

Task 1

The screenshot shows the PostgreSQL IDE interface. On the left, the Object Explorer displays the database schema, with the 'airline' table selected under the 'public' schema. The main query editor displays the following SQL query:

```
--lab3--  
--1  
SELECT * FROM passengers WHERE first_name = last_name;
```

The Data Output pane at the bottom shows the results of the query, which is currently empty. The status bar at the bottom indicates 'Total rows: 0' and 'Query complete 00:00:00.065'.

Task 2.

The screenshot shows the PostgreSQL IDE interface. On the left, the Object Explorer displays the database schema, with the 'airline' table selected under the 'public' schema. The main query editor displays the following SQL query:

```
--2  
SELECT DISTINCT last_name FROM passengers;
```

The Data Output pane at the bottom shows the results of the query, which are 12 rows of distinct last names. The status bar at the bottom indicates 'Total rows: 199' and 'Query complete 00:00:00.061'.

last_name
Hardman
Payne
Mixter
Gheorghe
Golsby
McGennis
Danihelka
Musla
Lynett
Romain
Rosling
O'Calleran

Task 3.

Publications

Schemas (1)

public

Aggregates

Collations

Domains

FTS Configurations

FTS Dictionaries

FTS Parsers

FTS Templates

Foreign Tables

Functions

Materialized Views

Operators

Procedures

Sequences

Tables (10)

airline

Columns (6)

Constraints

Indexes

RLS Policies

Rules

Triggers

airport

baggage

baggage_check

boarding_pass

booking

booking_flight

flights

passengers

security_check

Trigger Functions

Types

Views

Subscriptions

airport_2/postgres@PostgreSQL 17

Query Query History

--3

SELECT * FROM passengers

WHERE gender = 'Male'

AND date_of_birth BETWEEN '1998-01-01' AND '2000-12-31';

Data Output Messages Notifications

Showing rows: 1 to 21 Page No: 1 of 1

passenger_id	first_name	last_name	date_of_birth	gender	country_of_citizenship	country_of_residence	passport_number	created_at	update_at
1	Wayne	Bangs	1996-04-22	Male	Bosnia and Herzegovina	Canada	512588744-7	2023-12-11	2023-10-2
2	Conrad	Southerell	1998-01-25	Male	France	Japan	765817217-0	2023-04-04	2023-10-0
3	Wood	Yve	1997-01-18	Male	Latvia	China	985023334-6	2023-05-11	2023-08-2
4	Warden	Huett	2000-11-04	Male	Brazil	Portugal	389393096-5	2023-07-06	2023-10-0
5	Peyton	Durnian	1993-09-16	Male	Russia	China	846269581-3	2023-10-10	2024-02-0
6	Spencer	Moffet	1994-11-01	Male	Colombia	Philippines	127047949-0	2023-03-20	2023-05-2
7	Boote	Laurisch	1996-09-12	Male	Philippines	Bahamas	780593281-6	2023-09-06	2023-12-3
8	Pyotr	Colbron	1993-07-17	Male	China	China	582600382-0	2023-04-05	2023-11-1
9	Hurleigh	Goodwell	1990-05-21	Male	China	Russia	147114524-7	2024-03-02	2023-04-0
10	Cletus	Mosey	1997-09-23	Male	Myanmar	Indonesia	874794787-X	2023-08-30	2023-06-0
11	Fairfax	Brahmer	1991-02-10	Male	Morocco	Portugal	702800724-3	2023-08-05	2023-05-2
12	Mansour	Krauler	1991-05-20	Male	Serbia	China	017008861-X	2023-10-22	2023-06-3

Task 4

passenger_id

Constraints

Indexes

RLS Policies

Rules

Triggers

boarding_pass

Columns (6)

boarding_pass_id

booking_id

seat

boarding_time

created_at

update_at

Constraints

Indexes

RLS Policies

Rules

Triggers

booking

Columns (7)

booking_id

passenger_id

booking_platform

created_at

update_at

status

price

Constraints

Indexes

RLS Policies

Rules

Triggers

booking_flight

Columns (5)

Constraints

Indexes

airport_2/postgres@PostgreSQL 17

Query Query History

--4

SELECT TO_CHAR(created_at,'YYYY-MM') AS year_month,

SUM(price) AS total_price

FROM booking

GROUP BY TO_CHAR(created_at, 'YYYY-MM')

ORDER BY year_month;

Data Output Messages Notifications

Showing rows: 1 to 13 Page No: 1 of 1

year_month	total_price
2023-03	155294.81
2023-04	240649.84
2023-05	207361.58
2023-06	177058.76
2023-07	158703.58
2023-08	213237.05
2023-09	124509.29
2023-10	198113.29
2023-11	184333.41
2023-12	219119.78
2024-01	306355.62
2024-02	172192.21

Successfully run. Total query runtime: 91 msec. 13 rows affected.

Task 5

price

- Constraints
- Indexes
- RLS Policies
- Rules
- Triggers
- booking_flight
- Columns (5)
- Constraints
- Indexes
- RLS Policies
- Rules
- Triggers
- flights
- Columns (14)
- flight_id
- flight_no
- scheduled_departure
- scheduled_arrival
- departure_airport_id
- arrival_airport_id
- departing_gate
- arriving_gate
- airline_id
- status
- actual_departure
- actual_arrival
- created_at
- update_at

airport_2/postgres@PostgreSQL 17

Query Query History

```
--5
SELECT f.*
FROM flights f
JOIN airport a ON f.arrival_airport_id = a.airport_id
WHERE country = 'China';
```

Data Output Messages Notifications

Showing rows: 1 to 238 Page No: 1 of 1

flight_id [PK] integer	flight_no character varying (50)	scheduled_departure date	scheduled_arrival date	departure_airport_id integer	arrival_airport_id integer	departing_gate character varying (50)	arriving_gate character varying (50)	airline_id integer	status character varying (50)
1	3 FI-OL	2023-03-29	2023-08-01	18	12	47	9	34	Boarding
2	9 IN-OR	2023-05-18	2023-09-19	6	9	659	621	13	Delayed
3	13 BR-PE	2024-01-16	2023-06-02	13	20	1891	5429	1	Delayed
4	14 US-IN	2023-07-24	2024-02-27	18	3	973	297	8	Delayed
5	23 CN-65	2023-03-21	2024-01-08	2	3	934	3006	17	Boarding
6	24 BR-TO	2024-03-09	2023-11-22	3	9	561	242	19	Delayed
7	25 MZ-P	2024-01-22	2023-09-05	15	12	27	[null]	49	Delayed
8	34 US-AK	2024-02-08	2023-10-20	11	3	38	13	47	Departed
9	39 PG-MPL	2023-11-23	2023-06-05	12	12	2950	505	42	Boarding
10	41 ID-BA	2023-12-30	2023-04-04	2	9	14	5586	16	Boarding
11	45 CA-NU	2024-01-29	2023-04-28	5	20	21	2965	24	Boarding
12	47 IK-TN	2024-03-09	2023-12-31	10	20	600	69	20	Delayed

Task 6

price

- Constraints
- Indexes
- RLS Policies
- Rules
- Triggers
- booking_flight
- Columns (5)
- Constraints
- Indexes
- RLS Policies
- Rules
- Triggers
- flights
- Columns (14)
- flight_id
- flight_no
- scheduled_departure
- scheduled_arrival
- departure_airport_id
- arrival_airport_id
- departing_gate
- arriving_gate
- airline_id
- status
- actual_departure
- actual_arrival
- created_at
- update_at

airport_2/postgres@PostgreSQL 17

Query Query History

```
--6
SELECT * FROM airline
WHERE airline_country IN ('France', 'Portugal', 'Poland')
AND created_at BETWEEN '2023-11-01:00:00:00' AND '2024-03-31:23:51:00';
```

Data Output Messages Notifications

Showing rows: 1 to 7 Page No: 1 of 1

airline_id [PK] integer	airline_code character varying (50)	airline_name character varying (50)	airline_country character varying (50)	created_at date	update_at date
1	4 OOKB	KHS	France	2023-11-18	2024-02-18
2	13 OIFE	IFH	Portugal	2024-01-09	2023-11-09
3	15 SYKZ	KKG	Poland	2023-12-24	2023-10-30
4	24 ZSRG	RUG	Portugal	2024-03-11	2023-08-24
5	28 RKPD	JDG	Poland	2023-11-03	2023-12-06
6	30 CYST	YST	Poland	2023-11-24	2023-10-07
7	43 AYKM	KMA	France	2023-11-21	2023-05-30

Total rows: 7 Query complete 00:00:00.172 CRLF Ln 5448, Col 1

Task 7

airport_2/postgres@PostgreSQL 17

price
Constraints
Indexes
RLS Policies
Rules
Triggers
booking_flight
Columns (5)
Constraints
Indexes
RLS Policies
Rules
Triggers
flights
Columns (14)
flight_id
flight_no
scheduled_departure
scheduled_arrival
departure_airport_id
arrival_airport_id
departing_gate
arriving_gate
airline_id
status
actual_departure
actual_arrival
created_at
update_at
Constraints
Indexes
RLS Policies
Rules
Triggers
passengers
security_check
Columns (5)

Query Query History

```
--7
SELECT airline_name FROM airline WHERE airline_country = 'Kazakhstan';
```

Scratch Pad

Data Output Messages Notifications

airline_name
YLO

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

Total rows: 1 Query complete 00:00:00.062 CRLF Ln 5457, Col 1

Task 8

airport_2/postgres@PostgreSQL 17

price
Constraints
Indexes
RLS Policies
Rules
Triggers
booking_flight
Columns (5)
Constraints
Indexes
RLS Policies
Rules
Triggers
flights
Columns (14)
flight_id
flight_no
scheduled_departure
scheduled_arrival
departure_airport_id
arrival_airport_id
departing_gate
arriving_gate
airline_id
status
actual_departure
actual_arrival
created_at
update_at
Constraints
Indexes
RLS Policies
Rules
Triggers
passengers
security_check
Columns (5)

Query Query History

```
--8
UPDATE booking
SET price = price * 0.9
WHERE created_at < '2023-11-01';
```

Scratch Pad

Data Output Messages Notifications

UPDATE 300

Query returned successfully in 48 msec.

Query returned successfully in 48 msec.

Task 9

The screenshot shows a PostgreSQL IDE interface. On the left, a tree view displays the database schema, including tables like 'country', 'state', 'city', 'created_at', 'update_at', 'baggage', 'baggage_check', 'boarding_pass', and 'booking'. The 'baggage' table is selected, showing its columns: 'baggage_id', 'weight_in_kg', 'created_date', 'update_date', and 'booking_id'. The main query editor displays the following SQL query:

```
SELECT * FROM baggage
WHERE weight_in_kg > 25
ORDER BY weight_in_kg DESC
LIMIT 3;
```

The 'Data Output' tab at the bottom shows the results of the query, displaying 3 rows of baggage data:

baggage_id [PK] integer	weight_in_kg numeric (4,2)	created_date date	update_date date	booking_id integer
1	321	2023-07-07	2023-11-10	349
2	61	2023-04-21	2023-07-31	464
3	102	2024-01-24	2023-11-01	53

Task 10

The screenshot shows a PostgreSQL IDE interface. On the left, a tree view displays the database schema, including tables like 'arrivalAirport', 'departing_gate', 'arriving_gate', 'airline_id', 'status', 'actual_departure', 'actual_arrival', 'created_at', 'update_at', 'passengers', 'security_check', and 'security_check_id'. The 'passengers' table is selected, showing its columns: 'passenger_id', 'first_name', 'last_name', 'date_of_birth', 'gender', 'country_of_citizenship', 'country_of_residence', 'passport_number', 'created_at', and 'update_at'. The main query editor displays the following SQL query:

```
SELECT last_name, first_name FROM passengers
ORDER BY date_of_birth DESC
LIMIT 1;
```

The 'Data Output' tab at the bottom shows the results of the query, displaying 1 row of passenger data:

last_name character varying (50)	first_name character varying (50)
Michal	Bernie

Task 11

Database Explorer (Left Panel):

- Constraints
- Indexes
- RLS Policies
- Rules
- Triggers
- boarding_pass
- booking
 - Columns (7)
 - booking_id
 - passenger_id
 - booking_platform
 - created_at
 - update_at
 - status
 - price
- Constraints
- Indexes
- RLS Policies
- Rules
- Triggers
- booking_flight
 - Columns (5)
 - booking_id
 - flight_id
 - status
 - price
 - created_at
- flights
 - Columns (14)
 - flight_id
 - flight_no
 - scheduled_departure
 - scheduled_arrival
 - departure_airport_id
 - arrival_airport_id
 - departing_gate
 - arriving_gate

Query Editor (Center Panel):

```
--11
SELECT booking_platform, MIN(price) as cheapest_price
FROM booking
GROUP BY booking_platform;
```

Data Output (Bottom Panel):

booking_platform	cheapest_price
1	Schmitt-Quigley
2	Rohan, Hamill and Bosco
3	Kutch-Russel
4	Veum-Corwin
5	Wolff, Wuckert and Satterfield
6	Reichel, Deckow and Quitzon
7	Murazik-Gulgowski
8	Cole, Corwin and Leannon
9	Franecki, Dickens and Walsh
10	McLaughlin, Sipes and Abernathy
11	Leffler-Thompson
12	Raynor Inc

Success: Successfully run. Total query runtime: 113 msec. 494 rows affected.

Task 11

Database Explorer (Left Panel):

- passenger_id
- Constraints
- Indexes
- RLS Policies
- Rules
- Triggers
- boarding_pass
- booking
 - Columns (7)
 - booking_id
 - passenger_id
 - booking_platform
 - created_at
 - update_at
 - status
 - price
- Constraints
- Indexes
- RLS Policies
- Rules
- Triggers
- booking_flight
 - Columns (5)
 - booking_id
 - flight_id
 - status
 - price
 - created_at
- flights
 - Columns (14)
 - flight_id
 - flight_no
 - scheduled_departure
 - scheduled_arrival
 - departure_airport_id
 - arrival_airport_id
 - departing_gate
 - arriving_gate

Query Editor (Center Panel):

```
--12
SELECT airline_code FROM airline
WHERE airline_code LIKE '%0%'
OR airline_code LIKE '%1%'
OR airline_code LIKE '%2%'
OR airline_code LIKE '%3%'
OR airline_code LIKE '%4%'
OR airline_code LIKE '%5%'
OR airline_code LIKE '%6%'
OR airline_code LIKE '%7%'
OR airline_code LIKE '%8%'
OR airline_code LIKE '%9%';
```

Data Output (Bottom Panel):

airline_code	
1	ZAK6

Total rows: 1 Query complete 00:00:00.128

Task 12

Object Explorer

- FTS Templates
- Foreign Tables
- Functions
- Materialized Views
- Operators
- Procedures
- Sequences
- Tables (10)
 - airline
 - Columns (6)
 - airline_id
 - airline_code
 - airline_name
 - airline_country
 - created_at
 - updated_at
 - Constraints
 - Indexes
 - RLS Policies
 - Rules
 - Triggers
 - airport
 - baggage
 - baggage_check
 - boarding_pass
 - booking
 - Columns (8)
 - booking_id
 - flight_id
 - passenger_id
 - booking_platform
 - created_at
 - updated_at
 - status
 - ticket_price
 - Constraints
 - Indexes

my_airport/postgres@MyDB

Query

```
SELECT * FROM airline
ORDER BY created_at DESC
LIMIT 5;
```

Data Output

	airline_id	airline_code	airline_name	airline_country	created_at	updated_at
1	201	KZ001	KazAir	Turkey	2025-09-23 00:14:58.047603	2025-09-23 00:14:58.047603
2	3	AC_3	Airline_3	Country_3	2025-09-23 00:10:04.943487	2025-09-23 00:10:04.943487
3	4	AC_4	Airline_4	Country_4	2025-09-23 00:10:04.943487	2025-09-23 00:10:04.943487
4	5	AC_5	Airline_5	Country_5	2025-09-23 00:10:04.943487	2025-09-23 00:10:04.943487
5	2	AC_2	Airline_2	Country_2	2025-09-23 00:10:04.943487	2025-09-23 00:10:04.943487

Task 13

Object Explorer

- public
 - Aggregates
 - Collations
 - Domains
 - FTS Configurations
 - FTS Dictionaries
 - FTS Parsers
 - FTS Templates
 - Foreign Tables
 - Functions
 - Materialized Views
 - Operators
 - Procedures
 - Sequences
 - Tables (10)
 - airline
 - Columns (6)
 - airline_id
 - airline_code
 - airline_name
 - airline_country
 - created_at
 - update_at
 - Constraints
 - Indexes
 - RLS Policies
 - Rules
 - Triggers
 - airport
 - Columns (7)
 - airport_id
 - airport_name
 - country
 - state
 - city
 - created_at
 - update_at
 - Constraints
 - Indexes

airport_2/postgres@PostgreSQL 17

Query

```
--13
SELECT * FROM airline
ORDER BY created_at DESC
LIMIT 5;
```

Data Output

	airline_id	airline_code	airline_name	airline_country	created_at	update_at
1	9	KNQX	NOX	Venezuela	2024-03-16	2023-09-16
2	40	LTBD	CII	Argentina	2024-03-15	2024-01-29
3	22	2AK6	HGZ	Philippines	2024-03-13	2023-10-20
4	24	ZSRG	RUG	Portugal	2024-03-11	2023-08-24
5	45	HCMV	BUO	Sweden	2024-02-18	2023-12-10

Task 14

Object Explorer

- public
 - Aggregates
 - Collations
 - Domains
 - FTS Configurations
 - FTS Dictionaries
 - FTS Parsers
 - FTS Templates
 - Foreign Tables
 - Functions
 - Materialized Views
 - Operators
 - Procedures
 - Sequences
 - Tables (10)
 - airline
 - Columns (6)
 - airline_id
 - airline_code
 - airline_name
 - airline_country
 - created_at
 - update_at

Query

```
--14
SELECT * FROM baggage_check
WHERE booking_id BETWEEN 200 AND 300
AND check_result <> 'Checked';
```

Data Output

	baggage_check_id [PK] integer	check_result character varying (50)	created_at date	update_at date	booking_id integer	passenger_id integer
1	7	Not checked	2023-05-04	2023-04-29	226	44
2	12	Not checked	2023-10-02	2023-06-22	288	133
3	22	Not checked	2023-06-14	2023-11-10	246	101
4	23	Not checked	2023-05-29	2023-06-02	284	22
5	24	Not checked	2024-02-17	2023-10-03	267	68
6	25	Not checked	2024-01-20	2023-06-10	237	140
7	61	Not checked	2023-06-12	2023-11-05	279	195
8	73	Not checked	2023-12-02	2023-05-28	274	187
9	75	Not checked	2023-11-03	2023-12-03	300	130
10	83	Not checked	2023-10-04	2023-04-26	299	63
11	91	Not checked	2023-05-21	2023-09-03	234	76
12	92	Not checked	2024-01-26	2023-04-07	260	154

Total rows: 56 Query complete 00:00:00.125

Successfully run. Total query runtime: 125 msec. 56 rows affected.

Task 15

Object Explorer

- public
 - Aggregates
 - Collations
 - Domains
 - FTS Configurations
 - FTS Dictionaries
 - FTS Parsers
 - FTS Templates
 - Foreign Tables
 - Functions
 - Materialized Views
 - Operators
 - Procedures
 - Sequences
 - Tables (10)
 - airline
 - Columns (6)
 - airline_id
 - airline_code
 - airline_name
 - airline_country
 - created_at
 - update_at

Query

```
--15
SELECT * FROM baggage_check
WHERE DATE_TRUNC('month', update_at) = DATE_TRUNC('month', created_at)
AND created_at > update_at;
```

Data Output

	baggage_check_id [PK] integer	check_result character varying (50)	created_at date	update_at date	booking_id integer	passenger_id integer
1	34	Checked	2023-04-25	2023-04-08	28	57
2	86	Checked	2023-12-25	2023-12-07	312	22
3	104	Checked	2024-03-17	2024-03-14	41	83
4	109	Not checked	2023-08-30	2023-08-09	469	91
5	119	Not checked	2023-12-02	2023-12-01	135	55
6	148	Checked	2024-03-17	2024-03-16	86	5
7	219	Checked	2023-04-17	2023-04-14	233	200
8	248	Not checked	2023-06-22	2023-06-09	449	60
9	251	Not checked	2023-06-19	2023-06-16	260	26
10	299	Checked	2023-04-26	2023-04-08	385	191
11	304	Not checked	2023-07-29	2023-07-22	210	10
12	396	Not checked	2023-07-13	2023-07-01	37	144

Total rows: 18 Query complete 00:00:00.062