# Министерство науки и высшего образования Российской Федерации

федеральное государственное автономное образовательное учреждение высшего образования

# «НАЦИОНАЛЬНЫЙ ИССЛЕДОВАТЕЛЬСКИЙ УНИВЕРСИТЕТ ИТМО»

#### Отчет

по лабораторной работе №3 «Создание таблиц базы данных PostgreSQL. Заполнение таблиц рабочими данными»

по дисциплине «Проектирование и реализация баз данных»

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# Цель работы

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

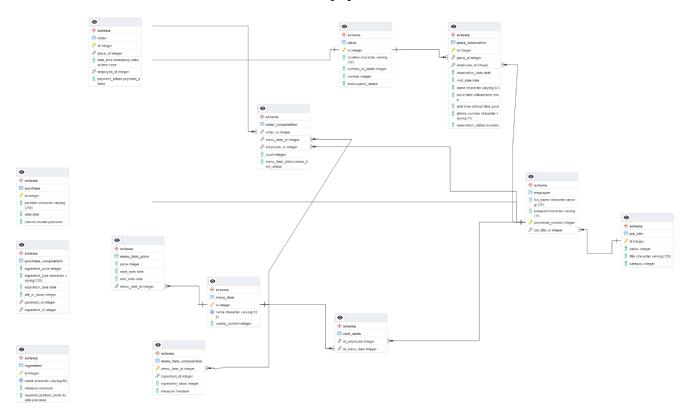
# Практическое задание

- 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.
- 7. Восстановить БД.

## Выполнение

Вариант 13. БД «Ресторан».

Схема логической модели базы данных, сгенерированная в Generate ERD:



Dump-file в приложении A

## Вывод

В ходе выполнения лабораторной работы была создана база данных PostgreSQL с использованием pgAdmin 4 в соответствии с индивидуальным заданием вариант 13, "Ресторан". Была создана схема в составе базы данных, а также таблицы базы данных. На данные были установлены ограничения: Primary Key, Unique, Check, Foreign Key. Таблицы были заполнены рабочими данными. Для обеспечения безопасности данных была создана резервная копия с расширением CUSTOM для восстановления БД. В результате выполнения лабораторной работы были успешно освоены практические навыки создания таблиц базы данных PostgreSQL, их заполнения рабочими данными, а также резервного копирования и восстановления БД.

#### Приложение А.

```
-- PostgreSQL database dump
-- Dumped from database version 16.0
-- Dumped by pg_dump version 16.0
-- Started on 2023-11-11 18:36:11
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 6 (class 2615 OID 32769)
-- Name: schema; Type: SCHEMA; Schema: -; Owner: postgres
CREATE SCHEMA schema;
ALTER SCHEMA schema OWNER TO postgres;
-- TOC entry 865 (class 1247 OID 49188)
-- Name: measure; Type: DOMAIN; Schema: public; Owner: postgres
CREATE DOMAIN public.measure AS character varying(10)
    CONSTRAINT measure_check CHECK (((VALUE)::text = ANY ((ARRAY['kg'::character
varying, 'l'::character varying])::text[])));
ALTER DOMAIN public.measure OWNER TO postgres;
-- TOC entry 910 (class 1247 OID 82074)
-- Name: menu_item_status; Type: DOMAIN; Schema: public; Owner: postgres
CREATE DOMAIN public.menu_item_status AS character varying(32)
```

```
CONSTRAINT menu_item_status_check CHECK (((VALUE)::text = ANY
((ARRAY['Served'::character varying, 'Cancelled'::character varying, 'In
progress'::character varying])::text[])));
ALTER DOMAIN public.menu_item_status OWNER TO postgres;
-- TOC entry 903 (class 1247 OID 82021)
-- Name: payment_status; Type: DOMAIN; Schema: public; Owner: postgres
CREATE DOMAIN public.payment_status AS character varying(32)
    CONSTRAINT payment status check CHECK (((VALUE)::text = ANY
((ARRAY['Paid'::character varying, 'Unpaid'::character varying,
'Cancelled'::character varying])::text[])));
ALTER DOMAIN public.payment_status OWNER TO postgres;
-- TOC entry 893 (class 1247 OID 81962)
-- Name: place_status; Type: DOMAIN; Schema: public; Owner: postgres
CREATE DOMAIN public.place_status AS character varying(32)
    CONSTRAINT place_status_check CHECK (((VALUE)::text = ANY
((ARRAY['Reserved'::character varying, 'Occupied'::character varying,
'Available'::character varying])::text[])));
ALTER DOMAIN public.place status OWNER TO postgres;
SET default_tablespace = '';
SET default_table_access_method = heap;
-- TOC entry 221 (class 1259 OID 57346)
-- Name: menu_item; Type: TABLE; Schema: schema; Owner: postgres
CREATE TABLE schema.menu_item (
    id integer NOT NULL,
    name character varying(128) DEFAULT ''::character varying NOT NULL,
    calorie_content integer DEFAULT 0 NOT NULL
);
ALTER TABLE schema.menu item OWNER TO postgres;
```

```
-- TOC entry 220 (class 1259 OID 57345)
-- Name: menu_item_id_seq; Type: SEQUENCE; Schema: schema; Owner: postgres
CREATE SEQUENCE schema." menu_item_id_seq"
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;
ALTER SEQUENCE schema." menu_item_id_seq" OWNER TO postgres;
-- TOC entry 5041 (class 0 OID 0)
-- Dependencies: 220
-- Name: menu_item_id_seq; Type: SEQUENCE OWNED BY; Schema: schema; Owner:
postgres
ALTER SEQUENCE schema." menu_item_id_seq" OWNED BY schema.menu_item.id;
-- TOC entry 227 (class 1259 OID 81927)
-- Name: chef_skills; Type: TABLE; Schema: schema; Owner: postgres
CREATE TABLE schema.chef_skills (
    id_employee integer NOT NULL,
    id_menu_item integer NOT NULL
);
ALTER TABLE schema.chef skills OWNER TO postgres;
-- TOC entry 226 (class 1259 OID 65615)
-- Name: employee; Type: TABLE; Schema: schema; Owner: postgres
CREATE TABLE schema.employee (
    full_name character varying(128) DEFAULT ''::character varying NOT NULL,
    passport character varying(11) DEFAULT '0000 000000'::character varying NOT
NULL,
    personnel_number integer NOT NULL,
    job_title_id integer NOT NULL,
    CONSTRAINT chk_passport CHECK (((passport)::text ~ '^\d{4} \d{6}$'::text))
```

```
);
ALTER TABLE schema.employee OWNER TO postgres;
-- TOC entry 225 (class 1259 OID 65614)
-- Name: employee_personnel_number_seq; Type: SEQUENCE; Schema: schema; Owner:
postgres
CREATE SEQUENCE schema.employee_personnel_number_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;
ALTER SEQUENCE schema.employee_personnel_number_seq OWNER TO postgres;
-- TOC entry 5042 (class 0 OID 0)
-- Dependencies: 225
-- Name: employee_personnel_number_seq; Type: SEQUENCE OWNED BY; Schema: schema;
Owner: postgres
ALTER SEQUENCE schema.employee_personnel_number_seq OWNED BY
schema.employee.personnel number;
-- TOC entry 219 (class 1259 OID 49202)
-- Name: ingredient; Type: TABLE; Schema: schema; Owner: postgres
CREATE TABLE schema.ingredient (
    id integer NOT NULL,
    name character varying(50) DEFAULT ''::character varying NOT NULL,
    measure public.measure NOT NULL,
    required_product_stock double precision DEFAULT 0 NOT NULL
);
ALTER TABLE schema.ingredient OWNER TO postgres;
-- TOC entry 218 (class 1259 OID 49201)
-- Name: ingredient_id_seq; Type: SEQUENCE; Schema: schema; Owner: postgres
```

```
CREATE SEQUENCE schema.ingredient_id_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;
ALTER SEQUENCE schema.ingredient_id_seq OWNER TO postgres;
-- TOC entry 5043 (class 0 OID 0)
-- Dependencies: 218
-- Name: ingredient id seq; Type: SEQUENCE OWNED BY; Schema: schema; Owner:
postgres
--
ALTER SEQUENCE schema.ingredient_id_seq OWNED BY schema.ingredient.id;
-- TOC entry 224 (class 1259 OID 65580)
-- Name: job_title; Type: TABLE; Schema: schema; Owner: postgres
CREATE TABLE schema.job_title (
    id integer NOT NULL,
    salary integer DEFAULT 13890 NOT NULL,
    title character varying(128) DEFAULT ''::character varying NOT NULL,
    category integer DEFAULT 0 NOT NULL
);
ALTER TABLE schema.job_title OWNER TO postgres;
-- TOC entry 223 (class 1259 OID 65579)
-- Name: job_title_id_seq; Type: SEQUENCE; Schema: schema; Owner: postgres
CREATE SEQUENCE schema.job_title_id_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;
```

```
ALTER SEQUENCE schema.job_title_id_seq OWNER TO postgres;
-- TOC entry 5044 (class 0 OID 0)
-- Dependencies: 223
-- Name: job_title_id_seq; Type: SEQUENCE OWNED BY; Schema: schema; Owner:
postgres
--
ALTER SEQUENCE schema.job_title_id_seq OWNED BY schema.job_title.id;
-- TOC entry 222 (class 1259 OID 65543)
-- Name: menu_item_composition; Type: TABLE; Schema: schema; Owner: postgres
CREATE TABLE schema.menu_item_composition (
    menu item id integer NOT NULL,
    ingredient_id integer NOT NULL,
    ingredient_value integer NOT NULL,
    measure public.measure NOT NULL
);
ALTER TABLE schema.menu_item_composition OWNER TO postgres;
-- TOC entry 228 (class 1259 OID 81944)
-- Name: menu_item_price; Type: TABLE; Schema: schema; Owner: postgres
CREATE TABLE schema.menu_item_price (
    price integer DEFAULT 0 NOT NULL,
    start_date date DEFAULT '2023-01-01'::date NOT NULL,
    end_date date DEFAULT CURRENT_DATE NOT NULL,
    menu_item_id integer
);
ALTER TABLE schema.menu_item_price OWNER TO postgres;
-- TOC entry 234 (class 1259 OID 82005)
-- Name: order; Type: TABLE; Schema: schema; Owner: postgres
CREATE TABLE schema. "order" (
    id integer NOT NULL,
    place_id integer NOT NULL,
    date_time timestamp without time zone DEFAULT CURRENT_TIMESTAMP NOT NULL,
```

```
employee_id integer NOT NULL,
    payment_status public.payment_status DEFAULT 'Unpaid'::character varying NOT
NULL
);
ALTER TABLE schema. "order" OWNER TO postgres;
-- TOC entry 235 (class 1259 OID 82051)
-- Name: order composition; Type: TABLE; Schema: schema; Owner: postgres
CREATE TABLE schema.order composition (
    order_id integer NOT NULL,
    menu_item_id integer NOT NULL,
    employee id integer NOT NULL,
    count integer DEFAULT 1 NOT NULL,
    menu_item_status public.menu_item_status DEFAULT 'In progress'::character
varying NOT NULL
);
ALTER TABLE schema.order_composition OWNER TO postgres;
-- TOC entry 233 (class 1259 OID 82004)
-- Name: order id seq; Type: SEQUENCE; Schema: schema; Owner: postgres
CREATE SEQUENCE schema.order id seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;
ALTER SEQUENCE schema.order_id_seq OWNER TO postgres;
-- TOC entry 5045 (class 0 OID 0)
-- Dependencies: 233
-- Name: order_id_seq; Type: SEQUENCE OWNED BY; Schema: schema; Owner: postgres
ALTER SEQUENCE schema.order id seq OWNED BY schema."order".id;
```

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```
-- TOC entry 230 (class 1259 OID 81954)
-- Name: place; Type: TABLE; Schema: schema; Owner: postgres
CREATE TABLE schema.place (
    id integer NOT NULL,
    location character varying(32) DEFAULT ''::character varying NOT NULL,
    number_of_seats integer NOT NULL,
    number integer NOT NULL,
    status public.place_status DEFAULT 'Available'::character varying NOT NULL
);
ALTER TABLE schema.place OWNER TO postgres;
-- TOC entry 229 (class 1259 OID 81953)
-- Name: place_id_seq; Type: SEQUENCE; Schema: schema; Owner: postgres
CREATE SEQUENCE schema.place_id_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;
ALTER SEQUENCE schema.place_id_seq OWNER TO postgres;
-- TOC entry 5046 (class 0 OID 0)
-- Dependencies: 229
-- Name: place_id_seq; Type: SEQUENCE OWNED BY; Schema: schema; Owner: postgres
ALTER SEQUENCE schema.place_id_seq OWNED BY schema.place.id;
-- TOC entry 232 (class 1259 OID 81976)
-- Name: place_reservation; Type: TABLE; Schema: schema; Owner: postgres
CREATE TABLE schema.place_reservation (
    id integer NOT NULL,
    place id integer NOT NULL,
    employee_id integer NOT NULL,
    reservation_date date DEFAULT CURRENT_DATE NOT NULL,
    visit_date date DEFAULT CURRENT_DATE NOT NULL,
```

```
name character varying(32) DEFAULT ''::character varying NOT NULL,
    since time without time zone DEFAULT '12:00:00'::time without time zone NOT
NULL,
    until time without time zone DEFAULT '23:00:00'::time without time zone NOT
NULL,
    phone_number character varying(11) DEFAULT ''::character varying NOT NULL,
    reservation_status boolean DEFAULT true NOT NULL
);
ALTER TABLE schema.place_reservation OWNER TO postgres;
-- TOC entry 231 (class 1259 OID 81975)
-- Name: place_reservation_id_seq; Type: SEQUENCE; Schema: schema; Owner:
postgres
CREATE SEQUENCE schema.place_reservation_id_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;
ALTER SEQUENCE schema.place reservation id seq OWNER TO postgres;
-- TOC entry 5047 (class 0 OID 0)
-- Dependencies: 231
-- Name: place_reservation_id_seq; Type: SEQUENCE OWNED BY; Schema: schema;
Owner: postgres
ALTER SEQUENCE schema.place_reservation_id_seq OWNED BY
schema.place_reservation.id;
-- TOC entry 237 (class 1259 OID 98312)
-- Name: purchase; Type: TABLE; Schema: schema; Owner: postgres
CREATE TABLE schema.purchase (
    id integer NOT NULL,
    provider character varying(256) DEFAULT ''::character varying NOT NULL,
    date date DEFAULT CURRENT_DATE NOT NULL,
    volume double precision DEFAULT 0 NOT NULL,
    CONSTRAINT chk_date CHECK ((date > '2023-01-01'::date)),
```

```
CONSTRAINT chk_volume CHECK ((volume > (0)::double precision))
);
ALTER TABLE schema.purchase OWNER TO postgres;
_ _
-- TOC entry 216 (class 1259 OID 41009)
-- Name: purchase_composition; Type: TABLE; Schema: schema; Owner: postgres
CREATE TABLE schema.purchase_composition (
    ingredient_price integer DEFAULT 0 NOT NULL,
    ingredient type character varying(128) DEFAULT ''::character varying,
    expiration_date date DEFAULT CURRENT_DATE NOT NULL,
    left_in_stock integer DEFAULT 0 NOT NULL,
    purchase id integer NOT NULL,
    ingredient_id integer NOT NULL,
    CONSTRAINT chk_expiration_date CHECK ((expiration_date > '2023-01-
01'::date)),
    CONSTRAINT chk price CHECK ((ingredient price > 0))
);
ALTER TABLE schema.purchase_composition OWNER TO postgres;
-- TOC entry 217 (class 1259 OID 49152)
-- Name: purchase composition purchase id seq; Type: SEQUENCE; Schema: schema;
Owner: postgres
CREATE SEQUENCE schema.purchase_composition_purchase_id_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;
ALTER SEQUENCE schema.purchase composition purchase id seq OWNER TO postgres;
-- TOC entry 5048 (class 0 OID 0)
-- Dependencies: 217
-- Name: purchase_composition_purchase_id_seq; Type: SEQUENCE OWNED BY; Schema:
schema; Owner: postgres
```

```
schema.purchase_composition.purchase_id;
-- TOC entry 236 (class 1259 OID 98311)
-- Name: purchase_id_seq; Type: SEQUENCE; Schema: schema; Owner: postgres
CREATE SEQUENCE schema.purchase_id_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;
ALTER SEQUENCE schema.purchase_id_seq OWNER TO postgres;
-- TOC entry 5049 (class 0 OID 0)
-- Dependencies: 236
-- Name: purchase_id_seq; Type: SEQUENCE OWNED BY; Schema: schema; Owner:
postgres
ALTER SEQUENCE schema.purchase id seq OWNED BY schema.purchase.id;
-- TOC entry 4778 (class 2604 OID 65620)
-- Name: employee personnel_number; Type: DEFAULT; Schema: schema; Owner:
postgres
--
ALTER TABLE ONLY schema.employee ALTER COLUMN personnel_number SET DEFAULT
nextval('schema.employee personnel number seq'::regclass);
-- TOC entry 4766 (class 2604 OID 49205)
-- Name: ingredient id; Type: DEFAULT; Schema: schema; Owner: postgres
ALTER TABLE ONLY schema.ingredient ALTER COLUMN id SET DEFAULT
nextval('schema.ingredient_id_seq'::regclass);
-- TOC entry 4772 (class 2604 OID 65583)
```

ALTER SEQUENCE schema.purchase\_composition\_purchase\_id\_seq OWNED BY

```
-- Name: job_title id; Type: DEFAULT; Schema: schema; Owner: postgres
ALTER TABLE ONLY schema.job_title ALTER COLUMN id SET DEFAULT
nextval('schema.job_title_id_seq'::regclass);
-- TOC entry 4769 (class 2604 OID 57349)
-- Name: menu_item id; Type: DEFAULT; Schema: schema; Owner: postgres
ALTER TABLE ONLY schema.menu_item ALTER COLUMN id SET DEFAULT nextval('schema."
menu_item_id_seq"'::regclass);
-- TOC entry 4793 (class 2604 OID 82008)
-- Name: order id; Type: DEFAULT; Schema: schema; Owner: postgres
ALTER TABLE ONLY schema. "order" ALTER COLUMN id SET DEFAULT
nextval('schema.order_id_seq'::regclass);
-- TOC entry 4782 (class 2604 OID 81957)
-- Name: place id; Type: DEFAULT; Schema: schema; Owner: postgres
ALTER TABLE ONLY schema.place ALTER COLUMN id SET DEFAULT
nextval('schema.place_id_seq'::regclass);
-- TOC entry 4785 (class 2604 OID 81979)
-- Name: place_reservation id; Type: DEFAULT; Schema: schema; Owner: postgres
ALTER TABLE ONLY schema.place_reservation ALTER COLUMN id SET DEFAULT
nextval('schema.place_reservation_id_seq'::regclass);
-- TOC entry 4798 (class 2604 OID 98315)
-- Name: purchase id; Type: DEFAULT; Schema: schema; Owner: postgres
ALTER TABLE ONLY schema.purchase ALTER COLUMN id SET DEFAULT
nextval('schema.purchase_id_seq'::regclass);
```

```
-- TOC entry 4765 (class 2604 OID 49153)
-- Name: purchase_composition purchase_id; Type: DEFAULT; Schema: schema; Owner:
postgres
ALTER TABLE ONLY schema.purchase_composition ALTER COLUMN purchase_id SET DEFAULT
nextval('schema.purchase_composition_purchase_id_seq'::regclass);
-- TOC entry 5025 (class 0 OID 81927)
-- Dependencies: 227
-- Data for Name: chef skills; Type: TABLE DATA; Schema: schema; Owner: postgres
COPY schema.chef skills (id employee, id menu item) FROM stdin;
2
    2
2
   5
5
   3
5
١.
-- TOC entry 5024 (class 0 OID 65615)
-- Dependencies: 226
-- Data for Name: employee; Type: TABLE DATA; Schema: schema; Owner: postgres
COPY schema.employee (full_name, passport, personnel_number, job_title_id) FROM
stdin;
Иванов Иван Иванович
                        1234 567890 1
Смирнова-Лаптева Ольга Алексеевна 9876 543210 2
                                                    2
Гусейнов Эмиль Натиг Оглы
                          2468 135790 3
Кузнецова Анна Олеговна 3691 482057 4
Жаворонков Леонид Данилович 8024 975310 5
١.
-- TOC entry 5017 (class 0 OID 49202)
-- Dependencies: 219
-- Data for Name: ingredient; Type: TABLE DATA; Schema: schema; Owner: postgres
--
COPY schema.ingredient (id, name, measure, required_product_stock) FROM stdin;
   Молоко 1
                100.5
1
2
    Помидоры
                kg 30
    Краб
           kg 4.76
```

```
Сыр kg 5
5
   Клубничный джем 1 2.5
١.
-- TOC entry 5022 (class 0 OID 65580)
-- Dependencies: 224
-- Data for Name: job_title; Type: TABLE DATA; Schema: schema; Owner: postgres
COPY schema.job_title (id, salary, title, category) FROM stdin;
   130 Официант
2
   450 Повар
3
  300 Менеджер
                    5
  100 Официант
                    1
5
   1000
            Шеф 6
١.
-- TOC entry 5019 (class 0 OID 57346)
-- Dependencies: 221
-- Data for Name: menu_item; Type: TABLE DATA; Schema: schema; Owner: postgres
COPY schema.menu_item (id, name, calorie_content) FROM stdin;
   Салат Цезарь
                    350
2
   Суп-гуляш
                400
   Карабашки в сливочном соусе 350
   Паста Болоньезе 450
5
  Тирамису
                300
١.
-- TOC entry 5020 (class 0 OID 65543)
-- Dependencies: 222
-- Data for Name: menu_item_composition; Type: TABLE DATA; Schema: schema; Owner:
postgres
COPY schema.menu_item_composition (menu_item_id, ingredient_id, ingredient_value,
measure) FROM stdin;
١.
-- TOC entry 5026 (class 0 OID 81944)
-- Dependencies: 228
```

```
-- Data for Name: menu_item_price; Type: TABLE DATA; Schema: schema; Owner:
postgres
COPY schema.menu_item_price (price, start_date, end_date, menu_item_id) FROM
stdin;
450 2023-09-01 2024-09-01 1
300 2023-09-01 2024-09-01 2
950 2023-09-01 2024-01-01 3
350 2023-09-01 2023-11-01 4
450 2023-11-01 2024-11-01 4
200 2023-09-01 2024-09-01 5
١.
-- TOC entry 5032 (class 0 OID 82005)
-- Dependencies: 234
-- Data for Name: order; Type: TABLE DATA; Schema: schema; Owner: postgres
COPY schema. "order" (id, place_id, date_time, employee_id, payment_status) FROM
stdin;
1
   1
       2023-11-01 12:30:00 1
                               Cancelled
2
   2 2023-11-02 14:00:00 4
                               Paid
3
  3 2023-11-03 18:45:00 4
                               Paid
4
  3 2023-11-04 20:15:00 4
                               Cancelled
5
  5 2023-11-05 21:30:00 1
                               Paid
١.
-- TOC entry 5033 (class 0 OID 82051)
-- Dependencies: 235
-- Data for Name: order_composition; Type: TABLE DATA; Schema: schema; Owner:
postgres
COPY schema.order_composition (order_id, menu_item_id, employee_id, count,
menu_item_status) FROM stdin;
               Served
1
  2
      2 4
2
   4 4 1
               Served
3
   5 2 2
               Served
١.
-- TOC entry 5028 (class 0 OID 81954)
-- Dependencies: 230
-- Data for Name: place; Type: TABLE DATA; Schema: schema; Owner: postgres
```

```
COPY schema.place (id, location, number_of_seats, number, status) FROM stdin;
1
   У окна 4
               1
                   Available
2
   В углу 2
                   Reserved
               2
  Ha террасе 6 3 Occupied
3
4
   В центре зала 8 4
                           Reserved
5
  На балконе 3 5
                       Occupied 0
١.
-- TOC entry 5030 (class 0 OID 81976)
-- Dependencies: 232
-- Data for Name: place reservation; Type: TABLE DATA; Schema: schema; Owner:
postgres
--
COPY schema.place_reservation (id, place_id, employee_id, reservation_date,
visit_date, name, since, until, phone_number, reservation_status) FROM stdin;
       3 2023-11-01 2023-11-06 Инга
                                           14:00:00
                                                       16:00:00
                                                                   89234567876 t
       3
3
           2023-11-02 2023-11-07 Виталий 18:00:00
   5
                                                       20:00:00
                                                                  89345678906 t
١.
-- TOC entry 5035 (class 0 OID 98312)
-- Dependencies: 237
-- Data for Name: purchase; Type: TABLE DATA; Schema: schema; Owner: postgres
COPY schema.purchase (id, provider, date, volume) FROM stdin;
   Весёлый молочник
                       2023-04-11 4.5
2
   Global Village 2023-05-11 6
3
   000 "Дальневосточный рыбак" 2023-03-11 2
4
   000 "Сырзавод" 2023-01-11 6
5
   ИП Ольга Ивановна 2023-05-11 1
١.
-- TOC entry 5014 (class 0 OID 41009)
-- Dependencies: 216
-- Data for Name: purchase composition; Type: TABLE DATA; Schema: schema; Owner:
postgres
COPY schema.purchase_composition (ingredient_price, ingredient_type,
expiration date, left in stock, purchase id, ingredient id) FROM stdin;
90 Молочный продукт
                       2023-11-12 0
32 Овощи
           2023-11-08 0 2 2
1300
       Морепродукты
                       2023-12-30 0
                                       3
```

```
400 Кисломолочный продукт 2023-12-12 0
150 Варенье и соус 2024-11-12 0 5
١.
-- TOC entry 5050 (class 0 OID 0)
-- Dependencies: 220
-- Name: menu_item_id_seq; Type: SEQUENCE SET; Schema: schema; Owner: postgres
SELECT pg_catalog.setval('schema." menu_item_id_seq"', 5, true);
-- TOC entry 5051 (class 0 OID 0)
-- Dependencies: 225
-- Name: employee personnel number seq; Type: SEQUENCE SET; Schema: schema;
Owner: postgres
SELECT pg_catalog.setval('schema.employee_personnel_number_seq', 5, true);
-- TOC entry 5052 (class 0 OID 0)
-- Dependencies: 218
-- Name: ingredient_id_seq; Type: SEQUENCE SET; Schema: schema; Owner: postgres
SELECT pg_catalog.setval('schema.ingredient_id_seq', 5, true);
-- TOC entry 5053 (class 0 OID 0)
-- Dependencies: 223
-- Name: job_title_id_seq; Type: SEQUENCE SET; Schema: schema; Owner: postgres
SELECT pg_catalog.setval('schema.job_title_id_seq', 5, true);
-- TOC entry 5054 (class 0 OID 0)
-- Dependencies: 233
-- Name: order id seq; Type: SEQUENCE SET; Schema: schema; Owner: postgres
SELECT pg_catalog.setval('schema.order_id_seq', 5, true);
```

```
-- TOC entry 5055 (class 0 OID 0)
-- Dependencies: 229
-- Name: place_id_seq; Type: SEQUENCE SET; Schema: schema; Owner: postgres
SELECT pg_catalog.setval('schema.place_id_seq', 5, true);
-- TOC entry 5056 (class 0 OID 0)
-- Dependencies: 231
-- Name: place_reservation_id_seq; Type: SEQUENCE SET; Schema: schema; Owner:
postgres
SELECT pg_catalog.setval('schema.place_reservation_id_seq', 3, true);
-- TOC entry 5057 (class 0 OID 0)
-- Dependencies: 217
-- Name: purchase_composition_purchase_id_seq; Type: SEQUENCE SET; Schema:
schema; Owner: postgres
SELECT pg_catalog.setval('schema.purchase_composition_purchase_id_seq', 1,
false);
-- TOC entry 5058 (class 0 OID 0)
-- Dependencies: 236
-- Name: purchase_id_seq; Type: SEQUENCE SET; Schema: schema; Owner: postgres
SELECT pg_catalog.setval('schema.purchase_id_seq', 5, true);
-- TOC entry 4837 (class 2606 OID 57353)
-- Name: menu_item menu_item_pkey; Type: CONSTRAINT; Schema: schema; Owner:
postgres
ALTER TABLE ONLY schema.menu_item
    ADD CONSTRAINT " menu_item_pkey" PRIMARY KEY (id);
-- TOC entry 4806 (class 2606 OID 98304)
```

```
-- Name: ingredient ch_name; Type: CHECK CONSTRAINT; Schema: schema; Owner:
postgres
ALTER TABLE schema.ingredient
    ADD CONSTRAINT ch_name CHECK (((name)::text ~ '^[A-AËA-Z][a-Aëa-z\s]'::text))
NOT VALID;
-- TOC entry 4808 (class 2606 OID 98305)
-- Name: menu_item ch_name; Type: CHECK CONSTRAINT; Schema: schema; Owner:
postgres
ALTER TABLE schema.menu_item
    ADD CONSTRAINT ch_name CHECK (((name)::text ~ '^[A-AËA-Z][a-Aëa-z\s]'::text))
NOT VALID;
-- TOC entry 4809 (class 2606 OID 81926)
-- Name: menu_item chk_calorie_content; Type: CHECK CONSTRAINT; Schema: schema;
Owner: postgres
ALTER TABLE schema.menu_item
    ADD CONSTRAINT chk calorie content CHECK ((calorie content > 0)) NOT VALID;
-- TOC entry 4811 (class 2606 OID 65589)
-- Name: job_title chk_category; Type: CHECK CONSTRAINT; Schema: schema; Owner:
postgres
--
ALTER TABLE schema.job_title
    ADD CONSTRAINT chk category CHECK (((category >= 0) AND (category <= 6))) NOT
VALID;
-- TOC entry 4829 (class 2606 OID 82072)
-- Name: order_composition chk_count; Type: CHECK CONSTRAINT; Schema: schema;
Owner: postgres
ALTER TABLE schema.order_composition
    ADD CONSTRAINT chk_count CHECK ((count > 0)) NOT VALID;
```

```
-- TOC entry 4821 (class 2606 OID 82000)
-- Name: place_reservation chk_date; Type: CHECK CONSTRAINT; Schema: schema;
Owner: postgres
ALTER TABLE schema.place_reservation
    ADD CONSTRAINT chk_date CHECK ((visit_date >= reservation_date)) NOT VALID;
-- TOC entry 4828 (class 2606 OID 82031)
-- Name: order chk_date; Type: CHECK CONSTRAINT; Schema: schema; Owner: postgres
ALTER TABLE schema. "order"
    ADD CONSTRAINT chk_date CHECK ((date_time > '2023-01-01 12:00:00'::timestamp
without time zone)) NOT VALID;
-- TOC entry 4816 (class 2606 OID 81951)
-- Name: menu_item_price chk_dates; Type: CHECK CONSTRAINT; Schema: schema;
Owner: postgres
ALTER TABLE schema.menu_item_price
    ADD CONSTRAINT chk dates CHECK ((end date > start date)) NOT VALID;
-- TOC entry 4814 (class 2606 OID 81921)
-- Name: employee chk_full_name; Type: CHECK CONSTRAINT; Schema: schema; Owner:
postgres
--
ALTER TABLE schema.employee
    ADD CONSTRAINT chk full name CHECK (((full name)::text ~ '^([A-9]{1}[a-

\pi = \frac{1}{1,32} \begin{bmatrix} -\frac{1}{1}[A-9]{1}[a-9]{1,32} [A-9]{1}[a-9]{1,29}( [A-9]{1}[a-9]{1,29})

яё]{1,32})?)$'::text)) NOT VALID;
-- TOC entry 4803 (class 2606 OID 49162)
-- Name: purchase_composition chk_left_in_stock; Type: CHECK CONSTRAINT; Schema:
schema; Owner: postgres
ALTER TABLE schema.purchase composition
    ADD CONSTRAINT chk_left_in_stock CHECK ((left_in_stock >= 0)) NOT VALID;
```

```
-- TOC entry 4819 (class 2606 OID 81974)
-- Name: place chk_location; Type: CHECK CONSTRAINT; Schema: schema; Owner:
postgres
ALTER TABLE schema.place
    ADD CONSTRAINT chk_location CHECK (((location)::text ~ '^[A-ЯЁА-Z][ a-яёа-
z]*$'::text)) NOT VALID;
-- TOC entry 4822 (class 2606 OID 82003)
-- Name: place_reservation chk_name; Type: CHECK CONSTRAINT; Schema: schema;
Owner: postgres
ALTER TABLE schema.place_reservation
    ADD CONSTRAINT chk_name CHECK (((name)::text ~ '^[A-ЯЁА-Z][а-яёа-
z]*$'::text)) NOT VALID;
-- TOC entry 4820 (class 2606 OID 81973)
-- Name: place chk_number_of_seats; Type: CHECK CONSTRAINT; Schema: schema;
Owner: postgres
ALTER TABLE schema.place
    ADD CONSTRAINT chk_number_of_seats CHECK (((number_of_seats > 0) AND
(number_of_seats < 21))) NOT VALID;</pre>
-- TOC entry 4823 (class 2606 OID 82001)
-- Name: place_reservation chk_phone_number; Type: CHECK CONSTRAINT; Schema:
schema; Owner: postgres
ALTER TABLE schema.place_reservation
    ADD CONSTRAINT chk_phone_number CHECK (((phone_number)::text ~
'89\d\d\d\d\d\d\d\d\d\::text)) NOT VALID;
-- TOC entry 4817 (class 2606 OID 81952)
-- Name: menu_item_price chk_price; Type: CHECK CONSTRAINT; Schema: schema;
Owner: postgres
ALTER TABLE schema.menu_item_price
```

## ADD CONSTRAINT chk\_price CHECK ((price > 0)) NOT VALID;

```
-- TOC entry 4807 (class 2606 OID 90120)
-- Name: ingredient chk_required_product_stock; Type: CHECK CONSTRAINT; Schema:
schema; Owner: postgres
ALTER TABLE schema.ingredient
    ADD CONSTRAINT chk_required_product_stock CHECK ((required_product_stock >=
(0)::double precision)) NOT VALID;
-- TOC entry 4824 (class 2606 OID 81998)
-- Name: place_reservation chk_reservation_date; Type: CHECK CONSTRAINT; Schema:
schema; Owner: postgres
ALTER TABLE schema.place_reservation
    ADD CONSTRAINT chk_reservation_date CHECK ((reservation_date > '2023-01-
01'::date)) NOT VALID;
-- TOC entry 4818 (class 2606 OID 81950)
-- Name: menu_item_price chk_start_date; Type: CHECK CONSTRAINT; Schema: schema;
Owner: postgres
ALTER TABLE schema.menu_item_price
    ADD CONSTRAINT chk_start_date CHECK ((start_date > '2023-01-01'::date)) NOT
VALID;
-- TOC entry 4825 (class 2606 OID 81996)
-- Name: place reservation chk time since; Type: CHECK CONSTRAINT; Schema:
schema; Owner: postgres
ALTER TABLE schema.place_reservation
    ADD CONSTRAINT chk_time_since CHECK (((since >= '12:00:00'::time without time
zone) AND (since <= '21:00:00'::time without time zone))) NOT VALID;</pre>
-- TOC entry 4812 (class 2606 OID 81923)
-- Name: job_title chk_title; Type: CHECK CONSTRAINT; Schema: schema; Owner:
postgres
```

```
ALTER TABLE schema.job_title
    ADD CONSTRAINT chk_title CHECK (((title)::text ~ '^([A-Я]{1}[a-яё]{1,32}( [a-
яё]{1,32}){0,10})$'::text)) NOT VALID;
-- TOC entry 4805 (class 2606 OID 81924)
-- Name: purchase_composition chk_type; Type: CHECK CONSTRAINT; Schema: schema;
Owner: postgres
ALTER TABLE schema.purchase composition
    ADD CONSTRAINT chk_type CHECK (((ingredient_type)::text ~ '^([A-9]{1}[a-
R\ddot{e} [1,32]([a-R\ddot{e}]\{1,32\})\{0,10\});::text)) NOT VALID;
-- TOC entry 4826 (class 2606 OID 81997)
-- Name: place_reservation chk_until_time; Type: CHECK CONSTRAINT; Schema:
schema; Owner: postgres
ALTER TABLE schema.place_reservation
    ADD CONSTRAINT chk_until_time CHECK (((until > '14:00:00'::time without time
zone) AND (until < '23:00:00'::time without time zone))) NOT VALID;</pre>
-- TOC entry 4827 (class 2606 OID 81999)
-- Name: place_reservation chk_visit_date; Type: CHECK CONSTRAINT; Schema:
schema; Owner: postgres
ALTER TABLE schema.place_reservation
    ADD CONSTRAINT chk_visit_date CHECK ((visit_date > '2023-01-01'::date)) NOT
VALID;
-- TOC entry 4845 (class 2606 OID 65623)
-- Name: employee employee_pkey; Type: CONSTRAINT; Schema: schema; Owner:
postgres
ALTER TABLE ONLY schema.employee
    ADD CONSTRAINT employee_pkey PRIMARY KEY (personnel_number);
```

```
-- TOC entry 4833 (class 2606 OID 49212)
-- Name: ingredient ingredient_name_key; Type: CONSTRAINT; Schema: schema; Owner:
postgres
ALTER TABLE ONLY schema.ingredient
    ADD CONSTRAINT ingredient_name_key UNIQUE (name);
-- TOC entry 4835 (class 2606 OID 49210)
-- Name: ingredient ingredient_pkey; Type: CONSTRAINT; Schema: schema; Owner:
postgres
ALTER TABLE ONLY schema.ingredient
    ADD CONSTRAINT ingredient pkey PRIMARY KEY (id);
-- TOC entry 4810 (class 2606 OID 65560)
-- Name: menu_item_composition ingredient_value; Type: CHECK CONSTRAINT; Schema:
schema; Owner: postgres
ALTER TABLE schema.menu_item_composition
    ADD CONSTRAINT ingredient_value CHECK ((ingredient_value > 0)) NOT VALID;
-- TOC entry 4847 (class 2606 OID 73729)
-- Name: employee job_title_id; Type: CONSTRAINT; Schema: schema; Owner: postgres
ALTER TABLE ONLY schema.employee
    ADD CONSTRAINT job_title_id UNIQUE (job_title_id);
-- TOC entry 4843 (class 2606 OID 65587)
-- Name: job_title job_title_pkey; Type: CONSTRAINT; Schema: schema; Owner:
postgres
--
ALTER TABLE ONLY schema.job_title
    ADD CONSTRAINT job_title_pkey PRIMARY KEY (id);
-- TOC entry 4841 (class 2606 OID 65549)
```

```
-- Name: menu_item_composition menu_item_composition_pkey; Type: CONSTRAINT;
Schema: schema; Owner: postgres
ALTER TABLE ONLY schema.menu_item_composition
    ADD CONSTRAINT menu_item_composition_pkey PRIMARY KEY (menu_item_id);
-- TOC entry 4839 (class 2606 OID 65537)
-- Name: menu_item menu_item_name_key; Type: CONSTRAINT; Schema: schema; Owner:
postgres
ALTER TABLE ONLY schema.menu_item
    ADD CONSTRAINT menu_item_name_key UNIQUE (name);
-- TOC entry 4853 (class 2606 OID 82055)
-- Name: order_pkey; Type: CONSTRAINT; Schema: schema; Owner: postgres
ALTER TABLE ONLY schema. "order"
    ADD CONSTRAINT order_pkey PRIMARY KEY (id);
-- TOC entry 4849 (class 2606 OID 81960)
-- Name: place place_pkey; Type: CONSTRAINT; Schema: schema; Owner: postgres
ALTER TABLE ONLY schema.place
    ADD CONSTRAINT place_pkey PRIMARY KEY (id);
-- TOC entry 4851 (class 2606 OID 98338)
-- Name: place reservation place reservation pkey; Type: CONSTRAINT; Schema:
schema; Owner: postgres
ALTER TABLE ONLY schema.place_reservation
    ADD CONSTRAINT place_reservation_pkey PRIMARY KEY (id);
-- TOC entry 4855 (class 2606 OID 98322)
-- Name: purchase purchase_pkey; Type: CONSTRAINT; Schema: schema; Owner:
postgres
```

```
ALTER TABLE ONLY schema.purchase
    ADD CONSTRAINT purchase_pkey PRIMARY KEY (id);
-- TOC entry 4813 (class 2606 OID 98329)
-- Name: job_title chk_salary; Type: CHECK CONSTRAINT; Schema: schema; Owner:
postgres
ALTER TABLE schema.job_title
    ADD CONSTRAINT "chk_salary" CHECK ((salary >= 88)) NOT VALID;
-- TOC entry 4864 (class 2606 OID 81989)
-- Name: place_reservation fk_employee_id; Type: FK CONSTRAINT; Schema: schema;
Owner: postgres
ALTER TABLE ONLY schema.place_reservation
    ADD CONSTRAINT fk_employee_id FOREIGN KEY (employee_id) REFERENCES
schema.employee(personnel_number);
-- TOC entry 4866 (class 2606 OID 82015)
-- Name: order fk_employee_id; Type: FK CONSTRAINT; Schema: schema; Owner:
postgres
ALTER TABLE ONLY schema. "order"
    ADD CONSTRAINT fk_employee_id FOREIGN KEY (employee_id) REFERENCES
schema.employee(personnel_number);
-- TOC entry 4868 (class 2606 OID 82067)
-- Name: order_composition fk_employee_id; Type: FK CONSTRAINT; Schema: schema;
Owner: postgres
ALTER TABLE ONLY schema.order_composition
    ADD CONSTRAINT fk_employee_id FOREIGN KEY (employee_id) REFERENCES
schema.employee(personnel_number) NOT VALID;
-- TOC entry 4861 (class 2606 OID 81930)
```

```
-- Name: chef_skills fk_id_employee; Type: FK CONSTRAINT; Schema: schema; Owner:
postgres
ALTER TABLE ONLY schema.chef_skills
    ADD CONSTRAINT fk_id_employee FOREIGN KEY (id_employee) REFERENCES
schema.employee(personnel_number);
-- TOC entry 4862 (class 2606 OID 81935)
-- Name: chef_skills fk_id_menu_item; Type: FK CONSTRAINT; Schema: schema; Owner:
postgres
ALTER TABLE ONLY schema.chef_skills
    ADD CONSTRAINT fk id menu item FOREIGN KEY (id menu item) REFERENCES
schema.menu_item(id);
-- TOC entry 4856 (class 2606 OID 65538)
-- Name: purchase_composition fk_ingredient_id; Type: FK CONSTRAINT; Schema:
schema; Owner: postgres
ALTER TABLE ONLY schema.purchase_composition
    ADD CONSTRAINT fk ingredient id FOREIGN KEY (ingredient id) REFERENCES
schema.ingredient(id) NOT VALID;
-- TOC entry 4858 (class 2606 OID 65555)
-- Name: menu_item_composition fk_ingredient_id; Type: FK CONSTRAINT; Schema:
schema; Owner: postgres
ALTER TABLE ONLY schema.menu item composition
    ADD CONSTRAINT fk ingredient id FOREIGN KEY (ingredient id) REFERENCES
schema.ingredient(id) NOT VALID;
-- TOC entry 4860 (class 2606 OID 65624)
-- Name: employee fk_job_title_id; Type: FK CONSTRAINT; Schema: schema; Owner:
postgres
ALTER TABLE ONLY schema.employee
    ADD CONSTRAINT fk_job_title_id FOREIGN KEY (job_title_id) REFERENCES
schema.job_title(id);
```

```
-- TOC entry 4859 (class 2606 OID 65550)
-- Name: menu_item_composition fk_menu_item_id; Type: FK CONSTRAINT; Schema:
schema; Owner: postgres
ALTER TABLE ONLY schema.menu_item_composition
    ADD CONSTRAINT fk_menu_item_id FOREIGN KEY (menu_item_id) REFERENCES
schema.menu item(id) NOT VALID;
-- TOC entry 4869 (class 2606 OID 82061)
-- Name: order_composition fk_menu_item_id; Type: FK CONSTRAINT; Schema: schema;
Owner: postgres
ALTER TABLE ONLY schema.order_composition
    ADD CONSTRAINT fk menu item id FOREIGN KEY (menu item id) REFERENCES
schema.menu_item(id) NOT VALID;
-- TOC entry 4870 (class 2606 OID 82056)
-- Name: order_composition fk_order_id; Type: FK CONSTRAINT; Schema: schema;
Owner: postgres
ALTER TABLE ONLY schema.order_composition
    ADD CONSTRAINT fk_order_id FOREIGN KEY (order_id) REFERENCES
schema."order"(id) NOT VALID;
-- TOC entry 4865 (class 2606 OID 81984)
-- Name: place_reservation fk_place_id; Type: FK CONSTRAINT; Schema: schema;
Owner: postgres
ALTER TABLE ONLY schema.place reservation
    ADD CONSTRAINT fk_place_id FOREIGN KEY (place_id) REFERENCES
schema.place(id);
-- TOC entry 4867 (class 2606 OID 82010)
-- Name: order fk_place_id; Type: FK CONSTRAINT; Schema: schema; Owner: postgres
```

```
ALTER TABLE ONLY schema. "order"
    ADD CONSTRAINT fk_place_id FOREIGN KEY (place_id) REFERENCES
schema.place(id);
-- TOC entry 4857 (class 2606 OID 106496)
-- Name: purchase_composition fk_purchase_id; Type: FK CONSTRAINT; Schema:
schema; Owner: postgres
ALTER TABLE ONLY schema.purchase_composition
    ADD CONSTRAINT fk_purchase_id FOREIGN KEY (purchase_id) REFERENCES
schema.purchase(id) NOT VALID;
-- TOC entry 4863 (class 2606 OID 98324)
-- Name: menu_item_price fl_menu_item_id; Type: FK CONSTRAINT; Schema: schema;
Owner: postgres
ALTER TABLE ONLY schema.menu_item_price
    ADD CONSTRAINT fl_menu_item_id FOREIGN KEY (menu_item_id) REFERENCES
schema.menu_item(id) NOT VALID;
-- Completed on 2023-11-11 18:36:12
-- PostgreSQL database dump complete
```