

Task 1

The screenshot shows the pgAdmin 4 interface with the 'airline' table selected in the Object Explorer. The query editor displays the following SQL query:

```
--lab 4
--1
SELECT UPPER(airline_name) AS upper_airline_name
FROM airline;
```

The Data Output pane shows the results of the query, displaying the 'upper_airline_name' for each row in the 'airline' table. The results are as follows:

upper_airline_name
IPC
PDN
KLE
KHS
YLO
NGL
Q
QIG
NDK
SOZ
RVA
KOQ
IFH
PIR

A notification message at the bottom right states: "You are currently running version 9.6 of pgAdmin 4, however the current version is 9.8. Please click [here](#) for more information."

Task 2

The screenshot shows the pgAdmin 4 interface with the 'baggage_check' table selected in the Object Explorer. The query editor displays the following SQL query:

```
--2
UPDATE airline SET airline_name = REPLACE(airline_name, 'Air', 'Aero');
```

The Data Output pane shows the results of the query, displaying the 'UPDATE 58' message. A notification message at the bottom right states: "You are currently running version 9.6 of pgAdmin 4, however the current version is 9.8. Please click [here](#) for more information."

Task 3

The screenshot shows the pgAdmin 4 interface with the following components:

- Object Explorer:** Displays the database schema. The 'airline' table is selected, showing columns: `airline_id`, `airline_code`, `airline_name`, `airline_country`, `created_at`, and `update_at`. The 'baggage' table is also visible with columns: `baggage_id`, `weight_in_kg`, `created_date`, `update_date`, and `booking_id`.
- Query Editor:** Contains the following SQL query:


```

SELECT flight_no
FROM flights
WHERE airline_id in (1,2) GROUP BY
flight_no
HAVING COUNT(DISTINCT airline_id) > 2;
      
```
- Data Output:** Shows the result of the query:

flight_no
character varying (30)
- Notifications:** A message box states: "You are currently running version 9.6 of pgAdmin 4, however the current version is 9.8. Please click [here](#) for more information."
- Status Bar:** Indicates "Total rows: 0" and "Query complete 00:00:00.075".

Task 4

The screenshot shows the pgAdmin 4 interface with the following components:

- Object Explorer:** Displays the database schema. The 'airport' table is selected, showing columns: `airport_id`, `airport_name`, `country`, `state`, `city`, `created_at`, and `update_at`.
- Query Editor:** Contains the following SQL query:


```

SELECT * FROM airport
WHERE airport_name LIKE '%Reginals'
AND airport_name LIKE '%Air%';
      
```
- Data Output:** Shows the result of the query:

airportId	airportName	country	state	city	created_at	update_at
[ps] integer	character varying (30)	country character varying (50)	state character varying (30)	city character varying (50)	date	date
- Status Bar:** Indicates "Total rows: 0" and "Query complete 00:00:00.086".

Task 5

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

```
--5
SELECT last_name, first_name,
       TO_CHAR(date_of_birth, 'Month DD, YYYY') as formatted_date
FROM passengers ;
```

The Data Output pane at the bottom shows the results of the query, displaying 14 rows of passenger information:

last_name	first_name	formatted_date
Imis	Hilde	January 03, 2000
Sparsholt	Anvy	June 09, 1974
Pococke	Reinold	June 07, 1982
Borrel	Con	October 17, 1986
Bangs	Wayne	April 22, 1996
Shackelford	Tildy	April 15, 2004
Oram	Byrle	July 07, 1985
Igo	Howard	March 29, 1984
Philippou	Alphonso	August 30, 1975
Needham	Fairfax	July 08, 1981
Prime	Vanda	May 17, 1977
Wimmer	Terra	January 02, 1977
Blaszczak	Domenic	December 31, 20...
Southerell	Conrad	January 25, 1998

Task 6

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

```
--6
SELECT flight_no
FROM flights
WHERE actual_arrival > scheduled_arrival;
```

The Data Output pane at the bottom shows the results of the query, displaying 14 rows of flight numbers:

flight_no
US-CT
US-NM
RU-KR
US-AZ
IN-OR
CA-NL
BR-PE
TH-32
US-MG
GB-ENG
UZ-SU
US-OR
KP-10
MZ-G

The status bar at the bottom indicates 'Total rows: 509' and 'Query complete 00:00:00.115'.

Task 7

The screenshot shows the PostgreSQL IDE interface. On the left, the Object Explorer displays the database structure, including the 'public' schema and the 'airline' table. The main query window shows the following SQL code:

```

--7
SELECT first_name, last_name, date_of_birth,
CASE
WHEN date_of_birth BETWEEN '1990-01-01' AND '2007-12-31' THEN 'Yong'
WHEN date_of_birth BETWEEN '1970-01-01' AND '1990-12-31' THEN 'Adult'
ELSE 'Other'
END AS group
FROM passengers;

```

The Data Output pane shows the results of the query, displaying columns: first_name, last_name, date_of_birth, and group. The results are as follows:

first_name	last_name	date_of_birth	group	
1	Hilde	Imis	2000-01-03	Yong
2	Anry	Spansholt	1974-06-09	Adult
3	Reinald	Pococke	1982-06-07	Adult
4	Con	Borrel	1986-10-17	Adult
5	Wayne	Bangs	1996-04-22	Yong
6	Tildy	Shackleford	2004-04-15	Yong
7	Byrle	Oram	1985-07-07	Adult
8	Howard	Igo	1984-03-29	Adult
9	Alphonso	Philippou	1975-08-30	Adult
10	Fairfax	Needham	1981-07-08	Adult
11	Vanda	Prime	1977-05-17	Adult
12	Terra	Wimmer	1977-01-02	Adult
13	Domenic	Biaszczak	2001-12-31	Yong
14	Conrad	Southerell	1998-01-25	Yong

Total rows: 200. Query complete 00:00:00.281.

Task 8

The screenshot shows the PostgreSQL IDE interface. On the left, the Object Explorer displays the database structure, including the 'public' schema and the 'booking' table. The main query window shows the following SQL code:

```

--8
SELECT price,
CASE
WHEN price BETWEEN 100 AND 2000 THEN 'Cheap'
WHEN price BETWEEN 2001 AND 5000 THEN 'Medium'
WHEN price BETWEEN 5001 AND 10000 THEN 'Expensive'
ELSE 'Other'
END AS category_of_price
FROM booking;

```

The Data Output pane shows the results of the query, displaying columns: price and category_of_price. The results are as follows:

price	category_of_price	
1	1521.16	Cheap
2	4216.60	Medium
3	5782.37	Expensive
4	102.96	Cheap
5	1517.82	Cheap
6	7813.55	Expensive
7	1346.71	Cheap
8	7860.37	Expensive
9	7015.82	Expensive
10	1668.38	Cheap
11	1314.88	Cheap
12	3283.89	Medium
13	7813.79	Expensive
14	4375.07	Medium

Total rows: 500. Query complete 00:00:00.109.

Task 9

Object Explorer

- update_date
- booking_id
- Constraints
- Indexes
- RLS Policies
- Rules
- Triggers
- baggage_check
- 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
- flights
- passengers
 - Columns (10)
 - passenger_id
 - first_name
 - last_name
 - date_of_birth
 - gender
 - country_of_citizenship
 - country_of_residence
 - passport_number
 - created_at
 - update_at
 - Constraints
 - Indexes
 - RLS Policies
 - Rules

Query

```
--9
SELECT airline_country,
COUNT(airline_name) AS number_of_airline
FROM airline GROUP BY airline_country;
```

Data Output

airline_country	number_of_airline	
1	Yemen	1
2	Argentina	1
3	Indonesia	2
4	Sudan	1
5	Venezuela	1
6	Hungary	1
7	Slovenia	1
8	Greece	1
9	China	10
10	Russia	4
11	Georgia	1
12	Iran	1
13	Sweden	1
14	France	3

Showing rows: 1 to 26 Page No: 1 of 1

Task 10

Object Explorer

- Functions
- Materialized Views
- Operators
- Procedures
- Sequences
- Tables (10)
 - airline
 - airport
 - baggage
 - baggage_check
 - boarding_pass
 - booking
 - booking_flight
 - 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
 - Columns
 - Constraints
 - Indexes
 - RLS Policies
 - Rules
 - Triggers
- security_check

Query

```
--10
SELECT flight_no
FROM flights
WHERE scheduled_arrival < actual_arrival;
```

Data Output

flight_no	
1	US-CT
2	US-NM
3	RU-KR
4	US-AZ
5	IN-OR
6	CAN-L
7	BR-PE
8	TH-32
9	US-MS
10	GB-ENG
11	UZ-SU
12	US-OR
13	KP-10
14	MZ-0

Showing rows: 1 to 509 Page No: 1 of 1

Total rows: 509 Query complete 00:00:00.066 CRLF Ln 95, Col 13