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Лабораторная работа№ 1.2

«Создание таблиц базы данных POSTGRESQL. Заполнение таблиц рабочими данными»

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Цель работы: овладеть практическими навыками создания таблиц базы данных PostgreSQL 1X, заполнения их рабочими данными, резервного копирования и восстановления БД.

Оборудование: компьютерный класс.

Программное обеспечение: СУБД PostgreSQL 1X, pgAdmin 4.

Практическое задание:

1. Создать базу данных с использованием pgAdmin 4 (согласно индивидуальному заданию).
2. Создать схему в составе базы данных.
3. Создать таблицы базы данных.
4. Установить ограничения на данные: *Primary Key, Unique, Check, Foreign Key*.
5. Заполнить таблицы БД рабочими данными.
6. Создать резервную копию БД.

Указание:

Создать две резервные копии:

- *с расширением CUSTOM для восстановления БД;*
- *с расширением PLAIN для листинга (в отчете);*
- *при создании резервных копий БД настроить параметры Dump options для Type of objects и Queries .*

7. Восстановить БД.

ТЕХНОЛОГИЯ ВЫПОЛНЕНИЯ РАБОТЫ:

1. Название БД

Вариант 13. «Ресторан»

Описание предметной области: Сотрудники ресторана – повара и официанты. За каждым официантом закреплены определенные столы. Каждый повар готовит определенный набор блюд. Запас продуктов на складе не должен быть ниже заданного значения. Цена заказа складывается из стоимости ингредиентов и наценки, которая составляет 40% стоимости ингредиентов. БД должна содержать следующий минимальный набор сведений: ФИО сотрудника. Паспортные данные сотрудника. Категория сотрудника. Должность сотрудника. Оклад сотрудника. Наименование ингредиента. Код ингредиента. Дата закупки. Объем закупки. Количество продукта на складе. Необходимый запас продукта. Срок годности. Цена ингредиента. Поставщик. Наименование блюда. Код блюда. Объем ингредиента. Номер стола. Дата заказа. Код заказа. Количество. Название блюда. Ингредиенты, входящие в блюдо. Тип ингредиента.

Состав реквизитов сущностей:

a) **Ингредиент (**ID ингредиента, цена ингредиента, тип ингредиента, название ингредиента, объём ингредиента, количество на складе, срок годности, калорийность)

b) **Поставщик** (ID поставщика, имя поставщика, город поставщика, страна поставщика)

c) **Стол** (ID стола, размещение стола, занятость стола, вместимость_стола)

d) **Должность** (ID должности, оклад, категория сотрудника)

e) **Закупки** (ID закупки, ID поставщика, дата закупки, объём закупки)

f) **Состав закупки** (ID состава закупки, ID закупки, ID ингредиента, стоймость, нужный запас)

g) **Сотрудники** (ID сотрудника, ID должности, Фамилия, имя, отчество, паспорт сотрудника)

h) **Официант** (ID Официанта, ID сотрудника)

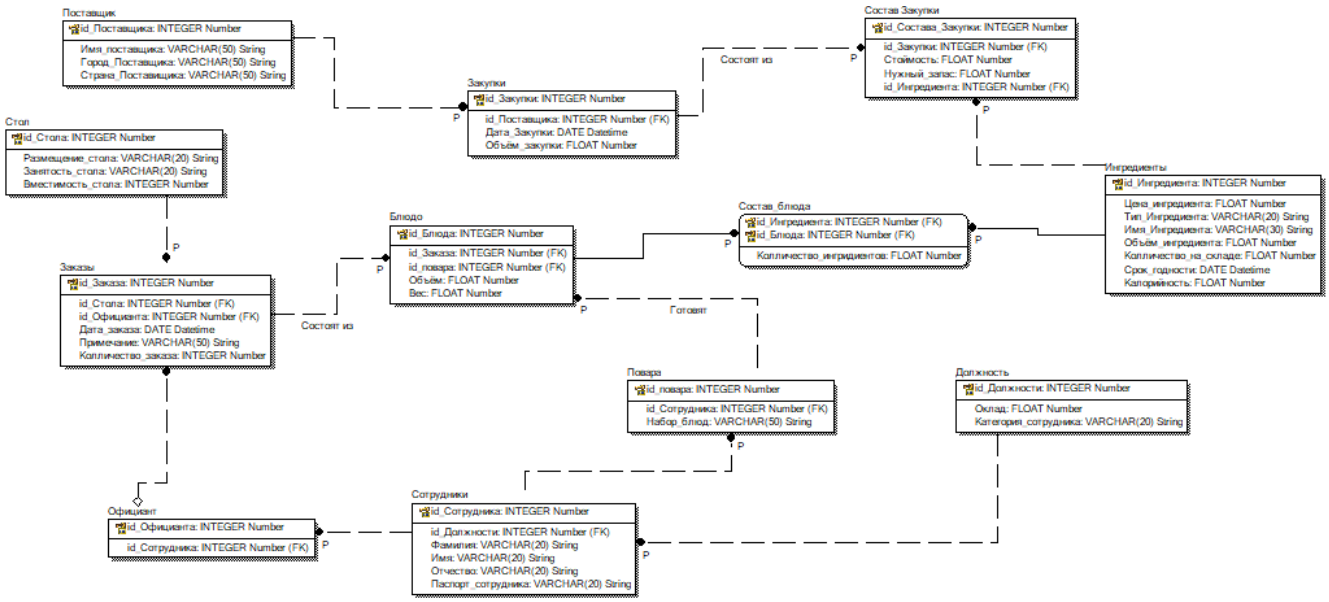
i) **Заказы** (ID заказа, ID стола, ID Официанта, Дата заказа, Примечание, Количество заказа)

j) **Повара** (ID Повара, ID сотрудника, набор блюд)

k) **Блюдо** (ID блюда, ID заказа, ID повара, объём, вес)

l) **Состав Блюда** (ID ингредиента, ID блюда, количество ингредиентов)

2. Схема логической модели БД в нотации IDEF1X:



Заполнение таблиц рабочими данными

Для заполнения использовался скрипт: *INSERT INTO (модификатор доступа).”Имя таблицы”(столбцы) VALUES (значения)*

	id_order [PK] integer	id_table integer	id_waiter integer	date_order date	notion character varying (50)	count_order integer
1	111161	111151	111131	2022-05-31	no	20
2	111162	111151	111133	2022-06-01	no salt	17
3	111163	111153	111132	2022-06-02	no chilly	4
4	111164	111155	111131	2022-06-03	no sugar	5
5	111165	111157	111132	2022-06-04	no	8
6	111166	111158	111133	2022-06-05	no	10
7	111167	111158	111132	2022-06-07	no	11
8	111168	111159	111133	2022-06-08	no	20

```
INSERT INTO public."Orders"(
    id_order, id_table, id_waiter, date_order, notion, count_order)
    VALUES
    (111161, 111151, 111131, '2022-05-31' :: date, 'no', 20),
    (111162, 111151, 111133, '2022-06-01' :: date, 'no salt', 17),
    (111163, 111153, 111132, '2022-06-02' :: date, 'no chilly', 4),
    (111164, 111155, 111131, '2022-06-03' :: date, 'no sugar', 5),
    (111165, 111157, 111132, '2022-06-04' :: date, 'no', 8),
    (111166, 111158, 111133, '2022-06-05' :: date, 'no', 10),
    (111167, 111158, 111132, '2022-06-07' :: date, 'no', 11),
    (111168, 111159, 111133, '2022-06-08' :: date, 'no', 20),
    (111169, 111153, 111131, '2022-06-09' :: date, 'no', 4),
```

ДАМП СО СКРИПТАМИ:

Создаем базу данных:

```
CREATE DATABASE courses WITH TEMPLATE = template0
ENCODING = 'UTF8' LOCALE = 'Russian_Russia.1251';
ALTER DATABASE VAR13 OWNER TO postgres;
\connect VAR13
SET statement_timeout = 0;
SET lock_timeout = 0;
SET idle_in_transaction_session_timeout = 0;
SET client_encoding = 'UTF8';
SET standard_conforming_strings = on;
SELECT pg_catalog.set_config('search_path', '', false);
SET check_function_bodies = false;
SET xmloption = content;
SET client_min_messages = warning;
SET row_security = off;
--
-- Name: courses; Type: SCHEMA; Schema: -; Owner: postgres
```

Создаем схему:

```
CREATE SCHEMA VAR13;
ALTER SCHEMA VAR13 OWNER TO postgres;
SET default_tablespace = '';
SET default_table_access_method = heap;
```

Создаем таблицы:

```
--
-- TOC entry 209 (class 1259 OID 49173)
-- Name: Cook; Type: TABLE; Schema: public; Owner: postgres
--

CREATE TABLE public."Cook" (
    id_cook integer NOT NULL,
    set_of_dishes character varying(50) NOT NULL,
    id_employer integer NOT NULL
);


ALTER TABLE public."Cook" OWNER TO postgres;

--
-- TOC entry 210 (class 1259 OID 49176)
-- Name: Dish_composition; Type: TABLE; Schema: public; Owner: postgres
--

CREATE TABLE public."Dish_composition" (
    id_ingredient integer NOT NULL,
    id_dish integer NOT NULL,
    count_ingredient real NOT NULL
);


ALTER TABLE public."Dish_composition" OWNER TO postgres;

--
-- TOC entry 211 (class 1259 OID 49179)
-- Name: Dishes; Type: TABLE; Schema: public; Owner: postgres
--

CREATE TABLE public."Dishes" (
    id_dish integer NOT NULL,
    id_order integer NOT NULL,
    id_cook integer NOT NULL,
    volume real NOT NULL,
    weight real NOT NULL
);


ALTER TABLE public."Dishes" OWNER TO postgres;
```

```
--
-- TOC entry 212 (class 1259 OID 49182)
-- Name: Employer; Type: TABLE; Schema: public; Owner: postgres
--

CREATE TABLE public."Employer" (
    id_employer integer NOT NULL,
    id_position integer NOT NULL,
    family character varying(20) NOT NULL,
    name character varying(20) NOT NULL,
    patronomyc character varying(20) NOT NULL,
    employer_passport character varying(20) NOT NULL
);


ALTER TABLE public."Employer" OWNER TO postgres;

--
-- TOC entry 213 (class 1259 OID 49185)
-- Name: Ingredient; Type: TABLE; Schema: public; Owner: postgres
--

CREATE TABLE public."Ingredient" (
    id_ingredient integer NOT NULL,
    ingredient_price real NOT NULL,
    ingredient_type character varying(20) NOT NULL,
    ingredient_name character varying(20) NOT NULL,
    ingredient_volume real NOT NULL,
    count_on_warehouse real NOT NULL,
    ingredient_bbd date NOT NULL,
    calories real NOT NULL
);


ALTER TABLE public."Ingredient" OWNER TO postgres;

--
-- TOC entry 214 (class 1259 OID 49188)
-- Name: Orders; Type: TABLE; Schema: public; Owner: postgres
--

CREATE TABLE public."Orders" (
    id_order integer NOT NULL,
    id_table integer NOT NULL,
    id_waiter integer NOT NULL,
    date_order date NOT NULL,
    notion character varying(50),
```

```
    count_order integer NOT NULL
);


ALTER TABLE public."Orders" OWNER TO postgres;

--
-- TOC entry 215 (class 1259 OID 49191)
-- Name: Platen; Type: TABLE; Schema: public; Owner: postgres
--

CREATE TABLE public."Platen" (
    id_table integer NOT NULL,
    table_occupation character varying(20),
    table_capacity integer NOT NULL,
    place_of_table character varying(20)
);


ALTER TABLE public."Platen" OWNER TO postgres;

--
-- TOC entry 216 (class 1259 OID 49194)
-- Name: Position; Type: TABLE; Schema: public; Owner: postgres
--

CREATE TABLE public."Position" (
    id_position integer NOT NULL,
    salary real NOT NULL,
    employer_category character varying(20) NOT NULL
);


ALTER TABLE public."Position" OWNER TO postgres;

--
-- TOC entry 217 (class 1259 OID 49197)
-- Name: Purchase; Type: TABLE; Schema: public; Owner: postgres
--

CREATE TABLE public."Purchase" (
    id_purchase integer NOT NULL,
    purchase_date date,
    purchase_volume real NOT NULL,
    id_supplier integer NOT NULL
);
```

```
ALTER TABLE public."Purchase" OWNER TO postgres;

--
-- TOC entry 218 (class 1259 OID 49200)
-- Name: Purchase_composition; Type: TABLE; Schema: public; Owner: postgres
--

CREATE TABLE public."Purchase_composition" (
    id_purchase_composition integer NOT NULL,
    id_purchase integer NOT NULL,
    cost real NOT NULL,
    right_stock real NOT NULL,
    id_ingredient integer NOT NULL
);


ALTER TABLE public."Purchase_composition" OWNER TO postgres;

--
-- TOC entry 219 (class 1259 OID 49203)
-- Name: Supplier; Type: TABLE; Schema: public; Owner: postgres
--

CREATE TABLE public."Supplier" (
    id_supplier integer NOT NULL,
    supplier_name character varying(50),
    supplier_city character varying(50),
    supplier_country character varying(50)
);


ALTER TABLE public."Supplier" OWNER TO postgres;

--
-- TOC entry 220 (class 1259 OID 49206)
-- Name: Supplier_id_supplier_seq; Type: SEQUENCE; Schema: public; Owner:
postgres
--

ALTER TABLE public."Supplier" ALTER COLUMN id_supplier ADD
GENERATED ALWAYS AS IDENTITY (
    SEQUENCE NAME public."Supplier_id_supplier_seq"
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
```

```
    CACHE 1
);


--
-- TOC entry 221 (class 1259 OID 49207)
-- Name: Table_id_table_seq; Type: SEQUENCE; Schema: public; Owner: postgres
--

ALTER TABLE public."Platen" ALTER COLUMN id_table ADD GENERATED
ALWAYS AS IDENTITY (
    SEQUENCE NAME public."Table_id_table_seq"
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1
);


--
-- TOC entry 222 (class 1259 OID 49208)
-- Name: Waiter; Type: TABLE; Schema: public; Owner: postgres
--

CREATE TABLE public."Waiter" (
    id_waiter integer NOT NULL,
    id_employer integer NOT NULL
);


ALTER TABLE public."Waiter" OWNER TO postgres;

--
-- TOC entry 223 (class 1259 OID 49211)
-- Name: Waiter_id_waiter_seq; Type: SEQUENCE; Schema: public; Owner: postgres
--

ALTER TABLE public."Waiter" ALTER COLUMN id_waiter ADD GENERATED
ALWAYS AS IDENTITY (
    SEQUENCE NAME public."Waiter_id_waiter_seq"
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1
);
```

Задаем ограничения Checks и Foreign key:

COPY public."Cook" (id_cook, set_of_dishes, id_employer) FROM stdin;

111141 fried/stewed 111123

111142 stewed/boiled 111124

111143 boiled/fried 111125

\.

--

-- TOC entry 3436 (class 0 OID 49176)

-- Dependencies: 210

-- Data for Name: Dish_composition; Type: TABLE DATA; Schema: public; Owner: postgres

--

COPY public."Dish_composition" (id_ingredient, id_dish, count_ingredient) FROM stdin;

111181 111171 1

111182 111171 1

111186 111171 3

111186 111172 2

111184 111172 2

111188 111172 4

111183 111173 2

111188 111173 2

111182 111173 1

111185 111174 1

111181 111174 2

111186 111174 2

111184 111175 3

111181 111175 2

111187 111175 2

111183 111176 3

111182 111176 2

111187 111176 2

111187 111177 4

111188 111177 4

111186 111177 4

111187 111178 4

111188 111178 4

111181 111179 3

111182 111179 2

111181 111800 3

\.

--

-- TOC entry 3437 (class 0 OID 49179)

-- Dependencies: 211

-- Data for Name: Dishes; Type: TABLE DATA; Schema: public; Owner: postgres

--

COPY public."Dishes" (id_dish, id_order, id_cook, volume, weight) FROM stdin;

111171 111161 111141 150.5 420

111172 111162 111142 90.3 115.2

111173 111163 111143 40.6 50

111174 111164 111142 45.2 55.7

111175 111165 111143 75.5 90.1

111176 111166 111141 80 100.2

111177 111167 111143 85.3 125.2

111178 111168 111142 160.3 330.7

111179 111169 111141 36.6 78.8

111800 111700 111142 455.5 774.7

\.

--

-- TOC entry 3438 (class 0 OID 49182)

-- Dependencies: 212

-- Data for Name: Employer; Type: TABLE DATA; Schema: public; Owner: postgres

--

COPY public."Employer" (id_employer, id_position, family, name, patronomyc, employer_passport) FROM stdin;

111121 111114 Nagiev Dmitriy Vladimirovich 6716 53355

111122 111111 Victoryia Lazareva Sergeevna 6728 22837

111123 111113 Dobroslave Shiryaev Nurzupaevicg 6111 11111

111124 111113 IsmailDarzaev Umarshapaevich 6111 195851

111125 111113 Maxim Prihodko Tatianovich 6111 133337

111126 111112 Ksenya Sergeeva Sergeevna 11 124566

111127 111112 Mihail Romanov Yanovich 6666 133728

111128 111112 Mihail Zaxarov Yanovich 6636 135628

\.

--

-- TOC entry 3439 (class 0 OID 49185)

-- Dependencies: 213

-- Data for Name: Ingredient; Type: TABLE DATA; Schema: public; Owner: postgres

--

COPY public."Ingredient" (id_ingredient, ingredient_price, ingredient_type, ingredient_name, ingredient_volume, count_on_warehouse, ingredient_bbd, calories) FROM stdin;

111181	100	no vegan	eggs	50	400	2022-08-31	115.5

111182	45	vegan	bread	35.5	40	2022-06-30	45.5

111183	170	no vegan	chicken	400	150	2022-07-15	170.5

111184	300	no vegan	beef	450	250	2022-07-10	245.5

111185	250	no vegan	pig	445	225	2022-07-10	235.5

111186	70	vegan	grain	60	500	2023-01-01	0.85

111187	80	vegan	fruits	70	500	2022-06-30	15.8

111188	80	vegan	vegetables	70	500	2022-06-30	15.8

\.

--

-- TOC entry 3440 (class 0 OID 49188)

-- Dependencies: 214

-- Data for Name: Orders; Type: TABLE DATA; Schema: public; Owner: postgres

--

COPY public."Orders" (id_order, id_table, id_waiter, date_order, notion, count_order) FROM stdin;

111161	111151	111131	2022-05-31	no	5

111162 111151 111133 2022-06-01 no salt 6

111163 111153 111132 2022-06-02 no chilly 3

111164 111155 111131 2022-06-03 no sugar 4

111165 111157 111132 2022-06-04 no 4

111166 111158 111133 2022-06-05 no 4

111167 111158 111132 2022-06-07 no 5

111168 111159 111133 2022-06-08 no 2

111169 111153 111131 2022-06-09 no 3

111700 111159 111132 2022-06-10 no sauce 2

\.

--

-- TOC entry 3441 (class 0 OID 49191)

-- Dependencies: 215

-- Data for Name: Platen; Type: TABLE DATA; Schema: public; Owner: postgres

--

COPY public."Platen" (id_table, table_occupation, table_capacity, place_of_table) FROM stdin;

111151 armored 5 exit

111152 free 5 exit

111153 armored 2 kitchen

111155 armored 4 middle room

111154 free 20 middle room

111156 free 10 kitchen

111157 armored 4 middle room

111158 armored 4 exit

111159	armored	2	middle room

\.

--

-- TOC entry 3442 (class 0 OID 49194)

-- Dependencies: 216

-- Data for Name: Position; Type: TABLE DATA; Schema: public; Owner: postgres

--

COPY public."Position" (id_position, salary, employer_category) FROM stdin;

111111	30000manager

111112	25000waiter

111113	60000cook

111114	75000director

111115	15000cleaner

111116	20000barmen

\.

--

-- TOC entry 3443 (class 0 OID 49197)

-- Dependencies: 217

-- Data for Name: Purchase; Type: TABLE DATA; Schema: public; Owner: postgres

--

COPY public."Purchase" (id_purchase, purchase_date, purchase_volume, id_supplier) FROM stdin;

111101 2022-04-28 272625 111191

111102 2022-04-29 70000111193

111103 2022-04-30 51491111192

\.

--

-- TOC entry 3444 (class 0 OID 49200)

-- Dependencies: 218

-- Data for Name: Purchase_composition; Type: TABLE DATA; Schema: public; Owner: postgres

--

COPY public."Purchase_composition" (id_purchase_composition, id_purchase, cost, right_stock, id_ingredient) FROM stdin;

111004 111102 40000500 111187

111005 111102 40000500 111188

111001 111101 25500400 111183

111002 111101 75000450 111184

111003 111101 56250445 111185

111006 111103 40000400 111181

111007 111103 1800 40 111182

111008 111103 35000500 111186

\.

--

-- TOC entry 3445 (class 0 OID 49203)

-- Dependencies: 219

-- Data for Name: Supplier; Type: TABLE DATA; Schema: public; Owner: postgres

--

COPY public."Supplier" (id_supplier, supplier_name, supplier_city, supplier_country) FROM stdin;

111191 Soslan MoscowCity Moscow

111192 Seraphim Pittsburg Russia

111193 Ramzan Chechnya Kavkaz

\.

--

-- TOC entry 3448 (class 0 OID 49208)

-- Dependencies: 222

-- Data for Name: Waiter; Type: TABLE DATA; Schema: public; Owner: postgres

--

COPY public."Waiter" (id_waiter, id_employer) FROM stdin;

111131 111126

111132 111127

111133 111128

\.

--

-- TOC entry 3455 (class 0 OID 0)

-- Dependencies: 220

-- Name: Supplier_id_supplier_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres

--

SELECT pg_catalog.setval('public."Supplier_id_supplier_seq"', 1, false);

--

-- TOC entry 3456 (class 0 OID 0)

-- Dependencies: 221

-- Name: Table_id_table_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres

--

SELECT pg_catalog.setval('public."Table_id_table_seq"', 1, false);

--

-- TOC entry 3457 (class 0 OID 0)

-- Dependencies: 223

-- Name: Waiter_id_waiter_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres

--

SELECT pg_catalog.setval('public."Waiter_id_waiter_seq"', 1, false);

--

-- TOC entry 3210 (class 2606 OID 49212)

-- Name: Cook Cook_id_cook_check; Type: CHECK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE public."Cook"

    ADD CONSTRAINT "Cook_id_cook_check" CHECK ((id_cook > 0)) NOT VALID;

--

-- TOC entry 3229 (class 2606 OID 49214)

-- Name: Cook Cook_id_cook_id_cook1_key; Type: CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public."Cook"

    ADD CONSTRAINT "Cook_id_cook_id_cook1_key" UNIQUE (id_cook) INCLUDE (id_cook);

--

-- TOC entry 3231 (class 2606 OID 49216)

-- Name: Cook Cook_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public."Cook"

    ADD CONSTRAINT "Cook_pkey" PRIMARY KEY (id_cook);

--

-- TOC entry 3211 (class 2606 OID 49217)

-- Name: Dish_composition Dish_composition_count_ingredient_check; Type: CHECK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE public."Dish_composition"

    ADD CONSTRAINT "Dish_composition_count_ingredient_check" CHECK ((count_ingredient > (0)::double precision)) NOT VALID;

--

-- TOC entry 3212 (class 2606 OID 49218)

-- Name: Dish_composition Dish_composition_id_dish_check; Type: CHECK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE public."Dish_composition"

    ADD CONSTRAINT "Dish_composition_id_dish_check" CHECK ((id_dish > 0)) NOT VALID;

--

-- TOC entry 3213 (class 2606 OID 49219)

-- Name: Dish_composition Dish_composition_id_ingredient_check; Type: CHECK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE public."Dish_composition"

    ADD CONSTRAINT "Dish_composition_id_ingredient_check" CHECK ((id_ingredient > 0)) NOT VALID;

```
--

-- TOC entry 3234 (class 2606 OID 49221)

-- Name: Dish_composition Dish_composition_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres

--


ALTER TABLE ONLY public."Dish_composition"

    ADD CONSTRAINT "Dish_composition_pkey" PRIMARY KEY (id_ingredient, id_dish);




--

-- TOC entry 3214 (class 2606 OID 49222)

-- Name: Dishes Dishes_id_dish_check; Type: CHECK CONSTRAINT; Schema: public; Owner: postgres

--


ALTER TABLE public."Dishes"

    ADD CONSTRAINT "Dishes_id_dish_check" CHECK ((id_dish > 0)) NOT VALID;




--

-- TOC entry 3237 (class 2606 OID 49224)

-- Name: Dishes Dishes_id_dish_id_dish1_key; Type: CONSTRAINT; Schema: public; Owner: postgres

--


ALTER TABLE ONLY public."Dishes"
```

```
    ADD CONSTRAINT "Dishes_id_dish_id_dish1_key" UNIQUE (id_dish)
INCLUDE (id_dish);




--

-- TOC entry 3239 (class 2606 OID 49226)

-- Name: Dishes Dishes_pkey; Type: CONSTRAINT; Schema: public; Owner:
postgres

--


ALTER TABLE ONLY public."Dishes"

    ADD CONSTRAINT "Dishes_pkey" PRIMARY KEY (id_dish);




--

-- TOC entry 3215 (class 2606 OID 49227)

-- Name: Dishes Dishes_volume_check; Type: CHECK CONSTRAINT; Schema:
public; Owner: postgres

--


ALTER TABLE public."Dishes"

    ADD CONSTRAINT "Dishes_volume_check" CHECK ((volume > (0)::double
precision)) NOT VALID;




--

-- TOC entry 3216 (class 2606 OID 49228)

-- Name: Dishes Dishes_weight_check; Type: CHECK CONSTRAINT; Schema:
public; Owner: postgres

--
```

```
ALTER TABLE public."Dishes"
    ADD CONSTRAINT "Dishes_weight_check" CHECK ((weight > (0)::double
precision)) NOT VALID;




--
-- TOC entry 3217 (class 2606 OID 49229)
-- Name: Employer Employer_id_employer_check; Type: CHECK CONSTRAINT;
Schema: public; Owner: postgres
--


ALTER TABLE public."Employer"
    ADD CONSTRAINT "Employer_id_employer_check" CHECK ((id_employer > 0))
NOT VALID;




--
-- TOC entry 3243 (class 2606 OID 49231)
-- Name: Employer Employer_id_employer_id_employer1_key; Type:
CONSTRAINT; Schema: public; Owner: postgres
--


ALTER TABLE ONLY public."Employer"
    ADD CONSTRAINT "Employer_id_employer_id_employer1_key" UNIQUE
(id_employer) INCLUDE (id_employer);




--
-- TOC entry 3245 (class 2606 OID 49233)
```

-- Name: Employer Employer_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public."Employer"

    ADD CONSTRAINT "Employer_pkey" PRIMARY KEY (id_employer);

--

-- TOC entry 3218 (class 2606 OID 49234)

-- Name: Ingredient Ingredient_id_ingredient_check; Type: CHECK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE public."Ingredient"

    ADD CONSTRAINT "Ingredient_id_ingredient_check" CHECK ((id_ingredient > 0)) NOT VALID;

--

-- TOC entry 3248 (class 2606 OID 49236)

-- Name: Ingredient Ingredient_id_ingredient_id_ingredient1_key; Type: CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public."Ingredient"

    ADD CONSTRAINT "Ingredient_id_ingredient_id_ingredient1_key" UNIQUE (id_ingredient) INCLUDE (id_ingredient);

```
--

-- TOC entry 3250 (class 2606 OID 49238)

-- Name: Ingredient Ingredient_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres

--


ALTER TABLE ONLY public."Ingredient"

    ADD CONSTRAINT "Ingredient_pkey" PRIMARY KEY (id_ingredient);




--

-- TOC entry 3219 (class 2606 OID 49239)

-- Name: Orders Orders_id_order_check; Type: CHECK CONSTRAINT; Schema: public; Owner: postgres

--


ALTER TABLE public."Orders"

    ADD CONSTRAINT "Orders_id_order_check" CHECK ((id_order > 0)) NOT VALID;




--

-- TOC entry 3252 (class 2606 OID 49241)

-- Name: Orders Orders_id_order_id_order1_key; Type: CONSTRAINT; Schema: public; Owner: postgres

--


ALTER TABLE ONLY public."Orders"

    ADD CONSTRAINT "Orders_id_order_id_order1_key" UNIQUE (id_order) INCLUDE (id_order);
```

--

-- TOC entry 3254 (class 2606 OID 49243)

-- Name: Orders Orders_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public."Orders"

    ADD CONSTRAINT "Orders_pkey" PRIMARY KEY (id_order);

--

-- TOC entry 3220 (class 2606 OID 49244)

-- Name: Platen Platen_id_table_check; Type: CHECK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE public."Platen"

    ADD CONSTRAINT "Platen_id_table_check" CHECK ((id_table > 0)) NOT VALID;

--

-- TOC entry 3258 (class 2606 OID 49246)

-- Name: Platen Platen_id_table_key; Type: CONSTRAINT; Schema: public; Owner: postgres

--

```
ALTER TABLE ONLY public."Platen"
    ADD CONSTRAINT "Platen_id_table_key" UNIQUE (id_table);


--
-- TOC entry 3260 (class 2606 OID 49248)
-- Name: Platen Platen_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres
--

ALTER TABLE ONLY public."Platen"
    ADD CONSTRAINT "Platen_pkey" PRIMARY KEY (id_table);


--
-- TOC entry 3221 (class 2606 OID 49249)
-- Name: Platen Platen_table_capacity_check; Type: CHECK CONSTRAINT;
Schema: public; Owner: postgres
--

ALTER TABLE public."Platen"
    ADD CONSTRAINT "Platen_table_capacity_check" CHECK ((table_capacity > 0))
NOT VALID;


--
-- TOC entry 3222 (class 2606 OID 49250)
-- Name: Position Position_id_position_check; Type: CHECK CONSTRAINT;
Schema: public; Owner: postgres
--
```

```
ALTER TABLE public."Position"
    ADD CONSTRAINT "Position_id_position_check" CHECK ((id_position > 0)) NOT VALID;


--
-- TOC entry 3262 (class 2606 OID 49252)
-- Name: Position Position_id_position_id_position1_key; Type: CONSTRAINT; Schema: public; Owner: postgres
--

ALTER TABLE ONLY public."Position"
    ADD CONSTRAINT "Position_id_position_id_position1_key" UNIQUE (id_position) INCLUDE (id_position);


--
-- TOC entry 3264 (class 2606 OID 49254)
-- Name: Position Position_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres
--

ALTER TABLE ONLY public."Position"
    ADD CONSTRAINT "Position_pkey" PRIMARY KEY (id_position);


--
-- TOC entry 3223 (class 2606 OID 49255)
```

-- Name: Position Position_salary_check; Type: CHECK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE public."Position"

    ADD CONSTRAINT "Position_salary_check" CHECK ((salary > (0)::double precision)) NOT VALID;

--

-- TOC entry 3225 (class 2606 OID 49256)

-- Name: Purchase_composition Purchase_composition_id_purchase_composition_check; Type: CHECK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE public."Purchase_composition"

    ADD CONSTRAINT "Purchase_composition_id_purchase_composition_check" CHECK ((id_purchase_composition > 0)) NOT VALID;

--

-- TOC entry 3271 (class 2606 OID 49258)

-- Name: Purchase_composition Purchase_composition_id_purchase_composition_id_purchase_co_key; Type: CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public."Purchase_composition"

    ADD CONSTRAINT "Purchase_composition_id_purchase_composition_id_purchase_co_key" UNIQUE (id_purchase_composition) INCLUDE (id_purchase_composition);

--

-- TOC entry 3273 (class 2606 OID 49260)

-- Name: Purchase_composition Purchase_composition_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public."Purchase_composition"

    ADD CONSTRAINT "Purchase_composition_pkey" PRIMARY KEY (id_purchase_composition);

--

-- TOC entry 3224 (class 2606 OID 49261)

-- Name: Purchase Purchase_id_purchase_check; Type: CHECK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE public."Purchase"

    ADD CONSTRAINT "Purchase_id_purchase_check" CHECK ((id_purchase > 0)) NOT VALID;

--

-- TOC entry 3266 (class 2606 OID 49263)

-- Name: Purchase Purchase_id_purchase_id_purchase1_key; Type: CONSTRAINT; Schema: public; Owner: postgres

--

```
ALTER TABLE ONLY public."Purchase"
    ADD CONSTRAINT "Purchase_id_purchase_id_purchase1_key" UNIQUE (id_purchase) INCLUDE (id_purchase);


--
-- TOC entry 3268 (class 2606 OID 49265)
-- Name: Purchase Purchase_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres
--

ALTER TABLE ONLY public."Purchase"
    ADD CONSTRAINT "Purchase_pkey" PRIMARY KEY (id_purchase);


--
-- TOC entry 3226 (class 2606 OID 49266)
-- Name: Supplier Supplier_id_supplier_check; Type: CHECK CONSTRAINT; Schema: public; Owner: postgres
--

ALTER TABLE public."Supplier"
    ADD CONSTRAINT "Supplier_id_supplier_check" CHECK ((id_supplier > 0)) NOT VALID;


--
-- TOC entry 3277 (class 2606 OID 49268)
-- Name: Supplier Supplier_id_supplier_key; Type: CONSTRAINT; Schema: public; Owner: postgres
```

--

ALTER TABLE ONLY public."Supplier"

    ADD CONSTRAINT "Supplier_id_supplier_key" UNIQUE (id_supplier);

--

-- TOC entry 3279 (class 2606 OID 49270)

-- Name: Supplier Supplier_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public."Supplier"

    ADD CONSTRAINT "Supplier_pkey" PRIMARY KEY (id_supplier);

--

-- TOC entry 3227 (class 2606 OID 49271)

-- Name: Waiter Waiter_id_waiter_check; Type: CHECK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE public."Waiter"

    ADD CONSTRAINT "Waiter_id_waiter_check" CHECK ((id_waiter > 0)) NOT VALID;

--

-- TOC entry 3281 (class 2606 OID 49273)

-- Name: Waiter Waiter_id_waiter_id_waiter1_key; Type: CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public."Waiter"

    ADD CONSTRAINT "Waiter_id_waiter_id_waiter1_key" UNIQUE (id_waiter) INCLUDE (id_waiter);

--

-- TOC entry 3283 (class 2606 OID 49275)

-- Name: Waiter Waiter_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public."Waiter"

    ADD CONSTRAINT "Waiter_pkey" PRIMARY KEY (id_waiter);

--

-- TOC entry 3240 (class 1259 OID 49276)

-- Name: fki_Cook_id_cook_fkey; Type: INDEX; Schema: public; Owner: postgres

--

CREATE INDEX "fki_Cook_id_cook_fkey" ON public."Dishes" USING btree (id_cook);

--

-- TOC entry 3235 (class 1259 OID 49277)

-- Name: fki_Dishes_id_dish_fkey; Type: INDEX; Schema: public; Owner: postgres

--

CREATE INDEX "fki_Dishes_id_dish_fkey" ON public."Dish_composition" USING btree (id_dish);

--

-- TOC entry 3232 (class 1259 OID 49278)

-- Name: fki_Employer_id_employer_fkey; Type: INDEX; Schema: public; Owner: postgres

--

CREATE INDEX "fki_Employer_id_employer_fkey" ON public."Cook" USING btree (id_employer);

--

-- TOC entry 3274 (class 1259 OID 49279)

-- Name: fki_Ingredient_id_ingredient_fkey; Type: INDEX; Schema: public; Owner: postgres

--

CREATE INDEX "fki_Ingredient_id_ingredient_fkey" ON public."Purchase_composition" USING btree (id_ingredient);

--

-- TOC entry 3241 (class 1259 OID 49280)

-- Name: fki_Orders_id_order_fkey; Type: INDEX; Schema: public; Owner: postgres

--

CREATE INDEX "fki_Orders_id_order_fkey" ON public."Dishes" USING btree (id_order);

--

-- TOC entry 3246 (class 1259 OID 49281)

-- Name: fki_Position_id_position_fkey; Type: INDEX; Schema: public; Owner: postgres

--

CREATE INDEX "fki_Position_id_position_fkey" ON public."Employer" USING btree (id_position);

--

-- TOC entry 3275 (class 1259 OID 49282)

-- Name: fki_Purchase_id_purchase_fkey; Type: INDEX; Schema: public; Owner: postgres

--

CREATE INDEX "fki_Purchase_id_purchase_fkey" ON public."Purchase_composition" USING btree (id_purchase);

--

-- TOC entry 3269 (class 1259 OID 49283)

-- Name: fki_Purchase_id_supplier_fkey; Type: INDEX; Schema: public; Owner:

postgres

--

CREATE INDEX "fki_Purchase_id_supplier_fkey" ON public."Purchase" USING btree (id_purchase);

--

-- TOC entry 3255 (class 1259 OID 49284)

-- Name: fki_Table_id_table_fkey; Type: INDEX; Schema: public; Owner: postgres

--

CREATE INDEX "fki_Table_id_table_fkey" ON public."Orders" USING btree (id_table);

--

-- TOC entry 3256 (class 1259 OID 49285)

-- Name: fki_Waiter_id_waiter_fkey; Type: INDEX; Schema: public; Owner: postgres

--

CREATE INDEX "fki_Waiter_id_waiter_fkey" ON public."Orders" USING btree (id_waiter);

--

-- TOC entry 3287 (class 2606 OID 49286)

-- Name: Dishes Cook_id_cook_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public."Dishes"

    ADD CONSTRAINT "Cook_id_cook_fkey" FOREIGN KEY (id_cook) REFERENCES public."Cook"(id_cook) ON UPDATE RESTRICT ON DELETE RESTRICT DEFERRABLE INITIALLY DEFERRED;

--

-- TOC entry 3285 (class 2606 OID 49291)

-- Name: Dish_composition Dishes_id_dish_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public."Dish_composition"

    ADD CONSTRAINT "Dishes_id_dish_fkey" FOREIGN KEY (id_dish) REFERENCES public."Dishes"(id_dish) ON UPDATE RESTRICT ON DELETE RESTRICT DEFERRABLE INITIALLY DEFERRED;

--

-- TOC entry 3284 (class 2606 OID 49296)

-- Name: Cook Employer_id_employer_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public."Cook"

    ADD CONSTRAINT "Employer_id_employer_fkey" FOREIGN KEY (id_employer) REFERENCES public."Employer"(id_employer) ON UPDATE RESTRICT ON DELETE RESTRICT DEFERRABLE INITIALLY DEFERRED;

--

-- TOC entry 3295 (class 2606 OID 49301)

-- Name: Waiter Employer_id_employer_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public."Waiter"

    ADD CONSTRAINT "Employer_id_employer_fkey" FOREIGN KEY (id_employer) REFERENCES public."Employer"(id_employer) ON UPDATE RESTRICT ON DELETE RESTRICT DEFERRABLE INITIALLY DEFERRED;

--

-- TOC entry 3286 (class 2606 OID 49306)

-- Name: Dish_composition Ingredient_id_ingredient_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public."Dish_composition"

    ADD CONSTRAINT "Ingredient_id_ingredient_fkey" FOREIGN KEY (id_ingredient) REFERENCES public."Ingredient"(id_ingredient) ON UPDATE RESTRICT ON DELETE RESTRICT DEFERRABLE INITIALLY DEFERRED;

--

-- TOC entry 3293 (class 2606 OID 49311)

-- Name: Purchase_composition Ingredient_id_ingredient_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres

--

```
ALTER TABLE ONLY public."Purchase_composition"
    ADD CONSTRAINT "Ingredient_id_ingredient_fkey" FOREIGN KEY (id_ingredient) REFERENCES public."Ingredient"(id_ingredient) ON UPDATE RESTRICT ON DELETE RESTRICT DEFERRABLE INITIALLY DEFERRED;


--
-- TOC entry 3288 (class 2606 OID 49316)
-- Name: Dishes Orders_id_order_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres
--

ALTER TABLE ONLY public."Dishes"
    ADD CONSTRAINT "Orders_id_order_fkey" FOREIGN KEY (id_order) REFERENCES public."Orders"(id_order) ON UPDATE RESTRICT ON DELETE RESTRICT DEFERRABLE INITIALLY DEFERRED;


--
-- TOC entry 3290 (class 2606 OID 49321)
-- Name: Orders Platen_id_table_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres
--

ALTER TABLE ONLY public."Orders"
    ADD CONSTRAINT "Platen_id_table_fkey" FOREIGN KEY (id_table) REFERENCES public."Platen"(id_table) ON UPDATE RESTRICT ON DELETE RESTRICT DEFERRABLE INITIALLY DEFERRED;


--
```

-- TOC entry 3289 (class 2606 OID 49326)

-- Name: Employer Position_id_position_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public."Employer"

    ADD CONSTRAINT "Position_id_position_fkey" FOREIGN KEY (id_position) REFERENCES public."Position"(id_position) ON UPDATE RESTRICT ON DELETE RESTRICT DEFERRABLE INITIALLY DEFERRED;

--

-- TOC entry 3294 (class 2606 OID 49331)

-- Name: Purchase_composition Purchase_id_purchase_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public."Purchase_composition"

    ADD CONSTRAINT "Purchase_id_purchase_fkey" FOREIGN KEY (id_purchase) REFERENCES public."Purchase"(id_purchase) ON UPDATE RESTRICT ON DELETE RESTRICT DEFERRABLE INITIALLY DEFERRED;

--

-- TOC entry 3292 (class 2606 OID 49336)

-- Name: Purchase Purchase_id_supplier_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public."Purchase"

    ADD CONSTRAINT "Purchase_id_supplier_fkey" FOREIGN KEY (id_purchase)

REFERENCES public."Purchase"(id_purchase) ON UPDATE RESTRICT ON DELETE RESTRICT DEFERRABLE INITIALLY DEFERRED;

--

-- TOC entry 3291 (class 2606 OID 49341)

-- Name: Orders Waiter_id_waiter_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public."Orders"

    ADD CONSTRAINT "Waiter_id_waiter_fkey" FOREIGN KEY (id_waiter) REFERENCES public."Waiter"(id_waiter) ON UPDATE RESTRICT ON DELETE RESTRICT DEFERRABLE INITIALLY DEFERRED;

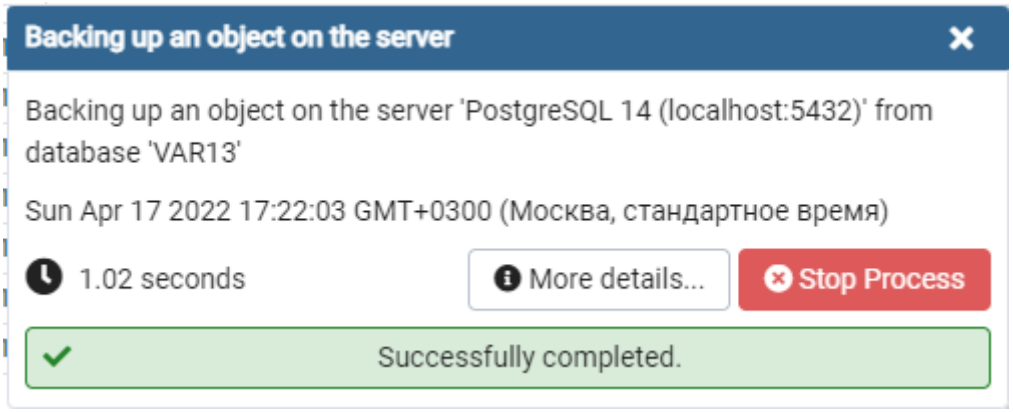
-- Completed on 2022-04-17 17:22:04

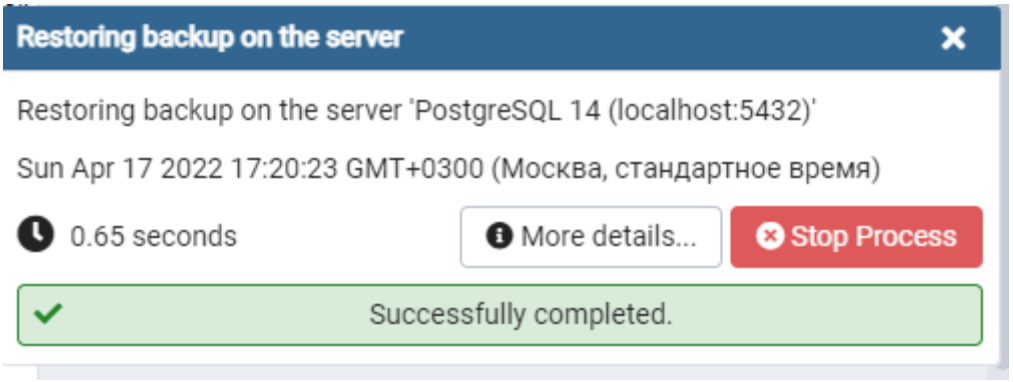
--

-- PostgreSQL database dump complete

--

Созданием бэкапа и его восстановление:





Вывод:

PgAdmin – достаточно удобная программа для создания баз данных PostgreSQL, обладающая приемлемо интуитивным интерфейсом, разобраться с которым новичку не доставит великих проблем. Но, к сожалению, программа обладает неявными ограничениями или даже багами, с которыми новичку самостоятельно справиться будет гораздо тяжелее. К примеру, с чем столкнулся Я: невозможность задать ограничение для столбца, если его имя содержит символы верхнего регистра, необходимость использовать скрипты SELECT, INSERT, DELETE, etc., так как программа не воспринимает стандартный метод ввода SQL.