**Курс " Javascript Fullstack Developer" и "Javascript Frontend"**

# **Кожевников Сергей 2024 год**

# **Задание 3**

Продумать и разработать базу данных для:  
1) todo-листа.  
2) интернет-магазина.  
3) социальной сети.  
4) системы управления обучающими курсами.

Опциональное дз:

1) Придумать свою идею для проекта и описать структуру БД для него.

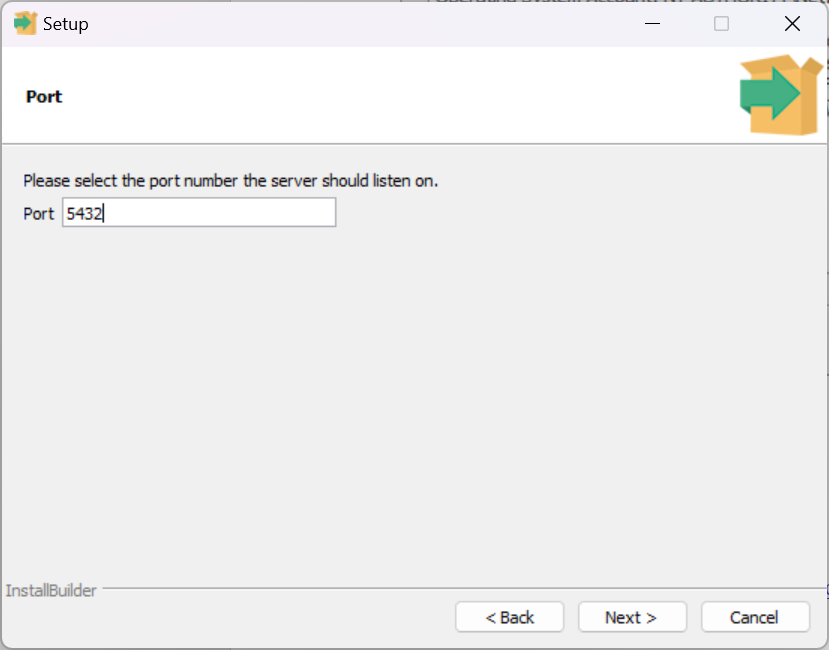
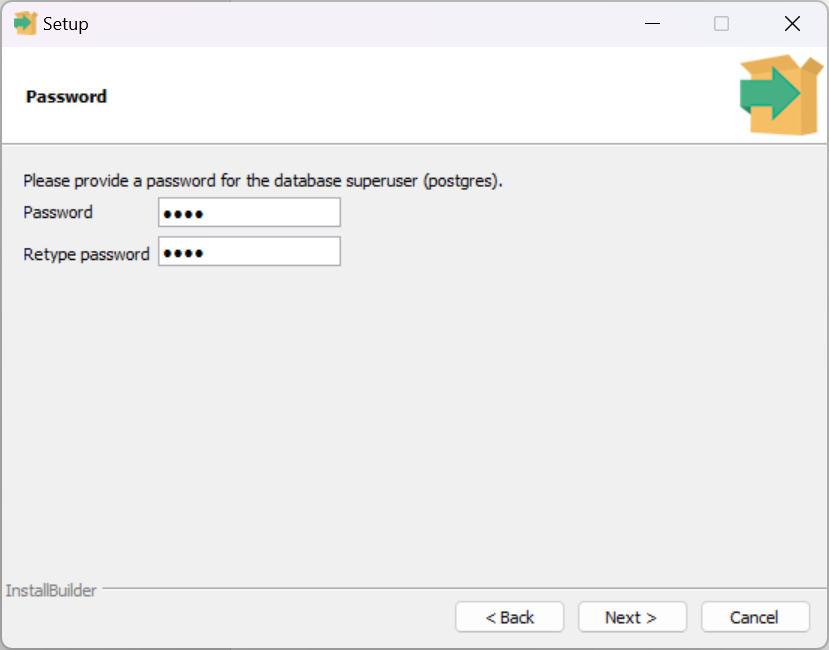
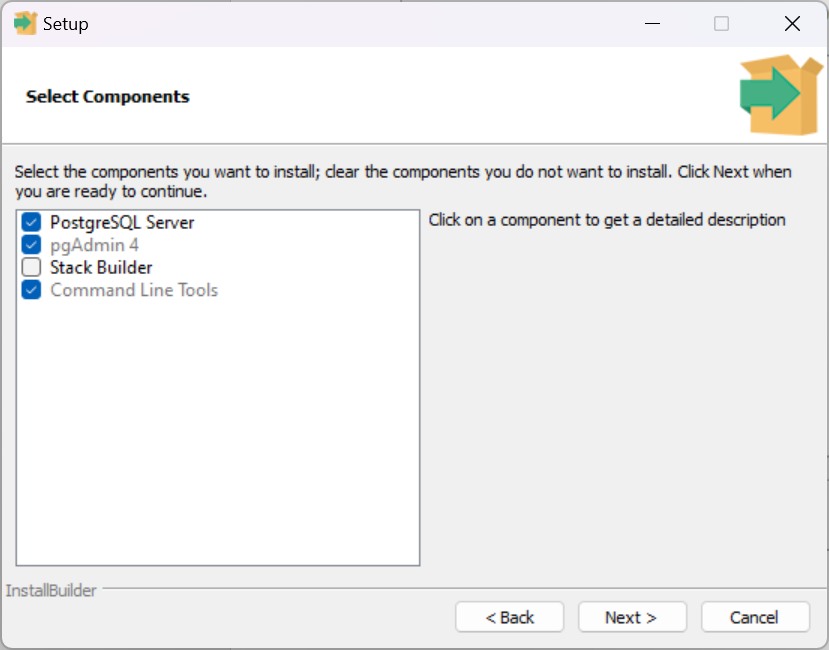
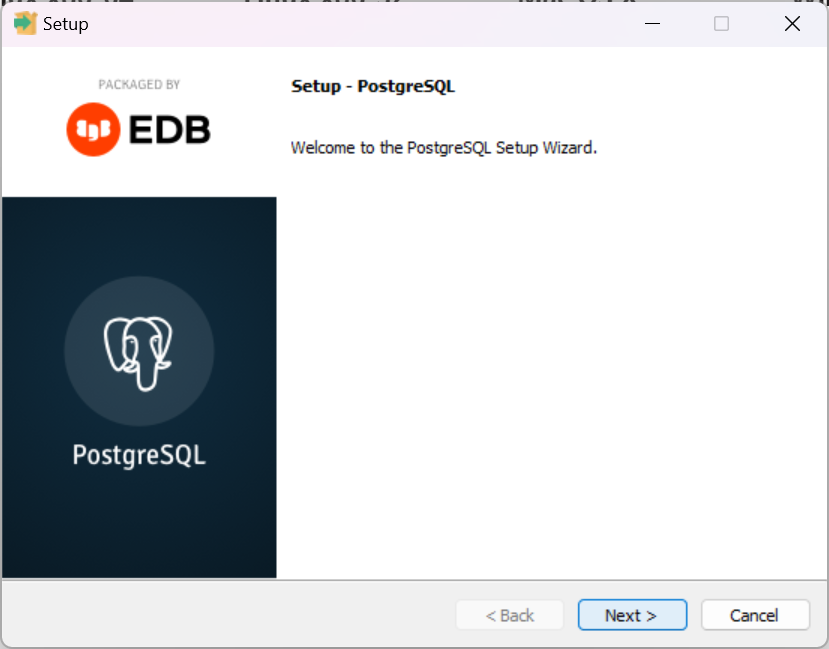
2) Установить PostgreSQL и с помощью SQL запросов создать описанную структуру.

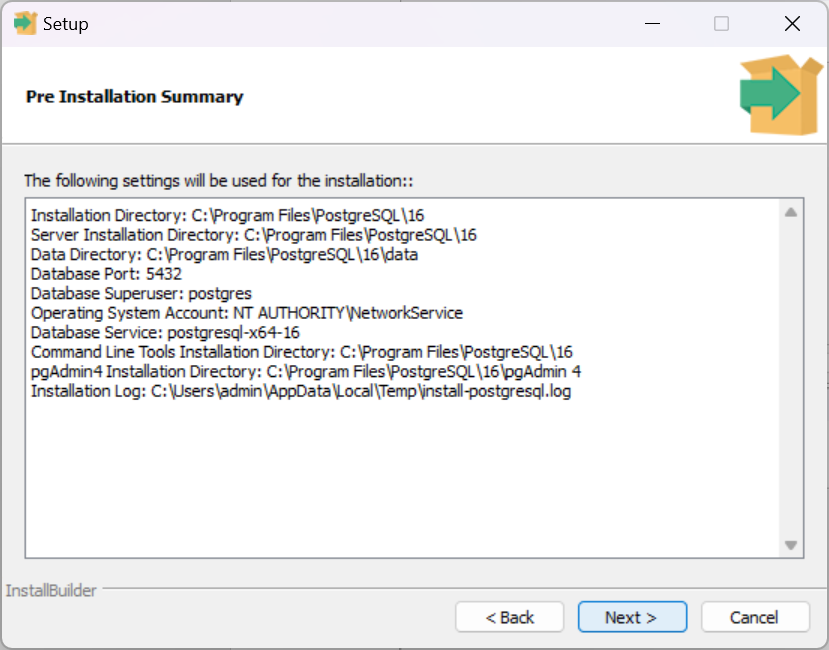
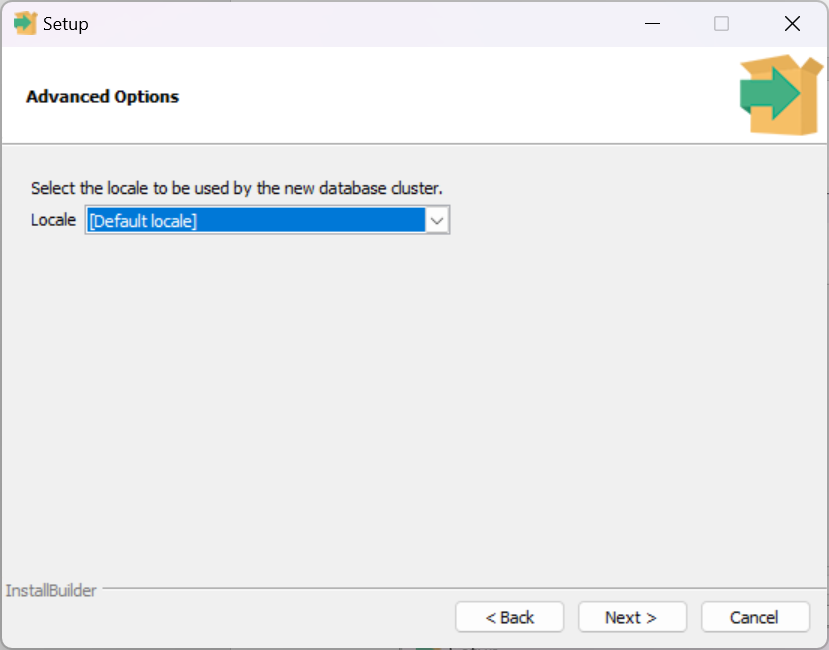
3) Ознакомиться с GUI для баз данных (напр. DataGrip) и попробовать поработать с БД через нее.

**Установил PostgreSQL 16.2 for Windows 10 x64**

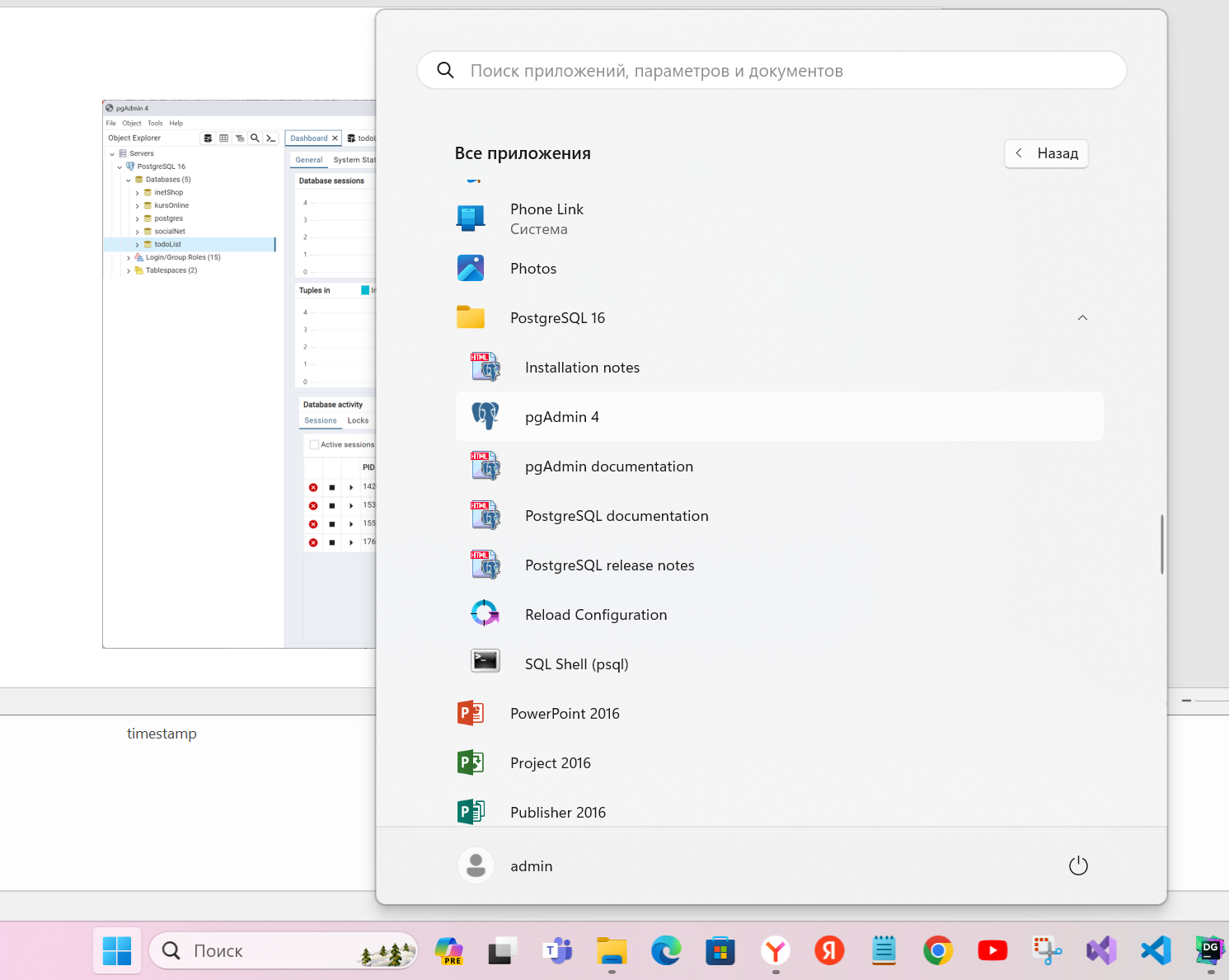
<https://www.postgresql.org/download/>

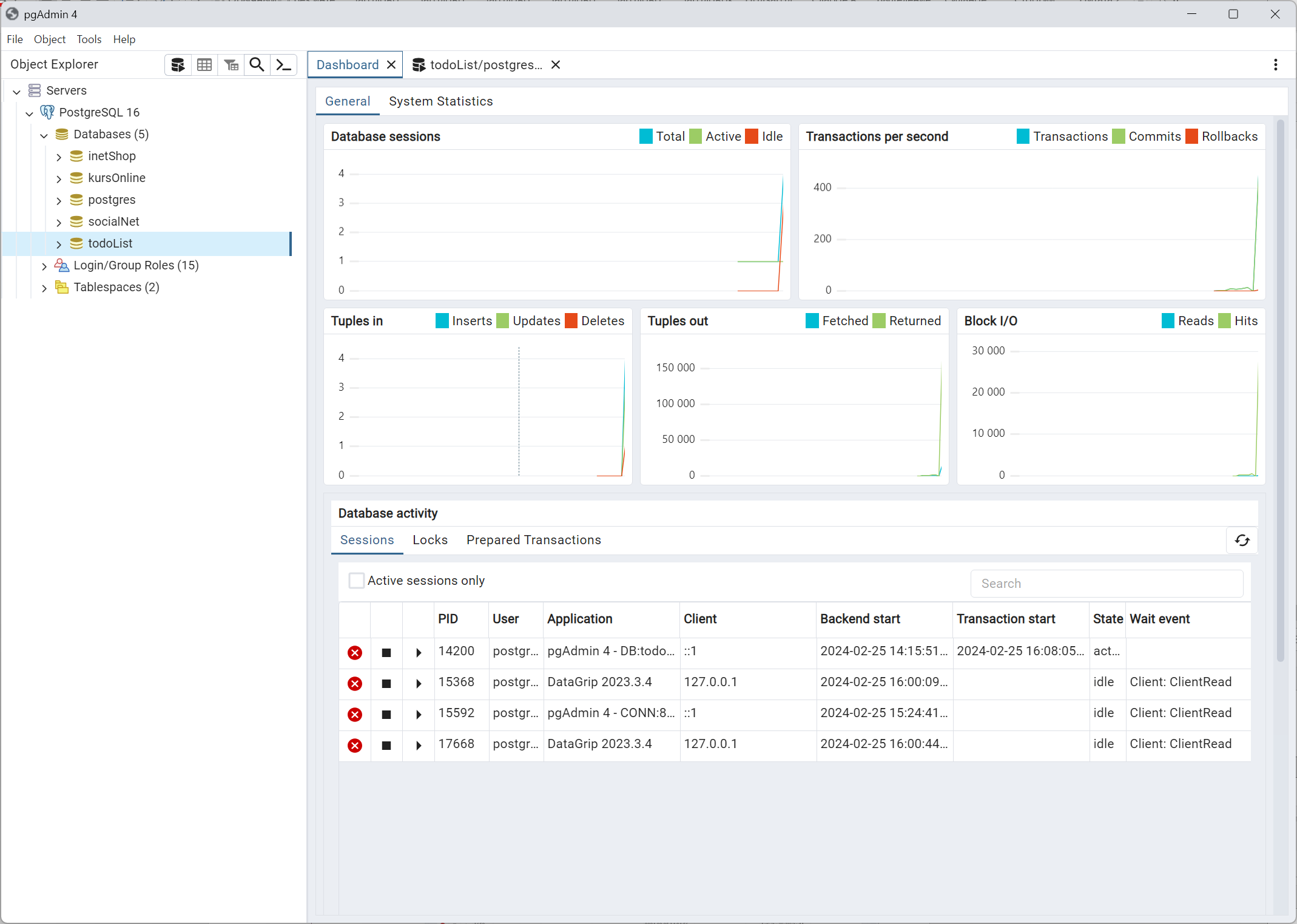
[**https://www.enterprisedb.com/downloads/postgres-postgresql-downloads**](https://www.enterprisedb.com/downloads/postgres-postgresql-downloads)





**Запустил и настроил pgAdmin**

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**Установил ODBC for PostgresSQL**

https://www.postgresql.org/ftp/odbc/versions/msi/

Установил DataGrip (<https://www.jetbrains.com/datagrip/>), ознакомился с GUI для баз данных и попробовал поработать с БД через нее.

Подключил локальный сервер PostgreSQL. Проверил соединение.

DBMS: PostgreSQL (ver. 16.2)

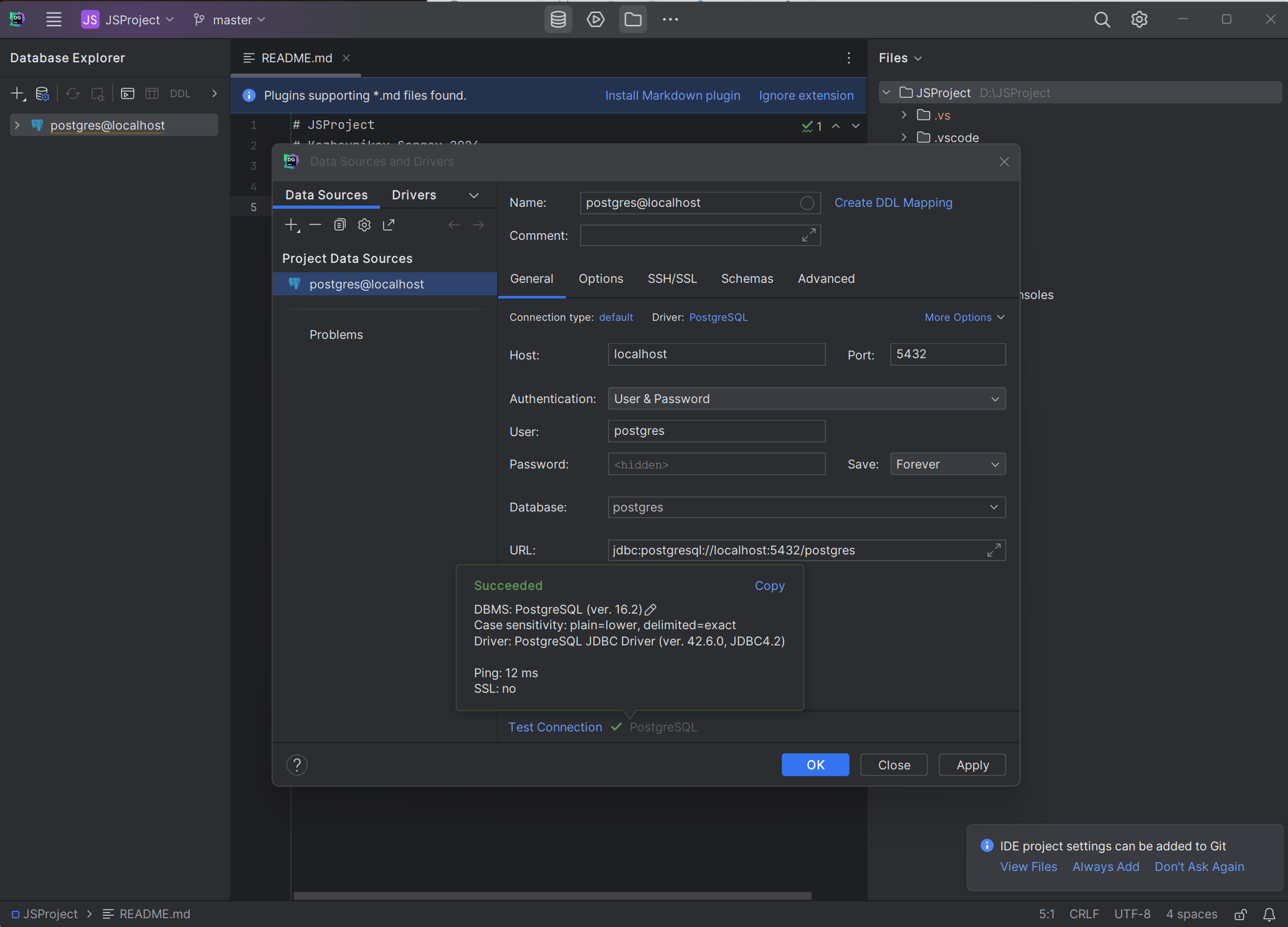
Case sensitivity: plain=lower, delimited=exact

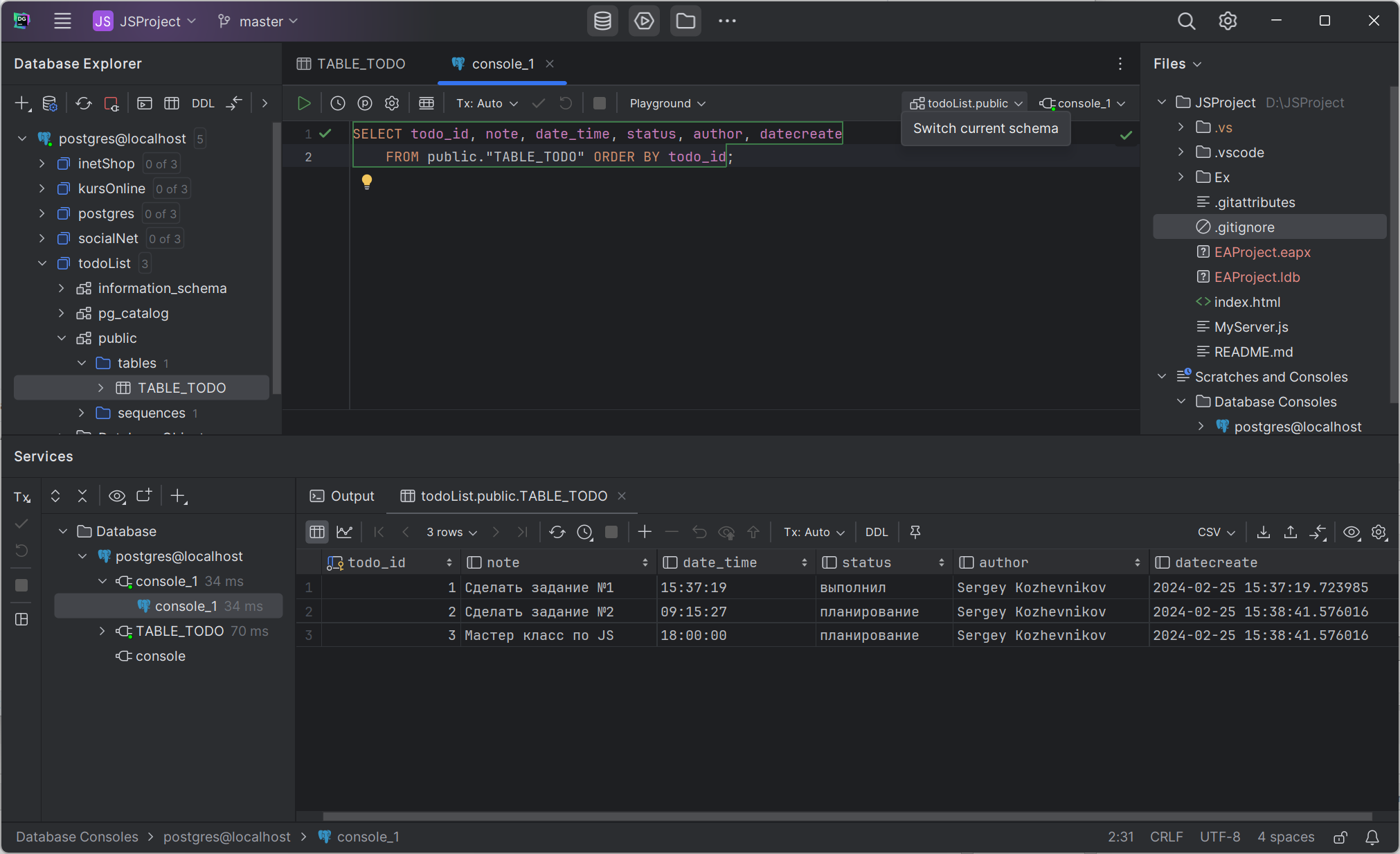
Driver: PostgreSQL JDBC Driver (ver. 42.6.0, JDBC4.2)

Ping: 12 ms

SSL: no

Подключил базы в DataGrip и вывел запрос данных.





# **Решение**

# База данных TODO

### Tables diagram

Data Modeling diagram in package 'Tables'

Tables

Version 1.0

admin created on 25.02.2024. Last modified 26.02.2024



1. Tables

### t\_kurs

Database table in package 'Tables'

t\_kurs

Version 1.0 Phase 1.0 Proposed

admin created on 26.02.2024. Last modified 26.02.2024

DBMS PostgreSQL

| COLUMN NAME | DATATYPE | NOT NULL | COMMENTS |
| --- | --- | --- | --- |
| kurs\_id | integer | True | Properties:  AutoNum = True  property = AutoNum=True;  SequenceName = kurs\_id\_seq |
| kurs\_name | varchar(255) | False |  |
| user\_id | integer | False |  |
| todo\_id | integer | False |  |

|  |  |  |
| --- | --- | --- |
| PRIMARY KEY NAME | COLUMNS | COMMENTS |
| PK\_t\_kurs | kurs\_id |  |

|  |  |  |
| --- | --- | --- |
| TYPE / NAME | COLUMNS | COMMENTS |
| «index» IXFK\_t\_kurs\_t\_TODO | todo\_id |  |
| «index» IXFK\_t\_kurs\_t\_User | user\_id |  |

|  |  |  |
| --- | --- | --- |
| FOREIGN KEY NAME | COLUMNS | REFERENCES |
| FK\_t\_kurs\_t\_TODO | todo\_id | t\_TODO(todo\_id) |
| FK\_t\_kurs\_t\_User | user\_id | t\_User(user\_id) |

### t\_order

Database table in package 'Tables'

t\_order

Version 1.0 Phase 1.0 Proposed

admin created on 26.02.2024. Last modified 26.02.2024

DBMS PostgreSQL

| COLUMN NAME | DATATYPE | NOT NULL | COMMENTS |
| --- | --- | --- | --- |
| order\_id | integer | True | Properties:  AutoNum = True  property = AutoNum=True;  SequenceName = order\_id\_seq |
| product\_name | varchar(50) | False |  |
| product\_count | integer | False | Initial value: 0 |
| product\_cost | double precision | False |  |
| notes | text | False |  |
| user\_id | integer | False | Initial value: 0 |
| date\_create | time without time zone | False |  |

|  |  |  |
| --- | --- | --- |
| PRIMARY KEY NAME | COLUMNS | COMMENTS |
| PK\_t\_order | order\_id |  |

|  |  |  |
| --- | --- | --- |
| TYPE / NAME | COLUMNS | COMMENTS |
| «index» IXFK\_t\_order\_t\_User | user\_id |  |

|  |  |  |
| --- | --- | --- |
| FOREIGN KEY NAME | COLUMNS | REFERENCES |
| FK\_t\_order\_t\_User | user\_id | t\_User(user\_id) |

### t\_TODO

Database table in package 'Tables'

t\_TODO

Version 1.0 Phase 1.0 Proposed

admin created on 25.02.2024. Last modified 26.02.2024

DBMS PostgreSQL

| COLUMN NAME | DATATYPE | NOT NULL | COMMENTS |
| --- | --- | --- | --- |
| todo\_id | integer | True | Properties:  AutoNum = True  property = AutoNum=True;  SequenceName = todo\_id\_seq |
| notes | text | False |  |
| date\_time | timestamp | False |  |
| status | varchar(50) | False | планирование, отложен, в работе, выполнил |
| user\_id | integer | False |  |
| datecreate | timestamp | False |  |

|  |  |  |
| --- | --- | --- |
| PRIMARY KEY NAME | COLUMNS | COMMENTS |
| PK\_t\_TODO | todo\_id |  |

|  |  |  |
| --- | --- | --- |
| TYPE / NAME | COLUMNS | COMMENTS |
| «index» IXFK\_t\_TODO\_T\_User | user\_id |  |

|  |  |  |
| --- | --- | --- |
| FOREIGN KEY NAME | COLUMNS | REFERENCES |
| FK\_t\_TODO\_T\_User | user\_id | t\_User(user\_id) |

### t\_User

Database table in package 'Tables'

t\_User

Version 1.0 Phase 1.0 Proposed

admin created on 26.02.2024. Last modified 26.02.2024

DBMS PostgreSQL

| COLUMN NAME | DATATYPE | NOT NULL | COMMENTS |
| --- | --- | --- | --- |
| user\_id | integer | True | Properties:  AutoNum = True  property = AutoNum=True;  SequenceName = user\_id\_seq |
| user\_name | varchar(255) | False |  |
| user\_email | varchar(50) | False |  |
| user\_tell | varchar(50) | False |  |

|  |  |  |
| --- | --- | --- |
| PRIMARY KEY NAME | COLUMNS | COMMENTS |
| PK\_t\_User | user\_id |  |

SELECT todo\_id, notes, date\_time, status, user\_id, datecreate

FROM public."t\_TODO" ORDER BY todo\_id; -- Вывел результат

INSERT INTO public."t\_TODO" as todo (notes, date\_time, status, user\_id, datecreate)

VALUES

('Задание 1','2024-02-26 09:55:27','планирование',1, current\_timestamp),

('Задание 2','2024-02-24 11:11:27','планирование',2, current\_timestamp),

('Задание 3','2023-06-24 12:11:27','планирование',2, current\_timestamp),

('Задание 4','2023-05-24 05:11:27','планирование',2, current\_timestamp),

('Задание 5','2024-01-24 09:11:27','планирование',1, current\_timestamp),

('Задание 6','2024-01-26 15:12:27','планирование',3, current\_timestamp),

('Мастер класс по JS','2024.02.25 18:00:00','выполнил',3, current\_timestamp); -- Создал новую строку

INSERT INTO public."t\_User" as usr (user\_name, user\_email, user\_tell)

VALUES

('Sergey Kozhevnikov','kozhevnikov.su@gmail.com','+7 (985) 867 04 89'), -- Создал нового пользователя

('Sidor Sidorov','sidor234@gmail.com','+7 (432) 324 02 11'), -- Создал нового пользователя

('Ivan Ivanov','ivan3423@gmail.com','+7 (985) 342 01 32'); -- Создал нового пользователя

SELECT user\_id, user\_name, user\_email, user\_tell

FROM public."t\_User" order by user\_id ;

INSERT INTO public.t\_kurs(kurs\_id, kurs\_name, user\_id, todo\_id)

VALUES

(2,'Курс 2', 2, 2),

(3,'Курс 3', 3, 3),

(4,'Курс 4', 1, 4),

(5,'Курс 5', 2, 5),

(6,'Курс 6', 3, 6);

SELECT kurs\_id, kurs\_name, user\_id, todo\_id

FROM public."t\_kurs" order by kurs\_id ;

INSERT INTO public.t\_order(

order\_id, product\_name, product\_count, product\_cost, notes, user\_id, date\_create)

VALUES

(2,'Товар 2', 11, 1223.28,'Описание товара 2', 2,current\_timestamp),

(3,'Товар 3', 12, 6523.12,'Описание товара 3', 3,current\_timestamp),

(4,'Товар 4', 13, 5561.22,'Описание товара 4', 1,current\_timestamp),

(5,'Товар 5', 14, 45233.3,'Описание товара 5', 2,current\_timestamp);

SELECT order\_id, product\_name, product\_count, product\_cost, notes, user\_id, date\_create

FROM public.t\_order;

UPDATE public."t\_TODO"

SET date\_time = '2024-02-25 15:37:19'

WHERE todo\_id = 2; -- Обновил дату

UPDATE public."t\_TODO"

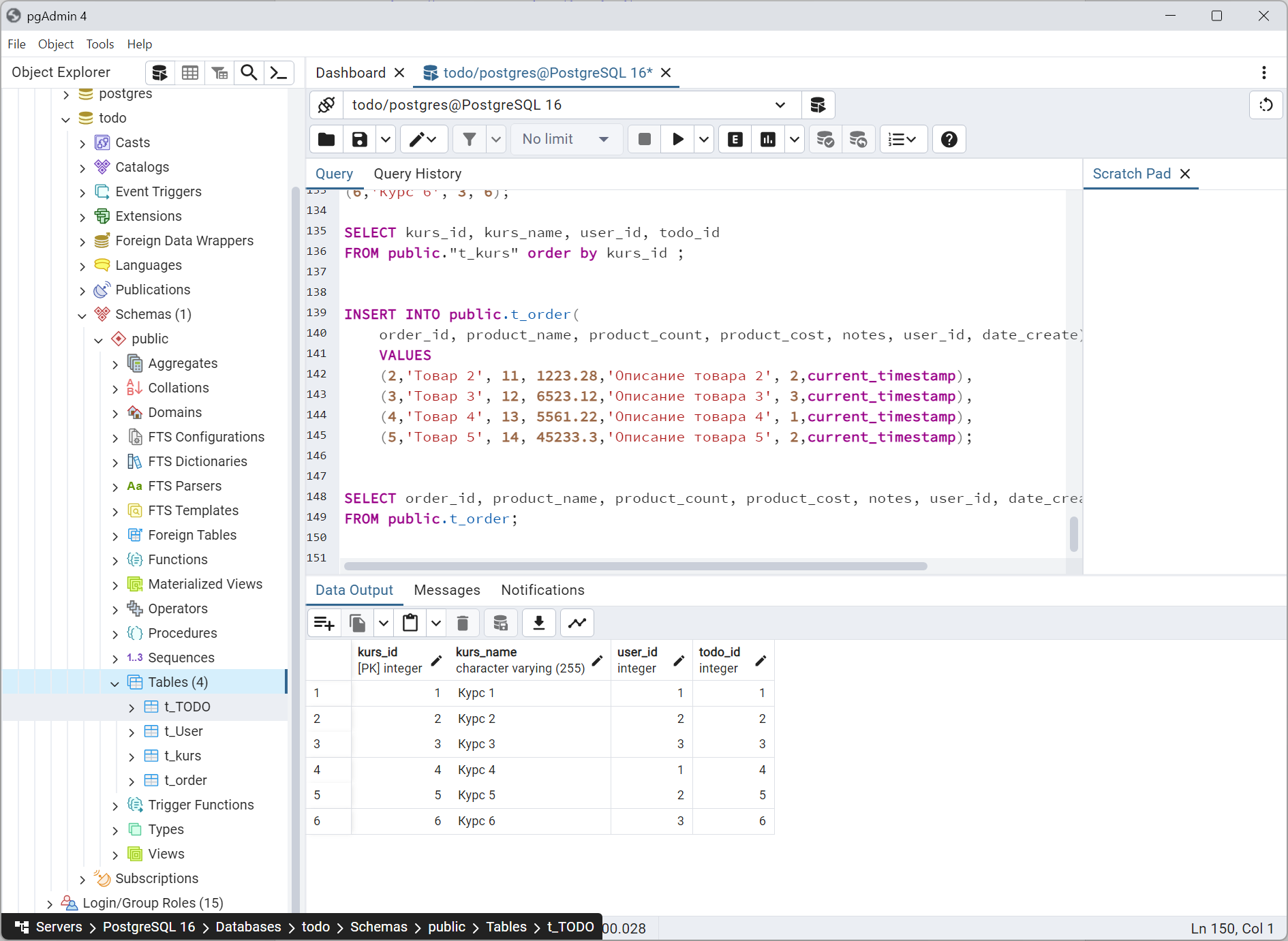
SET status = 'в работе'

--планирование, отложен, в работе, выполнил

WHERE todo\_id = 3; -- Обновил статус

delete FROM public."t\_TODO"

WHERE todo\_id = 4; -- Удалил строку



# База данных проекта IMS

### Tables diagram

Data Modeling diagram in package 'Tables'

Tables

Version 1.0

Сергей Кожевников created on 21.02.2024. Last modified 26.02.2024



1. Tables

### t\_connector

Database table in package 'Tables'

t\_connector

Version 1.0 Phase 1.0 Proposed

Сергей Кожевников created on 26.02.2024. Last modified 26.02.2024

DBMS PostgreSQL

| COLUMN NAME | DATATYPE | NOT NULL | COMMENTS |
| --- | --- | --- | --- |
| connector\_id | integer | True | Properties:  AutoNum = True  property = AutoNum=True;  SequenceName = connector\_id\_seq |
| name | varchar(255) | False |  |
| direction | varchar(50) | False |  |
| notes | text | False |  |
| connector\_type | varchar(50) | False |  |
| start\_object\_id | integer | False | Initial value: 0 |
| end\_object\_id | integer | False | Initial value: 0 |
| ims\_guid | varchar(40) | False |  |

|  |  |  |
| --- | --- | --- |
| PRIMARY KEY NAME | COLUMNS | COMMENTS |
| PK\_t\_connector | connector\_id |  |

|  |  |  |
| --- | --- | --- |
| TYPE / NAME | COLUMNS | COMMENTS |
| «index» IXFK\_t\_connector\_t\_object | start\_object\_id |  |
| «index» IXFK\_t\_connector\_t\_object\_02 | end\_object\_id |  |

|  |  |  |
| --- | --- | --- |
| FOREIGN KEY NAME | COLUMNS | REFERENCES |
| FK\_t\_connector\_t\_object\_02 | end\_object\_id | public.t\_object(object\_id) |
| FK\_t\_connector\_t\_object | start\_object\_id | public.t\_object(object\_id) |

### public.t\_documents

Database table in package 'Tables'

t\_documents

Version 1.0 Phase 1.0 Proposed

Сергей Кожевников created on 21.02.2024. Last modified 21.02.2024

DBMS PostgreSQL

| COLUMN NAME | DATATYPE | NOT NULL | COMMENTS |
| --- | --- | --- | --- |
| doc\_id | varchar(40) | True |  |
| docname | varchar(100) | False |  |
| notes | varchar(255) | False |  |
| style | varchar(255) | False |  |
| element\_id | varchar(40) | True |  |
| elementtype | varchar(50) | True |  |
| strcontent | text | False |  |
| bincontent | bytea | False |  |
| doctype | varchar(100) | False |  |
| author | varchar(50) | False |  |
| isactive | integer | False | Initial value: 1 |
| sequence | integer | False | Initial value: 0 |
| docdate | timestamp without time zone | False |  |
| object\_id | integer | False |  |

|  |  |  |
| --- | --- | --- |
| PRIMARY KEY NAME | COLUMNS | COMMENTS |
| PK\_t\_documents | doc\_id |  |

|  |  |  |
| --- | --- | --- |
| TYPE / NAME | COLUMNS | COMMENTS |
| «index» IXFK\_t\_documents\_t\_object | object\_id |  |

|  |  |  |
| --- | --- | --- |
| FOREIGN KEY NAME | COLUMNS | REFERENCES |
| FK\_t\_documents\_t\_object | object\_id | public.t\_object(object\_id) |

### public.t\_glossary

Database table in package 'Tables'

t\_glossary

Version 1.0 Phase 1.0 Proposed

SYKozhevnikov created on 21.02.2024. Last modified 21.02.2024

DBMS PostgreSQL

| COLUMN NAME | DATATYPE | NOT NULL | COMMENTS |
| --- | --- | --- | --- |
| term | varchar(255) | False |  |
| type | varchar(255) | False |  |
| meaning | text | False |  |
| glossaryid | integer | True | Properties:  AutoNum = 1  Increment = 1  property = AutoNum=1;StartNum=1;Increment=1;  SequenceName = glossaryid\_seq  StartNum = 1 |

|  |  |  |
| --- | --- | --- |
| PRIMARY KEY NAME | COLUMNS | COMMENTS |
| pk\_glossary | glossaryid |  |

|  |  |  |
| --- | --- | --- |
| TYPE / NAME | COLUMNS | COMMENTS |
| «index» idx\_glossary\_term | term |  |
| «index» idx\_glossary\_type | type |  |

### public.t\_object

Database table in package 'Tables'

t\_object

Version 1.0 Phase 1.0 Proposed

Сергей Кожевников created on 21.02.2024. Last modified 21.02.2024

DBMS PostgreSQL

| COLUMN NAME | DATATYPE | NOT NULL | COMMENTS |
| --- | --- | --- | --- |
| object\_id | integer | True | Properties:  AutoNum = True  property = AutoNum=True;  SequenceName = object\_id\_seq |
| object\_type | varchar(255) | False |  |
| name | varchar(255) | False |  |
| alias | varchar(255) | False |  |
| author | varchar(255) | False |  |
| version | varchar(50) | False | Initial value: '1.0' |
| note | text | False |  |
| package\_id | integer | False | Initial value: 0 |
| stereotype | varchar(255) | False |  |
| status | varchar(50) | False |  |
| ims\_guid | varchar(40) | False |  |
| property\_id | integer | False |  |
| connector\_id | integer | False |  |

|  |  |  |
| --- | --- | --- |
| PRIMARY KEY NAME | COLUMNS | COMMENTS |
| PK\_t\_object | object\_id |  |

|  |  |  |
| --- | --- | --- |
| TYPE / NAME | COLUMNS | COMMENTS |
| «index» IXFK\_t\_object\_t\_objectproperties | property\_id |  |
| «index» IXFK\_t\_object\_t\_package | package\_id |  |

|  |  |  |
| --- | --- | --- |
| FOREIGN KEY NAME | COLUMNS | REFERENCES |
| FK\_t\_object\_t\_objectproperties | property\_id | t\_objectproperties(property\_id) |
| FK\_t\_object\_t\_package | package\_id | t\_package(package\_id) |

### t\_objectproperties

Database table in package 'Tables'

t\_objectproperties

Version 1.0 Phase 1.0 Proposed

Сергей Кожевников created on 26.02.2024. Last modified 26.02.2024

DBMS PostgreSQL

| COLUMN NAME | DATATYPE | NOT NULL | COMMENTS |
| --- | --- | --- | --- |
| property\_id | integer | True |  |
| object\_id | integer | False | Initial value: 0 |
| property | varchar(255) | False |  |
| value | varchar(255) | False |  |
| notes | text | False |  |
| ims\_guid | varchar(40) | False |  |

|  |  |  |
| --- | --- | --- |
| PRIMARY KEY NAME | COLUMNS | COMMENTS |
| PK\_t\_objectproperties | property\_id |  |

### t\_package

Database table in package 'Tables'

t\_package

Version 1.0 Phase 1.0 Proposed

Сергей Кожевников created on 26.02.2024. Last modified 26.02.2024

DBMS PostgreSQL

| COLUMN NAME | DATATYPE | NOT NULL | COMMENTS |
| --- | --- | --- | --- |
| package\_id | integer | True | Properties:  AutoNum = True  property = AutoNum=True;  SequenceName = package\_id\_seq |
| name | varchar(255) | False |  |
| parent\_id | integer | False | Initial value: 0 |
| notes | text | False |  |
| ims\_guid | varchar(40) | False |  |

|  |  |  |
| --- | --- | --- |
| PRIMARY KEY NAME | COLUMNS | COMMENTS |
| PK\_t\_package | package\_id |  |

|  |  |  |
| --- | --- | --- |
| TYPE / NAME | COLUMNS | COMMENTS |
| «index» ix\_package\_name | name |  |

### public.t\_taggedvalue

Database table in package 'Tables'

t\_taggedvalue

Version 1.0 Phase 1.0 Proposed

Сергей Кожевников created on 21.02.2024. Last modified 26.02.2024

DBMS PostgreSQL

| COLUMN NAME | DATATYPE | NOT NULL | COMMENTS |
| --- | --- | --- | --- |
| property\_id | varchar(40) | True |  |
| element\_id | varchar(40) | True |  |
| tagvalue | text | True |  |
| notes | text | False |  |
| baseclass | varchar(100) | False |  |
| object\_id | integer | False |  |

|  |  |  |
| --- | --- | --- |
| PRIMARY KEY NAME | COLUMNS | COMMENTS |
| PK\_t\_taggedvalue | property\_id |  |

|  |  |  |
| --- | --- | --- |
| TYPE / NAME | COLUMNS | COMMENTS |
| «index» IXFK\_t\_taggedvalue\_t\_object | object\_id |  |

|  |  |  |
| --- | --- | --- |
| FOREIGN KEY NAME | COLUMNS | REFERENCES |
| FK\_t\_taggedvalue\_t\_object | object\_id | public.t\_object(object\_id) |

