-12-05	2023-07-06
10	879	56	393	IT-55	2023-12-01	2023-04-02
11	974	448	170	SD-01	2023-12-02	2023-12-17

### Task 3

```

CREATE OR REPLACE VIEW vw_top5_routes AS
SELECT
    f.departure_airport_id,
    dep.airport_name AS departure_airport,
    f.arrival_airport_id,
    arr.airport_name AS arrival_airport,
    COUNT(*) AS total_bookings
FROM booking_flight AS bf
JOIN flights AS f
    ON bf.flight_id = f.flight_id
JOIN airport AS dep
    ON f.departure_airport_id = dep.airport_id
JOIN airport AS arr
    ON f.arrival_airport_id = arr.airport_id
GROUP BY
    f.departure_airport_id, dep.airport_name,
    f.arrival_airport_id, arr.airport_name
ORDER BY total_bookings DESC
LIMIT 5;

SELECT * FROM vw_top5_routes;

```

	departure_airport_id integer	departure_airport character varying (50)	arrival_airport_id integer	arrival_airport character varying (50)	total_bookings bigint
1	10	Henri Coandă International Airp...	7	Armidale Airport	18
2	4	Garbaharey Airport	10	Henri Coandă International Airp...	15
3	13	Figari Sud-Corse Airport	4	Garbaharey Airport	14
4	6	Hana Airport	16	Zephyrhills Municipal Airport	14
5	14	Industrial Airpark	7	Armidale Airport	11

## Task 4

```
SELECT airline_id, airline_name, airline_code
FROM airline
ORDER BY airline_id;
```

	airline_id [PK] integer	airline_name character varying (50)	airline_code character varying (50)
1	1	IPC	SCIP
2	2	PDN	YPDA
3	3	KLE	FKKH
4	4	KHS	OOKB
5	5	YLQ	CYLQ
6	6	NGL	FANG
7	7	0	SSZS

```
CREATE OR REPLACE VIEW vw_flights_airline_5 AS
SELECT
    f.flight_id,
    f.flight_no,
    f.scheduled_departure,
    f.scheduled_arrival,
    f.departure_airport_id,
    f.arrival_airport_id,
    a.airline_id,
    a.airline_name,
    a.airline_code
FROM flights AS f
JOIN airline AS a
    ON f.airline_id = a.airline_id
WHERE a.airline_id = 5;

SELECT * FROM vw_flights_airline_5;
```

	flight_id	flight_no	scheduled_departure	scheduled_arrival	departure_airport_id	arrival_airport_id	airline_id	airline_name
	integer	character varying (50)	date	date	integer	integer	integer	character varying (50)
1	85	US-IL	2023-08-27	2023-08-07	4	12	5	YLQ
2	174	PK-BA	2023-12-15	2023-10-04	17	16	5	YLQ
3	251	MX-BCN	2024-03-07	2023-09-22	7	7	5	YLQ
4	311	KI-G	2023-07-10	2023-09-02	8	20	5	YLQ
5	391	MH-NMU	2024-03-01	2023-06-05	7	4	5	YLQ
6	662	CR-SJ	2023-05-20	2023-05-19	17	12	5	YLQ
7	823	US-FL	2023-08-06	2023-09-21	10	20	5	YLQ
8	913	BR-MS	2023-06-21	2023-11-16	11	20	5	YLQ
9	916	JP-20	2023-03-25	2024-02-21	4	10	5	YLQ
10	920	KR-11	2023-05-15	2023-06-23	16	13	5	YLQ

## Task 5

2023-03-19 → 2024-03-17

```

CREATE OR REPLACE VIEW vw_flights_airline_3_inDays AS
SELECT
    f.flight_id,
    f.flight_no,
    f.scheduled_departure,
    f.scheduled_arrival,
    f.departure_airport_id,
    f.arrival_airport_id,
    a.airline_id,
    a.airline_name,
    a.airline_code
FROM flights AS f
JOIN airline AS a
    ON f.airline_id = a.airline_id
WHERE a.airline_id = 3
    AND f.scheduled_departure::date
        BETWEEN DATE '2024-02-01' AND DATE '2024-02-08';

-- f.scheduled_departure::date
-- BETWEEN CURRENT_DATE AND CURRENT_DATE + INTERVAL '7 days'

SELECT * FROM vw_flights_airline_5_inDays;

```

	flight_id	flight_no	scheduled_departure	scheduled_arrival	departure_airport_id	arrival_airport_id	airline_id	airline_name
	integer	character varying (50)	date	date	integer	integer	integer	character varying (50)
1	706	RU-KO	2024-02-01	2023-04-02	12	12	3	KLE

## Task 6

```
CREATE OR REPLACE VIEW vw_flights_delayed_24h AS
SELECT
    flight_id,
    flight_no,
    scheduled_departure,
    actual_departure,
    (actual_departure::timestamp - scheduled_departure::timestamp) AS departure_delay
FROM flights
WHERE actual_departure IS NOT NULL
    AND (actual_departure::timestamp - scheduled_departure::timestamp) > INTERVAL '24
hours';

SELECT * FROM vw_flights_delayed_24h;
```

	flight_id integer	flight_no character varying (50)	scheduled_departure date	actual_departure date	departure_delay interval
1	2	US-NM	2023-07-21	2024-02-09	203 days
2	3	FI-OL	2023-03-29	2024-02-21	329 days
3	5	RO-DJ	2023-07-03	2023-11-18	138 days
4	6	CA-SK	2023-07-07	2024-02-19	227 days
5	7	AU-TAS	2023-10-12	2023-12-04	53 days
6	9	IN-OR	2023-05-18	2023-06-17	30 days
7	11	TH-57	2023-03-28	2024-02-06	315 days
8	12	CA-NL	2023-03-22	2023-04-28	37 days
9	14	US-IN	2023-07-24	2024-03-04	224 days
10	17	ES-AN	2023-09-10	2023-11-23	74 days
11	21	EE-39	2023-10-12	2023-10-28	16 days
12	22	GB-ENG	2023-11-03	2024-02-05	94 days
13	23	CN-65	2023-03-21	2023-04-21	31 days
14	26	CH-TI	2023-09-30	2024-01-01	93 days
15	27	UZ-SU	2023-05-13	2024-02-24	287 days
16	31	PH-BUK	2023-04-28	2023-12-21	237 days
17	36	AU-NT	2023-03-29	2023-12-30	276 days
18	37	ID-MU	2023-07-24	2023-12-05	134 days
19	38	AU-NT	2023-04-29	2023-09-18	142 days
20	39	PG-MPL	2023-11-23	2024-01-14	52 days
21	40	TW-TTT	2023-07-04	2023-11-09	128 days

## Task 7

```
CREATE OR REPLACE VIEW vw_leffler_thompson_passengers AS
SELECT DISTINCT
    p.passenger_id,
    p.first_name || ' ' || p.last_name AS full_name,
    p.country_of_citizenship AS country_of_origin
FROM booking AS b
JOIN passengers AS p
    ON b.passenger_id = p.passenger_id
WHERE b.booking_platform = 'Leffler-Thompson';

select * from vw_leffler_thompson_passengers;
```

	passenger_id	full_name	country_of_origin
	integer	text	character varying (50)
1	157	Philbert Shambro...	Colombia

### Task 8

```
CREATE OR REPLACE VIEW vw_top10_countries AS
SELECT
    a.country,
    COUNT(*) AS visit_count
FROM booking_flight AS bf
JOIN flights AS f
    ON bf.flight_id = f.flight_id
JOIN airport AS a
    ON f.arrival_airport_id = a.airport_id
GROUP BY a.country
ORDER BY visit_count DESC
LIMIT 10;

SELECT * FROM vw_top10_countries;
```

	country	visit_count
	character varying (50)	bigint
1	China	232
2	Indonesia	167
3	Philippines	137
4	Tanzania	78
5	United States	62
6	Russia	59
7	Poland	49
8	Slovenia	48
9	Afghanistan	46
10	Croatia	44

### Task 9

```
CREATE OR REPLACE VIEW vw_top5_routes_9 AS
SELECT
    f.departure_airport_id,
    dep.airport_name AS departure_airport,
    f.arrival_airport_id,
    arr.airport_name AS arrival_airport,
    COUNT(*) AS total_bookings, -- 5-бәған (сол күйі)
    COUNT(DISTINCT f.flight_id) AS flight_count, -- 6-шы жаңа баған
    AVG(b.price) AS avg_price -- 7-ші жаңа баған
FROM booking_flight AS bf
JOIN flights AS f
    ON bf.flight_id = f.flight_id
JOIN booking AS b
```

```

    ON b.booking_id = bf.booking_id
JOIN airport AS dep
    ON f.departure_airport_id = dep.airport_id
JOIN airport AS arr
    ON f.arrival_airport_id = arr.airport_id
GROUP BY
    f.departure_airport_id, dep.airport_name,
    f.arrival_airport_id, arr.airport_name
ORDER BY total_bookings DESC
LIMIT 5;

SELECT * FROM vw_top5_routes_9;

```

Showing rows: 1 to 5      Page No: 1 of 1						
departure_airport_id	departure_airport	arrival_airport_id	arrival_airport	total_bookings	flight_count	avg_price
10	Henri Coandă International Airp...	7	Armidale Airport	18	7	6335.60944444
2	Garbaharey Airport	10	Henri Coandă International Airp...	15	8	4767.53200000
3	Figari Sud-Corse Airport	4	Garbaharey Airport	14	5	6096.46357142
4	Hana Airport	16	Zephyrhills Municipal Airport	14	7	6021.81500000
5	Industrial Airpark	7	Armidale Airport	11	7	5768.01363636

## Task 10

```

DROP VIEW IF EXISTS
    vw_flight_details,
    vw_bookings_next_week,
    vw_top5_routes,
    vw_flights_airline_5,
    vw_flights_airline_3_inDays,
    vw_flights_delayed_24h,
    vw_leffler_thompson_passengers,
    vw_top10_countries,
    vw_top5_routes_9
CASCADE;

```