

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer

- > Procedures
- > 1.. 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
- > security_check

airport_database/postgres@labwork*

airport_database/postgres@labwork

No limit

Query History

Scratch Pad

Scratch Pad

Data Output Messages Notifications

CREATE INDEX

Query returned successfully in 67 msec.

Total rows: Query complete 00:00:00.067

✓ Query returned successfully in 67 msec. ✘

LF Ln 1, Col 62

pgAdmin 4

File Object Tools Edit View Window Help



Object Explorer



airport_database/postgres@labwork*

> 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

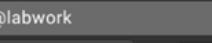
> Triggers

> passengers

> security_check



airport_database/postgres@labwork



Query

```
1 create unique index idx_unique_flight_no_departure
2 on flights(flight_no, scheduled_departure);
3
```

Scratch Pad

Data Output Messages Notifications

ERROR: создать уникальный индекс "idx_unique_flight_no_departure" не удалось
Ключ (flight_no, scheduled_departure)=(US-AK, 2023-06-05) дублируется.

ошибкa: создать уникальный индекс "idx_unique_flight_no_departure" не удалось
SQL state: 23505
Detail: Ключ (flight_no, scheduled_departure)=(US-AK, 2023-06-05) дублируется.

Total rows: Query complete 00:00:00.064

LF Ln 2, Col 3

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File Object Tools Edit View Window Help

Object Explorer airport_database/postgres@labwork* X

Tables (10)

- Procedures
- Sequences
- Tables (10)
 - airline
 - airport
 - baggage
 - baggage_check
 - boarding_pass
 - booking
 - booking_flight
 - flights
- Columns (14)
- Constraints
- Indexes
- RLS Policies
- Rules
- Triggers
- passengers
- security_check

airport_database/postgres@labwork

No limit

Query History

```
1 create index departure_and_arrival_airport_id on flights(departure_airport_id, arrival_airport_id)
```

Scratch Pad X

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

Data Output Messages Notifications

CREATE INDEX

Query returned successfully in 82 msec.

Total rows: Query complete 00:00:00.082

✓ Query returned successfully in 82 msec. ✘

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File Object Tools Edit View Window Help

Object Explorer

- Procedures
- Sequences
- Tables (10)
 - airline
 - airport
 - Columns (7)
 - airport_id
 - airport_name
 - country
 - state
 - city
 - created_at
 - update_at
 - Constraints
 - Indexes
 - RLS Policies
 - Rules
 - Triggers
 - 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

airport_database/postgres@labwork*

airport_database/postgres@labwork

No limit

Query History

```
explain analyze
select * from airport where country = 'Russia'
```

Scratch Pad

Data Output Messages Notifications

QUERY PLAN

text
1 Seq Scan on airport (cost=0.00..1.25 rows=1 width=484) (actual time=0.017..0.023 rows=1 loops=1)
2 Filter: ((country)::text = 'Russia'::text)
3 Rows Removed by Filter: 19
4 Planning Time: 0.089 ms
5 Execution Time: 0.041 ms

Showing rows: 1 to 5 Page No: 1 of 1

Total rows: 5 Query complete 00:00:00.109

Successfully run. Total query runtime: 109 msec. 5 rows affected.

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File Object Tools Edit View Window Help

Object Explorer



airport_database/postgres@labwork* X

airport_database/postgres@labwork



No limit

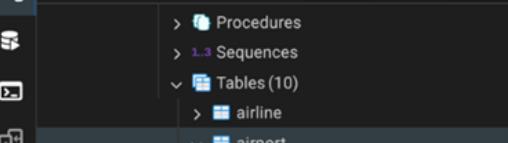


Query Query History

1 create index idx_airport_country on airport(country)



Scratch Pad X



1

create index idx_airport_country on airport(country)

Data Output Messages Notifications

CREATE INDEX

Query returned successfully in 98 msec.

Total rows: Query complete 00:00:00.098

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File Object Tools Edit View Window Help

Object Explorer

- Procedures
- Sequences
- Tables (10)
 - airline
 - airport
 - Columns (7)
 - airport_id
 - airport_name
 - country
 - state
 - city
 - created_at
 - update_at
 - Constraints
 - Indexes
 - RLS Policies
 - Rules
 - Triggers
 - 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

airport_database/postgres@labwork*

airport_database/postgres@labwork

No limit

Query History

Scratch Pad

```
explain analyze
select * from airport where country = 'Russia'
```

Data Output Messages Notifications

Showing rows: 1 to 5 Page No: 1 of 1

QUERY PLAN	
text	
1	Seq Scan on airport (cost=0.00..1.25 rows=1 width=484) (actual time=0.012..0.015 rows=1 loops=1)
2	Filter: ((country)::text = 'Russia'::text)
3	Rows Removed by Filter: 19
4	Planning Time: 0.258 ms
5	Execution Time: 0.030 ms

Total rows: 5 Query complete 00:00:00.103

Successfully run. Total query runtime: 103 msec. 5 rows affected.

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File Object Tools Edit View Window Help



Object Explorer



airport_database/postgres@labwork*

airport_database/postgres@labwork

Query

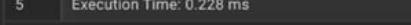
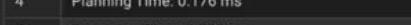
```
1 explain analyze
2 select * from baggage where weight_in_kg > 2.00
```

Scratch Pad

Data Output Messages Notifications



Showing rows: 1 to 5 Page No: 1 of 1



Total rows: 5 Query complete 00:00:00.122

✓ Successfully run. Total query runtime: 122 msec. 5 rows affected. ✘

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File Object Tools Edit View Window Help

Object Explorer

- > FTS Dictionaries
- > FTS Parsers
- > FTS Templates
- > Foreign Tables
- > Functions
- > Materialized Views
- > Operators
- > Procedures
- > Sequences
- > Tables(10)
 - > airline
 - > airport
 - > baggage

airport_database/postgres@labwork*

airport_database/postgres@labwork

No limit

Query History

```
1
2 create index idx_baggage_weight on baggage(weight_in_kg)
```

Scratch Pad

Columns (5)

- baggage_id
- weight_in_kg
- created_date
- update_date
- booking_id

CREATE INDEX

Query returned successfully in 110 msec.

Total rows: Query complete 00:00:00.110

✓ Query returned successfully in 110 msec. ✘

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File Object Tools Edit View Window Help



Object Explorer



airport_database/postgres@labwork*

FTS Dictionaries

FTS Parsers

FTS Templates

Foreign Tables

Functions

Materialized Views

Operators

Procedures

Sequences

Tables(10)

airline

airport

baggage

Columns (5)

baggage_id

weight_in_kg

created_date

update_date

booking_id

Constraints

Indexes

RLS Policies

Rules

Triggers

baggage_check

boarding_pass

booking

booking_flight

flights

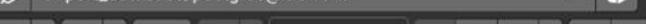
passengers

security_check

Trigger Functions

Types

airport_database/postgres@labwork



No limit

Query

Query History

```
1 explain analyze
2 select * from baggage where weight_in_kg > 2
```

Scratch Pad

Data Output

Messages Notifications



Showing rows: 1 to 5 Page No: 1 of 1

QUERY PLAN	
text	
1	Seq Scan on baggage (cost=0.00..11.25 rows=483 width=21) (actual time=0.007..0.080 rows=483 loop...
2	Filter: (weight_in_kg > '2'::numeric)
3	Rows Removed by Filter: 17
4	Planning Time: 0.209 ms
5	Execution Time: 0.108 ms

✓ Successfully run. Total query runtime: 69 msec. 5 rows affected.

Total rows: 5 Query complete 00:00:00.069

LF Ln 2, Col 35

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer



airport_database/postgres@labwork*



airport_database/postgres@labwork



Query

Query History

```
--create index idx_unique_passport_number on passengers(passport_number);

select indexname, indexdef from pg_indexes where tablename = 'passengers'
```

Scratch Pad



Data Output Messages Notifications

SQL

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

	indexname name	indexdef text
1	passengers_pkey	CREATE UNIQUE INDEX passengers_pkey ON public.passengers USING btree (passenger_id)
2	idx_unique_passport_num...	CREATE INDEX idx_unique_passport_number ON public.passengers USING btree (passport_num...

Total rows: 2 Query complete 00:00:00.076

LF Ln 4, Col 28

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File Object Tools Edit View Window Help

Object Explorer

- > FTS Dictionaries
- > FTS Parsers
- > FTS Templates
- > Foreign Tables
- > Functions
- > Materialized Views
- > Operators
- > Procedures
- > Sequences
- > Tables(10)
 - > airline
 - > airport
 - > baggage
 - > baggage_check
 - > boarding_pass
 - > booking
 - > 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

airport_database/postgres@labwork*

airport_database/postgres@labwork

Query

```
--create index idx_unique_passport_number on passengers(passport_number);

--select indexname, indexdef from pg_indexes where tablename = 'passengers'

insert into passengers(passenger_id,first_name, last_name, passport_number) values ('543', 'egor', 'dyomin', '1234');
insert into passengers(passenger_id,first_name, last_name, passport_number) values ('321', 'jalen', 'brown', '1234');
```

Data Output Messages Notifications

ERROR: повторяющееся значение ключа нарушает ограничение уникальности "passengers_pkey"
Ключ "(passenger_id)=(543)" уже существует.

ОШИБКА: повторяющееся значение ключа нарушает ограничение уникальности "passengers_pkey"
SQL state: 23505
Detail: Ключ "(passenger_id)=(543)" уже существует.

Total rows: | Query complete 00:00:00.067

LF | Ln 10, Col 1

pgAdmin 4

File Object Tools Edit View Window Help



Object Explorer



airport_database/postgres@labwork*

FTS Dictionaries

FTS Parsers

FTS Templates

Foreign Tables

Functions

Materialized Views

Operators

Procedures

Sequences

Tables(10)

airline

airport

baggage

baggage_check

boarding_pass

booking

booking_flight

flights

passenger

Columns(10)

passenger_id

first_name

last_name

date_of_birth

gender

country_of_citizenship

country_of_residence

passport_number

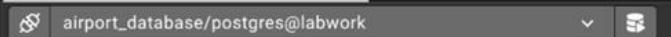
created_at

update_at

Constraints

Indexes

RLS Policies



airport_database/postgres@labwork



Query

```
1 create index idx_passenger_info
2   on passengers (first_name, last_name, date_of_birth, country_of_citizenship);
3
4
5 explain analyze
6 select * from passengers
7 where country_of_citizenship = 'Philippines'
8 and extract (year from date_of_birth) = 1984;
```

Scratch Pad

Data Output Messages Notifications



Showing rows: 1 to 5 Page No: 1 of 1

QUERY PLAN	
1	Seq Scan on passengers (cost=0.00..6.59 rows=1 width=64) (actual time=0.017..0.047 rows=1 loops=1)
2	Filter: (((country_of_citizenship)::text = 'Philippines'::text) AND (EXTRACT(year FROM date_of_birth) = '1984'::num...))
3	Rows Removed by Filter: 204
4	Planning Time: 0.395 ms
5	Execution Time: 0.059 ms

✓ Successfully run. Total query runtime: 97 msec. 5 rows affected.

Total rows: 5 Query complete 00:00:00.097

LF Ln 8, Col 46

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File Object Tools Edit View Window Help

Object Explorer



airport_database/postgres@labwork*

airport_database/postgres@labwork



Query

```
1 create index idx_passenger_info
2 on passengers (first_name, last_name, date_of_birth, country_of_citizenship);
3
4
5 explain analyze
6 select * from passengers
7 where country_of_citizenship = 'Philippines'
8 and extract (year from date_of_birth) = 1984;
9
10 create index idx_passenger_country_dob
11 ON passengers (country_of_citizenship, date_of_birth);
```

Scratch Pad X

Data Output Messages Notifications

CREATE INDEX

Query returned successfully in 120 msec.

✓ Query returned successfully in 120 msec. ✘

Total rows: | Query complete 00:00:00.120

LF Ln 10, Col 4

pgAdmin 4

File Object Tools Edit View Window Help



Object Explorer



airport_database/postgres@labwork*

airport_database/postgres@labwork

Query

```
1 create index idx_passenger_info
2 on passengers (first_name, last_name, date_of_birth, country_of_citizenship);
3
4
5 explain analyze
6 select * from passengers
7 where country_of_citizenship = 'Philippines'
8 and extract (year from date_of_birth) = 1984;
9
10 create index idx_passenger_country_dob
11 ON passengers (country_of_citizenship, date_of_birth);
12
13 explain analyze
14 select * from passengers
15 where country_of_citizenship = 'Philippines'
16 and date_of_birth between '1984-01-01' and '1984-12-31';
```

Scratch Pad

Data Output Messages Notifications

SQL

Showing rows: 1 to 5 Page No: 1 of 1

QUERY PLAN	
text	
1	Seq Scan on passengers (cost=0.00..6.59 rows=1 width=64) (actual time=0.016..0.062 rows=1 loops=1)
2	Filter: ((date_of_birth >= '1984-01-01'::date) AND (date_of_birth <= '1984-12-31'::date) AND ((country_of_citizenship)::text = 'Philippines'::text))
3	Rows Removed by Filter: 204
4	Planning Time: 0.374 ms
5	Execution Time: 0.081 ms

✓ Successfully run. Total query runtime: 80 msec. 5 rows affected.

Total rows: 5 Query complete 00:00:00.080

LF Ln 16, Col 43

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File Object Tools Edit View Window Help

Object Explorer airport_database/postgres@labwork*

airport_database/postgres@labwork

Query History

```
1 select indexname, indexdef
2   from pg_indexes
3  where tablename = 'passengers';
4
```

Tables (10)

- airline
- airport
- baggage
- baggage_check
- boarding_pass
- booking
- 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

Data Output Messages Notifications

SQL

	indexname name	indexdef text
1	passengers_pkey	CREATE UNIQUE INDEX passengers_pkey ON public.passengers USING btree (passenger_id)
2	idx_unique_passport_num...	CREATE INDEX idx_unique_passport_number ON public.passengers USING btree (passport_number)
3	idx_passenger_info	CREATE INDEX idx_passenger_info ON public.passengers USING btree (first_name, last_name, date_of_birth, country_of_citizen...
4	idx_passenger_country_dob	CREATE INDEX idx_passenger_country_dob ON public.passengers USING btree (country_of_citizenship, date_of_birth)

Showing rows: 1 to 4 Page No: 1 of 1

Total rows: 4 Query complete 00:00:00.140

Successfully run. Total query runtime: 140 msec. 4 rows affected.