Министерство науки и высшего образования Российской Федерации

федеральное государственное автономное образовательное учреждение высшего образования
«Национальный исследовательский университет ИТМО»

Факультет инфокоммуникационных технологий

# Лабораторная работа №2

# «Создание БД PostgreSQL в pgAdmin. Резервное копирование и восстановление БД»

## по дисциплине:

## «Базы данных»

**Выполнила**:

студентка II курса ИКТ

группы K3242

Липина Ольга Андреевна


**Проверил**:

*Говорова Марина Михайловна*

Санкт-Петербург

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

**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.

**Ход работы:**

**Часть 1. Создание и наполнение БД.**

Была установлена программа PostgresSQL версии 12, а так же платформа администрирования и управления для баз данных Postgres – PGAdmin. В PGAdmin была спроектирована база данных «Ресторан» (рис. 1).
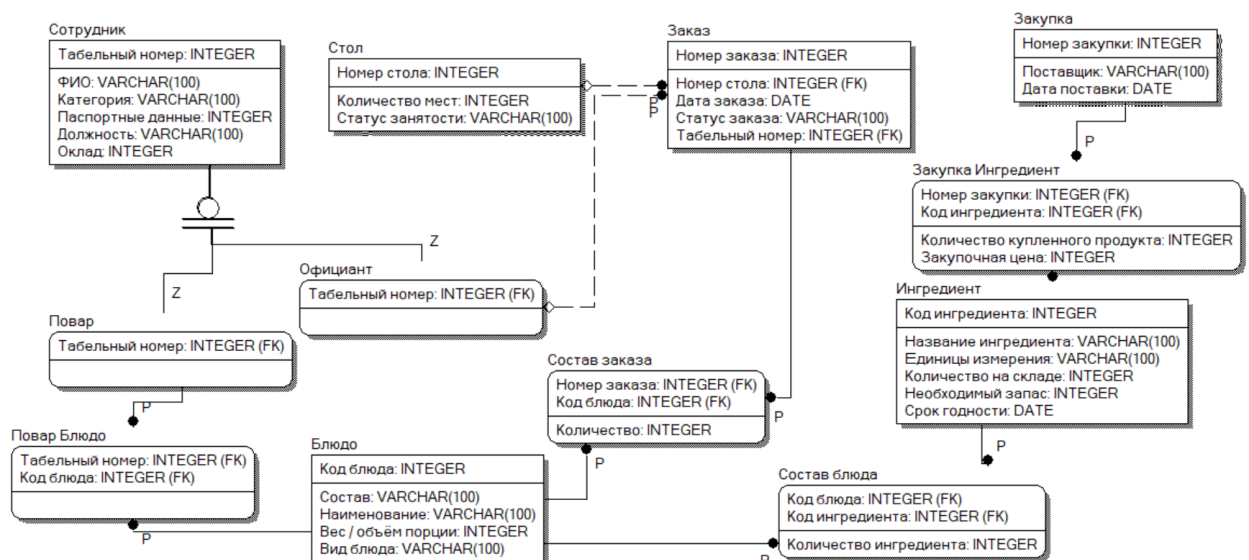


Рисунок 1 - Схема инфологической модели данных БД в нотации IDEF1X

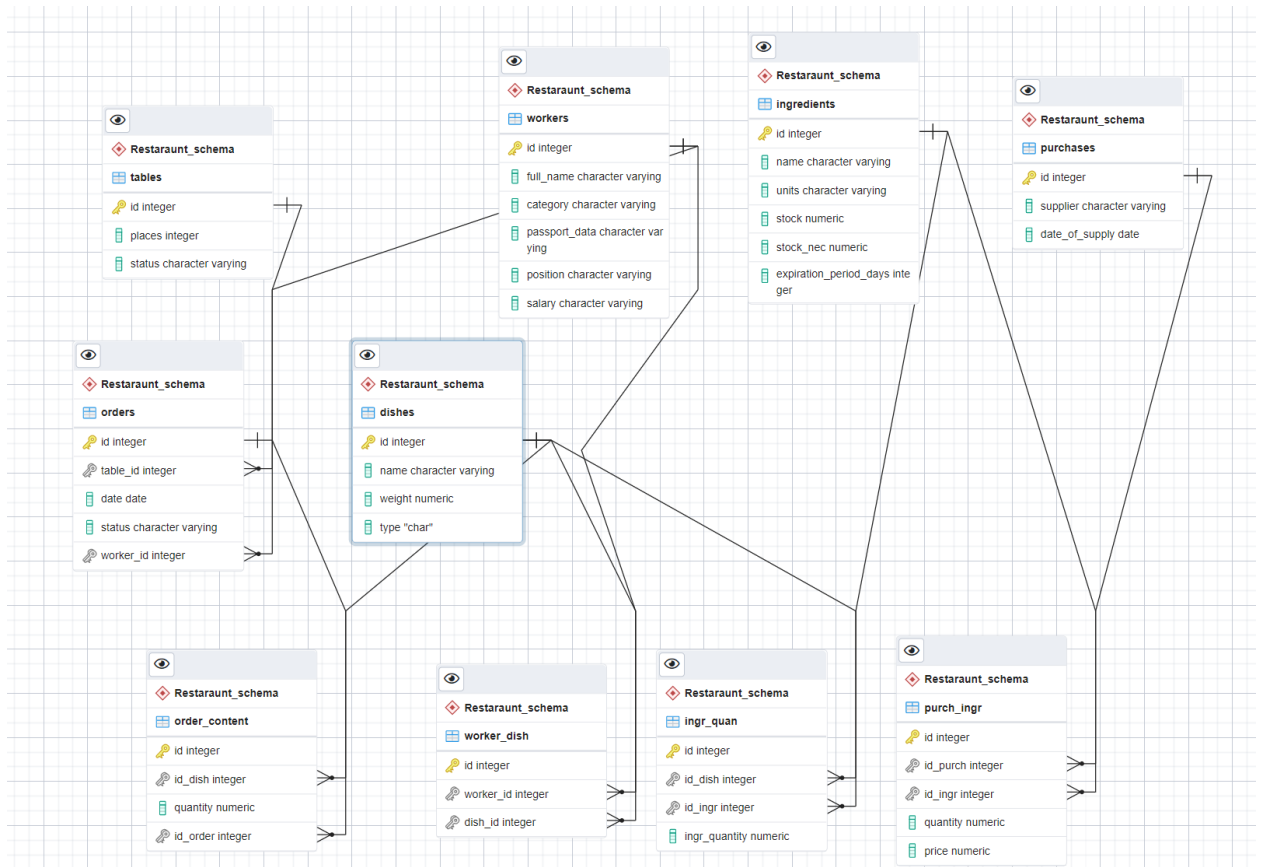Были также установлены ограничения на атрибуты, заданы связи между таблицами.



Рисунок 2 – ER модель базы данных «Ресторан»

Таблицы были заполнены синтетическими данными.

**Часть 2. Резервное копирование и восстановление.**

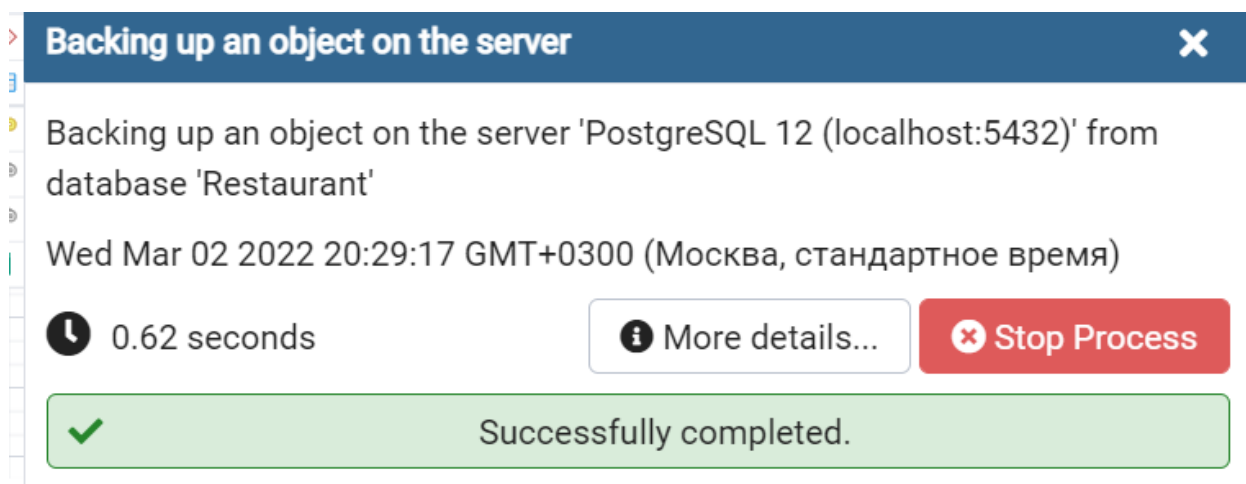С помощью утилиты pg_dump была создана копия для резервного восстановления базы:



Рисунок 3 – Скриншот успешного создания дампа БД

С помощью созданного бэкапа база была восстановлена.



**Restoring backup on the server** ✕

Restoring backup on the server 'PostgreSQL 12 (localhost:5432)'

Wed Mar 02 2022 20:31:00 GMT+0300 (Москва, стандартное время)

🕐 0.77 seconds    ℹ More details...   ⊗ Stop Process

✓ Successfully completed.

Рисунок 3 – Скриншот успешного восстановления БД

**Листинг резервной копии:**

--

-- PostgreSQL database dump

--


-- Dumped from database version 12.10

-- Dumped by pg_dump version 12.10


-- Started on 2022-03-02 20:13:09


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;


--

-- TOC entry 8 (class 2615 OID 16402)

-- Name: Restaraunt_schema; Type: SCHEMA; Schema: -; Owner: postgres

--

CREATE SCHEMA "Restaraunt_schema";

ALTER SCHEMA "Restaraunt_schema" OWNER TO postgres;

--

-- TOC entry 2940 (class 0 OID 0)

-- Dependencies: 8

-- Name: SCHEMA "Restaraunt_schema"; Type: COMMENT; Schema: -; Owner: postgres

--

COMMENT ON SCHEMA "Restaraunt_schema" IS 'v 1.0';

SET default_tablespace = '';

SET default_table_access_method = heap;

--

-- TOC entry 211 (class 1259 OID 16467)

-- Name: dishes; Type: TABLE; Schema: Restaraunt_schema; Owner: postgres

--

CREATE TABLE "Restaraunt_schema".dishes (
    id integer NOT NULL,
    name character varying NOT NULL,
    weight numeric NOT NULL,
    type "char" NOT NULL

```
);
```

ALTER TABLE "Restaraunt_schema".dishes OWNER TO postgres;

```
--
-- TOC entry 210 (class 1259 OID 16465)
-- Name: dishes_id_seq; Type: SEQUENCE; Schema: Restaraunt_schema; Owner: postgres
--
```

ALTER TABLE "Restaraunt_schema".dishes ALTER COLUMN id ADD GENERATED ALWAYS AS IDENTITY (

```
    SEQUENCE NAME "Restaraunt_schema".dishes_id_seq
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1
);
```

```
--
-- TOC entry 219 (class 1259 OID 16583)
-- Name: ingr_quan; Type: TABLE; Schema: Restaraunt_schema; Owner: postgres
--
```

```
CREATE TABLE "Restaraunt_schema".ingr_quan (
    id integer NOT NULL,
    id_dish integer NOT NULL,
    id_ingr integer NOT NULL,
    ingr_quantity numeric NOT NULL
);
```

```
ALTER TABLE "Restaraunt_schema".ingr_quan OWNER TO postgres;


--

-- TOC entry 218 (class 1259 OID 16581)

-- Name: ingr_quan_id_seq; Type: SEQUENCE; Schema: Restaraunt_schema; Owner: postgres

--


ALTER TABLE "Restaraunt_schema".ingr_quan ALTER COLUMN id ADD GENERATED ALWAYS AS
IDENTITY (

    SEQUENCE NAME "Restaraunt_schema".ingr_quan_id_seq

    START WITH 1

    INCREMENT BY 1

    NO MINVALUE

    NO MAXVALUE

    CACHE 1

);



--

-- TOC entry 208 (class 1259 OID 16425)

-- Name: ingredients; Type: TABLE; Schema: Restaraunt_schema; Owner: postgres

--


CREATE TABLE "Restaraunt_schema".ingredients (

    id integer NOT NULL,

    name character varying NOT NULL,

    units character varying NOT NULL,

    stock numeric NOT NULL,

    stock_nec numeric NOT NULL,

    expiration_period_days integer NOT NULL

);
```

ALTER TABLE "Restaraunt_schema".ingredients OWNER TO postgres;

--

-- TOC entry 207 (class 1259 OID 16423)

-- Name: ingredient_id_ingr_seq; Type: SEQUENCE; Schema: Restaraunt_schema; Owner: postgres

--

ALTER TABLE "Restaraunt_schema".ingredients ALTER COLUMN id ADD GENERATED ALWAYS AS IDENTITY (

    SEQUENCE NAME "Restaraunt_schema".ingredient_id_ingr_seq

    START WITH 1

    INCREMENT BY 1

    NO MINVALUE

    NO MAXVALUE

    CACHE 1

);

--

-- TOC entry 221 (class 1259 OID 16607)

-- Name: order_content; Type: TABLE; Schema: Restaraunt_schema; Owner: postgres

--

CREATE TABLE "Restaraunt_schema".order_content (

    id integer NOT NULL,

    id_dish integer NOT NULL,

    quantity numeric NOT NULL,

    id_order integer NOT NULL

);

```sql
ALTER TABLE "Restaraunt_schema".order_content OWNER TO postgres;


--
-- TOC entry 220 (class 1259 OID 16605)
-- Name: order_content_id_seq; Type: SEQUENCE; Schema: Restaraunt_schema; Owner: postgres
--

ALTER TABLE "Restaraunt_schema".order_content ALTER COLUMN id ADD GENERATED ALWAYS AS IDENTITY (
    SEQUENCE NAME "Restaraunt_schema".order_content_id_seq
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1
);



--
-- TOC entry 213 (class 1259 OID 16514)
-- Name: orders; Type: TABLE; Schema: Restaraunt_schema; Owner: postgres
--

CREATE TABLE "Restaraunt_schema".orders (
    id integer NOT NULL,
    table_id integer NOT NULL,
    date date NOT NULL,
    status character varying NOT NULL,
    worker_id integer NOT NULL
);
```

```sql
ALTER TABLE "Restaraunt_schema".orders OWNER TO postgres;


--

-- TOC entry 212 (class 1259 OID 16512)

-- Name: orders_id_seq; Type: SEQUENCE; Schema: Restaraunt_schema; Owner: postgres

--


ALTER TABLE "Restaraunt_schema".orders ALTER COLUMN id ADD GENERATED ALWAYS AS
IDENTITY (

    SEQUENCE NAME "Restaraunt_schema".orders_id_seq

    START WITH 1

    INCREMENT BY 1

    NO MINVALUE

    NO MAXVALUE

    CACHE 1

);



--

-- TOC entry 209 (class 1259 OID 16443)

-- Name: purch_ingr; Type: TABLE; Schema: Restaraunt_schema; Owner: postgres

--


CREATE TABLE "Restaraunt_schema".purch_ingr (

   id integer NOT NULL,

   id_purch integer NOT NULL,

   id_ingr integer NOT NULL,

   quantity numeric NOT NULL,

   price numeric NOT NULL

);


ALTER TABLE "Restaraunt_schema".purch_ingr OWNER TO postgres;
```

```
--
-- TOC entry 222 (class 1259 OID 16641)
-- Name: purch_ingr_id_seq; Type: SEQUENCE; Schema: Restaraunt_schema; Owner: postgres
--

ALTER TABLE "Restaraunt_schema".purch_ingr ALTER COLUMN id ADD GENERATED ALWAYS AS IDENTITY (
    SEQUENCE NAME "Restaraunt_schema".purch_ingr_id_seq
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1
);



--
-- TOC entry 206 (class 1259 OID 16415)
-- Name: purchases; Type: TABLE; Schema: Restaraunt_schema; Owner: postgres
--

CREATE TABLE "Restaraunt_schema".purchases (
    id integer NOT NULL,
    supplier character varying NOT NULL,
    date_of_supply date NOT NULL
);


ALTER TABLE "Restaraunt_schema".purchases OWNER TO postgres;


--
-- TOC entry 205 (class 1259 OID 16413)
```

```
ALTER TABLE "Restaraunt_schema".purchases ALTER COLUMN id ADD GENERATED ALWAYS AS IDENTITY (
    SEQUENCE NAME "Restaraunt_schema".purchases_id_purchase_seq
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1
);
```

```
CREATE TABLE "Restaraunt_schema".tables (
    id integer NOT NULL,
    places integer NOT NULL,
    status character varying NOT NULL
);
```

```
ALTER TABLE "Restaraunt_schema".tables OWNER TO postgres;
```

```sql
        ALTER TABLE "Restaraunt_schema".tables ALTER COLUMN id ADD GENERATED ALWAYS AS
IDENTITY (

    SEQUENCE NAME "Restaraunt_schema".tables_id_seq

    START WITH 1

    INCREMENT BY 1

    NO MINVALUE

    NO MAXVALUE

    CACHE 1

);
```

--

-- TOC entry 217 (class 1259 OID 16564)

-- Name: worker_dish; Type: TABLE; Schema: Restaraunt_schema; Owner: postgres

--

```sql
CREATE TABLE "Restaraunt_schema".worker_dish (

   id integer NOT NULL,

   worker_id integer NOT NULL,

   dish_id integer NOT NULL

);
```

```sql
ALTER TABLE "Restaraunt_schema".worker_dish OWNER TO postgres;
```

--

-- TOC entry 216 (class 1259 OID 16562)

-- Name: worker_dish_id_seq; Type: SEQUENCE; Schema: Restaraunt_schema; Owner: postgres

--

```sql
        ALTER TABLE "Restaraunt_schema".worker_dish ALTER COLUMN id ADD GENERATED ALWAYS
AS IDENTITY (
```

```
    SEQUENCE NAME "Restaraunt_schema".worker_dish_id_seq

    START WITH 1

    INCREMENT BY 1

    NO MINVALUE

    NO MAXVALUE

    CACHE 1

);
```

--

-- TOC entry 204 (class 1259 OID 16405)

-- Name: workers; Type: TABLE; Schema: Restaraunt_schema; Owner: postgres

--

```
CREATE TABLE "Restaraunt_schema".workers (

    id integer NOT NULL,

    full_name character varying NOT NULL,

    category character varying NOT NULL,

    passport_data character varying NOT NULL,

    "position" character varying NOT NULL,

    salary character varying NOT NULL

);
```

ALTER TABLE "Restaraunt_schema".workers OWNER TO postgres;

--

-- TOC entry 203 (class 1259 OID 16403)

-- Name: workers_table_num_seq; Type: SEQUENCE; Schema: Restaraunt_schema; Owner: postgres

--

```sql
        ALTER TABLE "Restaraunt_schema".workers ALTER COLUMN id ADD GENERATED ALWAYS AS IDENTITY (

        SEQUENCE NAME "Restaraunt_schema".workers_table_num_seq

        START WITH 1

        INCREMENT BY 1

        NO MINVALUE

        NO MAXVALUE

        CACHE 1

);
```

--

-- TOC entry 2923 (class 0 OID 16467)

-- Dependencies: 211

-- Data for Name: dishes; Type: TABLE DATA; Schema: Restaraunt_schema; Owner: postgres

--

```
COPY "Restaraunt_schema".dishes (id, name, weight, type) FROM stdin;
1       meat chowder  300     h
2       pasta   200     h
3       ice cream       150     d
4       cake    150     d
5       salad   300     s
6       meat chowder  300     h
\.
```

--

-- TOC entry 2931 (class 0 OID 16583)

-- Dependencies: 219

-- Data for Name: ingr_quan; Type: TABLE DATA; Schema: Restaraunt_schema; Owner: postgres

--

```
COPY "Restaraunt_schema".ingr_quan (id, id_dish, id_ingr, ingr_quantity) FROM stdin;
1       1       3       80
2       1       9       0.008
3       1       1       0.1
4       2       1       0.1
5       2       8       0.1
6       3       8       0.1
7       3       6       0.1
8       4       7       0.1
9       4       9       0.1
10      5       5       0.1
11      5       4       0.1
12      6       3       0.1
13      6       4       0.1
\.
```

--

-- TOC entry 2920 (class 0 OID 16425)

-- Dependencies: 208

-- Data for Name: ingredients; Type: TABLE DATA; Schema: Restaraunt_schema; Owner: postgres

--

```
COPY "Restaraunt_schema".ingredients (id, name, units, stock, stock_nec, expiration_period_days) FROM stdin;
```

| id | name | units | stock | stock_nec | expiration_period_days |
|----|------|-------|-------|-----------|------------------------|
| 1 | carrot | kg | 10 | 10 | 5 |
| 2 | potato | kg | 10 | 10 | 5 |
| 3 | meat | kg | 10 | 8 | 5 |
| 4 | fish | kg | 8 | 10 | 5 |
| 5 | sugar | kg | 8 | 10 | 360 |
| 6 | floar | kg | 8 | 8 | 360 |
| 7 | milk | l | 8 | 8 | 4 |
| 8 | cream | l | 8 | 8 | 4 |

| 9 | salt | kg | 10 | 10 | 360 |

\.

--

-- TOC entry 2933 (class 0 OID 16607)

-- Dependencies: 221

-- Data for Name: order_content; Type: TABLE DATA; Schema: Restaraunt_schema; Owner: postgres

--

```
COPY "Restaraunt_schema".order_content (id, id_dish, quantity, id_order) FROM stdin;
9    6    1    14
10   5    1    14
11   6    2    13
12   1    2    13
13   1    1    12
14   5    5    11
15   2    5    11
16   3    2    11
\.
```

--

-- TOC entry 2925 (class 0 OID 16514)

-- Dependencies: 213

-- Data for Name: orders; Type: TABLE DATA; Schema: Restaraunt_schema; Owner: postgres

--

```
COPY "Restaraunt_schema".orders (id, table_id, date, status, worker_id) FROM stdin;
1    13    2022-02-28    doing    7
2    14    2022-02-28    done     7
3    15    2022-02-28    doing    17
```

| 4 | 16 | 2022-02-28 | canceled | 17 |
| 5 | 17 | 2022-02-28 | paid | 21 |
| 6 | 18 | 2022-02-28 | paid | 21 |
| 7 | 19 | 2022-02-28 | done | 21 |
| 8 | 13 | 2022-03-01 | doing | 7 |
| 9 | 14 | 2022-03-01 | done | 7 |
| 10 | 15 | 2022-03-01 | doing | 17 |
| 11 | 16 | 2022-03-01 | paid | 17 |
| 12 | 17 | 2022-03-01 | paid | 21 |
| 13 | 18 | 2022-03-01 | paid | 21 |
| 14 | 19 | 2022-03-01 | done | 21 |

\.

--

-- TOC entry 2921 (class 0 OID 16443)

-- Dependencies: 209

-- Data for Name: purch_ingr; Type: TABLE DATA; Schema: Restaraunt_schema; Owner: postgres

--

COPY "Restaraunt_schema".purch_ingr (id, id_purch, id_ingr, quantity, price) FROM stdin;

| 1 | 11 | 9 | 10 | 100 |
| 3 | 10 | 8 | 10 | 2500 |
| 4 | 10 | 7 | 20 | 1700 |
| 5 | 10 | 6 | 30 | 800 |
| 6 | 9 | 9 | 10 | 100 |
| 7 | 9 | 6 | 11 | 100 |
| 8 | 9 | 8 | 30 | 1100 |
| 9 | 8 | 5 | 10 | 100 |
| 10 | 8 | 4 | 10 | 2000 |
| 11 | 8 | 3 | 11 | 200 |
| 12 | 7 | 5 | 10 | 100 |

\.

--

-- TOC entry 2918 (class 0 OID 16415)

-- Dependencies: 206

-- Data for Name: purchases; Type: TABLE DATA; Schema: Restaraunt_schema; Owner: postgres

--

COPY "Restaraunt_schema".purchases (id, supplier, date_of_supply) FROM stdin;

| | | |
|---|---|---|
| 1 | Oriental fairy tales | 2022-10-11 |
| 2 | Oriental fairy tales | 2022-02-28 |
| 3 | Oriental fairy tales | 2022-01-28 |
| 4 | Oriental fairy tales | 2022-10-28 |
| 5 | Oriental fairy tales | 2022-07-28 |
| 6 | Breadwinner | 2022-05-28 |
| 7 | Breadwinner | 2022-06-28 |
| 8 | Breadwinner | 2022-08-28 |
| 9 | Mountain slopes | 2022-09-28 |
| 10 | Mountain slopes | 2022-10-28 |
| 11 | Mountain slopes | 2022-10-01 |

\.

--

-- TOC entry 2927 (class 0 OID 16529)

-- Dependencies: 215

-- Data for Name: tables; Type: TABLE DATA; Schema: Restaraunt_schema; Owner: postgres

--

COPY "Restaraunt_schema".tables (id, places, status) FROM stdin;

| | | |
|---|---|---|
| 1 | 2 | booked |

| | | |
|---|---|---|
| 2 | 4 | booked |
| 3 | 2 | booked |
| 4 | 4 | free |
| 5 | 2 | free |
| 6 | 2 | booked |
| 7 | 10 | free |
| 8 | 6 | booked |
| 9 | 6 | booked |
| 10 | 6 | free |
| 11 | 6 | free |
| 12 | 2 | booked |
| 13 | 3 | taken |
| 14 | 2 | taken |
| 15 | 10 | taken |
| 16 | 2 | taken |
| 17 | 4 | taken |
| 18 | 4 | taken |
| 19 | 4 | taken |

\.


--

-- TOC entry 2929 (class 0 OID 16564)

-- Dependencies: 217

-- Data for Name: worker_dish; Type: TABLE DATA; Schema: Restaraunt_schema; Owner: postgres

--


COPY "Restaraunt_schema".worker_dish (id, worker_id, dish_id) FROM stdin;

| | | |
|---|---|---|
| 1 | 2 | 6 |
| 36 | 2 | 5 |
| 37 | 3 | 5 |
| 38 | 4 | 5 |

| 39 | 5  | 6 |
|----|----|---|
| 40 | 6  | 6 |
| 41 | 8  | 6 |
| 42 | 9  | 1 |
| 43 | 10 | 1 |
| 44 | 11 | 1 |
| 45 | 13 | 1 |
| 46 | 13 | 4 |
| 47 | 14 | 2 |
| 48 | 16 | 2 |
| 49 | 12 | 1 |
| 50 | 12 | 5 |
| 51 | 16 | 3 |
| 52 | 16 | 5 |
| 53 | 18 | 3 |
| 54 | 19 | 3 |
| 55 | 20 | 4 |
| 56 | 24 | 4 |
| 57 | 26 | 4 |

\.


--

-- TOC entry 2916 (class 0 OID 16405)

-- Dependencies: 204

-- Data for Name: workers; Type: TABLE DATA; Schema: Restaraunt_schema; Owner: postgres

--


COPY "Restaraunt_schema".workers (id, full_name, category, passport_data, "position", salary) FROM stdin;

| 1 | Липина Ольга Андреевна    | partner     | 0000 000000 | owner  | 5000 |
| 2 | Рубинов Даниил Королевич   | team_leader | 1635 295893 | cooker | 2015 |
| 3 | Вольфган Джон Марьянович   | jun         | 1005 125757 | cooker | 906  |

| 4 | Алмазов Елизар Королевич | senior | 1029 | 419386 | cooker | 1631 |
| 5 | Розман Даниил Евграфович | team_leader | 1804 | 692650 | cooker | 2316 |
| 6 | Рубинов Кирилл Марьянович | intern | 2556 | 479551 | cooker | 716 |
| 7 | Воедовов Енисей Королевич | intern | 1022 | 453364 | waiter | 750 |
| 8 | Паулаускас Енисей Царевич | middle | 2632 | 463577 | cooker | 1465 |
| 9 | Рубинов Егор Алексеевич | senior | 1070 | 397757 | cooker | 1915 |
| 10 | Горнов Максим Евграфович | senior | 2346 | 486722 | cooker | 1955 |
| 11 | Розман Елизар Романович | team_leader | 2903 | 162160 | cooker | 2344 |
| 12 | Рубинов Джон Евграфович | team_leader | 2080 | 478118 | cooker | 2078 |
| 13 | Алмазова Надежда Королевна | senior | 2145 | 415431 | cooker | 1840 |
| 14 | Данилова Виктория Королевна | senior | 2260 | 440476 | cooker | 1516 |
| 15 | Комсомольцева Виктория Даниловна | manager | 1323 | 526458 | waiter | 2226 |
| 16 | Горнова Марья Даниловна | senior | 1469 | 497597 | cooker | 1877 |
| 17 | Комсомольцева Карина Даниловна | jun | 2601 | 532727 | waiter | 851 |
| 18 | Рубинова Карина Даниловна | senior | 2076 | 115384 | cooker | 1681 |
| 19 | Комсомольцева Карина Измайловна | jun | 1674 | 524475 | cooker | 816 |
| 20 | Комсомольцева Надежда Даниловна | jun | 1858 | 570056 | cooker | 1199 |
| 21 | Горнова Карина Романовна | jun | 1575 | 207759 | waiter | 1008 |
| 22 | Данилова Марья Даниловна | senior | 2309 | 365380 | waiter | 1895 |
| 23 | Штофф Модестас Царевич | senior | 1805 | 503596 | waiter | 1837 |
| 24 | Штофф Вампир Царевич | intern | 1846 | 121782 | cooker | 476 |
| 25 | Штофф Фелиция Королевна | team_leader | 1922 | 578361 | waiter | 2257 |
| 26 | Дракула Айта Королевна | team_leader | 1159 | 351089 | cooker | 2203 |

\.


--

-- TOC entry 2941 (class 0 OID 0)

-- Dependencies: 210

-- Name: dishes_id_seq; Type: SEQUENCE SET; Schema: Restaraunt_schema; Owner: postgres

--

```
SELECT pg_catalog.setval('"Restaraunt_schema".dishes_id_seq', 6, true);



--

-- TOC entry 2942 (class 0 OID 0)

-- Dependencies: 218

-- Name: ingr_quan_id_seq; Type: SEQUENCE SET; Schema: Restaraunt_schema; Owner:
postgres

--



SELECT pg_catalog.setval('"Restaraunt_schema".ingr_quan_id_seq', 13, true);



--

-- TOC entry 2943 (class 0 OID 0)

-- Dependencies: 207

-- Name: ingredient_id_ingr_seq; Type: SEQUENCE SET; Schema: Restaraunt_schema; Owner:
postgres

--



SELECT pg_catalog.setval('"Restaraunt_schema".ingredient_id_ingr_seq', 9, true);



--

-- TOC entry 2944 (class 0 OID 0)

-- Dependencies: 220

-- Name: order_content_id_seq; Type: SEQUENCE SET; Schema: Restaraunt_schema; Owner:
postgres

--



SELECT pg_catalog.setval('"Restaraunt_schema".order_content_id_seq', 16, true);
```

--

-- TOC entry 2945 (class 0 OID 0)

-- Dependencies: 212

-- Name: orders_id_seq; Type: SEQUENCE SET; Schema: Restaraunt_schema; Owner: postgres

--

SELECT pg_catalog.setval('"Restaraunt_schema".orders_id_seq', 14, true);

--

-- TOC entry 2946 (class 0 OID 0)

-- Dependencies: 222

-- Name: purch_ingr_id_seq; Type: SEQUENCE SET; Schema: Restaraunt_schema; Owner: postgres

--

SELECT pg_catalog.setval('"Restaraunt_schema".purch_ingr_id_seq', 12, true);

--

-- TOC entry 2947 (class 0 OID 0)

-- Dependencies: 205

-- Name: purchases_id_purchase_seq; Type: SEQUENCE SET; Schema: Restaraunt_schema; Owner: postgres

--

SELECT pg_catalog.setval('"Restaraunt_schema".purchases_id_purchase_seq', 11, true);

--

-- TOC entry 2948 (class 0 OID 0)

-- Dependencies: 214

-- Name: tables_id_seq; Type: SEQUENCE SET; Schema: Restaraunt_schema; Owner: postgres

```
--

SELECT pg_catalog.setval('"Restaraunt_schema".tables_id_seq', 19, true);


--

-- TOC entry 2949 (class 0 OID 0)

-- Dependencies: 216

-- Name: worker_dish_id_seq; Type: SEQUENCE SET; Schema: Restaraunt_schema; Owner:
postgres

--


SELECT pg_catalog.setval('"Restaraunt_schema".worker_dish_id_seq', 57, true);



--

-- TOC entry 2950 (class 0 OID 0)

-- Dependencies: 203

-- Name: workers_table_num_seq; Type: SEQUENCE SET; Schema: Restaraunt_schema; Owner:
postgres

--


SELECT pg_catalog.setval('"Restaraunt_schema".workers_table_num_seq', 26, true);



--

-- TOC entry 2762 (class 2606 OID 16474)

-- Name: dishes dishes_pkey; Type: CONSTRAINT; Schema: Restaraunt_schema; Owner: postgres

--


ALTER TABLE ONLY "Restaraunt_schema".dishes
    ADD CONSTRAINT dishes_pkey PRIMARY KEY (id);
```

--

-- TOC entry 2758 (class 2606 OID 16462)

-- Name: purch_ingr id; Type: CONSTRAINT; Schema: Restaraunt_schema; Owner: postgres

--

ALTER TABLE ONLY "Restaraunt_schema".purch_ingr

    ADD CONSTRAINT id PRIMARY KEY (id);

--

-- TOC entry 2776 (class 2606 OID 16635)

-- Name: order_content id_; Type: CONSTRAINT; Schema: Restaraunt_schema; Owner: postgres

--

ALTER TABLE ONLY "Restaraunt_schema".order_content

    ADD CONSTRAINT id_ PRIMARY KEY (id);

--

-- TOC entry 2772 (class 2606 OID 16599)

-- Name: ingr_quan ingr_quan_id_dish_id_ingr_key; Type: CONSTRAINT; Schema: Restaraunt_schema; Owner: postgres

--

ALTER TABLE ONLY "Restaraunt_schema".ingr_quan

    ADD CONSTRAINT ingr_quan_id_dish_id_ingr_key UNIQUE (id_dish, id_ingr);

--

-- TOC entry 2774 (class 2606 OID 16590)

-- Name: ingr_quan ingr_quan_pkey; Type: CONSTRAINT; Schema: Restaraunt_schema; Owner: postgres

```
--

        ALTER TABLE ONLY "Restaraunt_schema".ingr_quan

            ADD CONSTRAINT ingr_quan_pkey PRIMARY KEY (id);




--

        -- TOC entry 2756 (class 2606 OID 16432)

        -- Name: ingredients ingredient_pkey; Type: CONSTRAINT; Schema: Restaraunt_schema; Owner:
postgres

        --


        ALTER TABLE ONLY "Restaraunt_schema".ingredients

            ADD CONSTRAINT ingredient_pkey PRIMARY KEY (id);




--

        -- TOC entry 2778 (class 2606 OID 16616)

        -- Name: order_content order_content_id_dish_id_key; Type: CONSTRAINT; Schema:
Restaraunt_schema; Owner: postgres

        --


        ALTER TABLE ONLY "Restaraunt_schema".order_content

            ADD CONSTRAINT order_content_id_dish_id_key UNIQUE (id_dish, id);




--

        -- TOC entry 2764 (class 2606 OID 16521)

        -- Name: orders orders_pkey; Type: CONSTRAINT; Schema: Restaraunt_schema; Owner:
postgres

        --


        ALTER TABLE ONLY "Restaraunt_schema".orders
```

```sql
    ADD CONSTRAINT orders_pkey PRIMARY KEY (id);



--

-- TOC entry 2760 (class 2606 OID 16464)

-- Name: purch_ingr purch_ingr_; Type: CONSTRAINT; Schema: Restaraunt_schema; Owner:
postgres

--


ALTER TABLE ONLY "Restaraunt_schema".purch_ingr

    ADD CONSTRAINT purch_ingr_ UNIQUE (id_purch, id_ingr);



--

-- TOC entry 2754 (class 2606 OID 16422)

-- Name: purchases purchases_pkey; Type: CONSTRAINT; Schema: Restaraunt_schema; Owner:
postgres

--


ALTER TABLE ONLY "Restaraunt_schema".purchases

    ADD CONSTRAINT purchases_pkey PRIMARY KEY (id);



--

-- TOC entry 2766 (class 2606 OID 16537)

-- Name: tables tables_pkey; Type: CONSTRAINT; Schema: Restaraunt_schema; Owner: postgres

--


ALTER TABLE ONLY "Restaraunt_schema".tables

    ADD CONSTRAINT tables_pkey PRIMARY KEY (id);



--
```

-- TOC entry 2768 (class 2606 OID 16575)

-- Name: worker_dish worker_dish_; Type: CONSTRAINT; Schema: Restaraunt_schema; Owner: postgres

--

ALTER TABLE ONLY "Restaraunt_schema".worker_dish

   ADD CONSTRAINT worker_dish_ UNIQUE (worker_id, dish_id);

--

-- TOC entry 2770 (class 2606 OID 16568)

-- Name: worker_dish worker_dish_pkey; Type: CONSTRAINT; Schema: Restaraunt_schema; Owner: postgres

--

ALTER TABLE ONLY "Restaraunt_schema".worker_dish

   ADD CONSTRAINT worker_dish_pkey PRIMARY KEY (id);

--

-- TOC entry 2752 (class 2606 OID 16412)

-- Name: workers workers_pkey; Type: CONSTRAINT; Schema: Restaraunt_schema; Owner: postgres

--

ALTER TABLE ONLY "Restaraunt_schema".workers

   ADD CONSTRAINT workers_pkey PRIMARY KEY (id);

--

-- TOC entry 2784 (class 2606 OID 16576)

-- Name: worker_dish dish_id; Type: FK CONSTRAINT; Schema: Restaraunt_schema; Owner: postgres

--

```sql
ALTER TABLE ONLY "Restaraunt_schema".worker_dish

    ADD CONSTRAINT dish_id FOREIGN KEY (dish_id) REFERENCES
"Restaraunt_schema".dishes(id) NOT VALID;



--

-- TOC entry 2787 (class 2606 OID 16617)

-- Name: order_content id_dish; Type: FK CONSTRAINT; Schema: Restaraunt_schema; Owner:
postgres

--


ALTER TABLE ONLY "Restaraunt_schema".order_content

    ADD CONSTRAINT id_dish FOREIGN KEY (id_dish) REFERENCES
"Restaraunt_schema".dishes(id);



--

-- TOC entry 2780 (class 2606 OID 16456)

-- Name: purch_ingr id_ingr; Type: FK CONSTRAINT; Schema: Restaraunt_schema; Owner:
postgres

--


ALTER TABLE ONLY "Restaraunt_schema".purch_ingr

    ADD CONSTRAINT id_ingr FOREIGN KEY (id_ingr) REFERENCES
"Restaraunt_schema".ingredients(id) NOT VALID;



--

-- TOC entry 2779 (class 2606 OID 16451)

-- Name: purch_ingr id_purch; Type: FK CONSTRAINT; Schema: Restaraunt_schema; Owner:
postgres

--
```

ALTER TABLE ONLY "Restaraunt_schema".purch_ingr

ADD CONSTRAINT id_purch FOREIGN KEY (id_purch) REFERENCES "Restaraunt_schema".purchases(id);

--

-- TOC entry 2785 (class 2606 OID 16593)

-- Name: ingr_quan ingr_quan_id_dish_fkey; Type: FK CONSTRAINT; Schema: Restaraunt_schema; Owner: postgres

--

ALTER TABLE ONLY "Restaraunt_schema".ingr_quan

ADD CONSTRAINT ingr_quan_id_dish_fkey FOREIGN KEY (id_dish) REFERENCES "Restaraunt_schema".dishes(id);

--

-- TOC entry 2786 (class 2606 OID 16600)

-- Name: ingr_quan ingr_quan_id_ingr_fkey; Type: FK CONSTRAINT; Schema: Restaraunt_schema; Owner: postgres

--

ALTER TABLE ONLY "Restaraunt_schema".ingr_quan

ADD CONSTRAINT ingr_quan_id_ingr_fkey FOREIGN KEY (id_ingr) REFERENCES "Restaraunt_schema".ingredients(id) NOT VALID;

--

-- TOC entry 2788 (class 2606 OID 16636)

-- Name: order_content order_content_id_order_fkey; Type: FK CONSTRAINT; Schema: Restaraunt_schema; Owner: postgres

--

ALTER TABLE ONLY "Restaraunt_schema".order_content

ADD CONSTRAINT order_content_id_order_fkey FOREIGN KEY (id_order) REFERENCES "Restaraunt_schema".orders(id) NOT VALID;

--

-- TOC entry 2782 (class 2606 OID 16538)

-- Name: orders table_id; Type: FK CONSTRAINT; Schema: Restaraunt_schema; Owner: postgres

--

ALTER TABLE ONLY "Restaraunt_schema".orders

ADD CONSTRAINT table_id FOREIGN KEY (table_id) REFERENCES "Restaraunt_schema".tables(id) NOT VALID;

--

-- TOC entry 2781 (class 2606 OID 16522)

-- Name: orders worker_id; Type: FK CONSTRAINT; Schema: Restaraunt_schema; Owner: postgres

--

ALTER TABLE ONLY "Restaraunt_schema".orders

ADD CONSTRAINT worker_id FOREIGN KEY (worker_id) REFERENCES "Restaraunt_schema".workers(id);

--

-- TOC entry 2783 (class 2606 OID 16569)

-- Name: worker_dish worker_id; Type: FK CONSTRAINT; Schema: Restaraunt_schema; Owner: postgres

--

ALTER TABLE ONLY "Restaraunt_schema".worker_dish

ADD CONSTRAINT worker_id FOREIGN KEY (worker_id) REFERENCES "Restaraunt_schema".workers(id);

-- Completed on 2022-03-02 20:13:09

--

-- PostgreSQL database dump complete

--

**Выводы**:

Выводы: с помощью PGAadmin была создана БД, выстроены связи между таблицами и атрибутами, установлены необходимые ограничения.  Также создана резервная копия, из которой база была восстановлена.