Министерство науки и высшего образования Российской Федерации федеральное государственное автономное образовательное учреждение высшегообразования
«НАЦИОНАЛЬНЫЙ ИССЛЕДОВАТЕЛЬСКИЙ УНИВЕРСИТЕТ ИТМО»

Отчет

по лабораторной работе №3 «АНАЛИЗ ДАННЫХ. ПОСТРОЕНИЕ ИНФОЛОГИЧЕСКОЙМОДЕЛИ ДАННЫХ БД»

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.

Указание:

Создать две резервные копии:

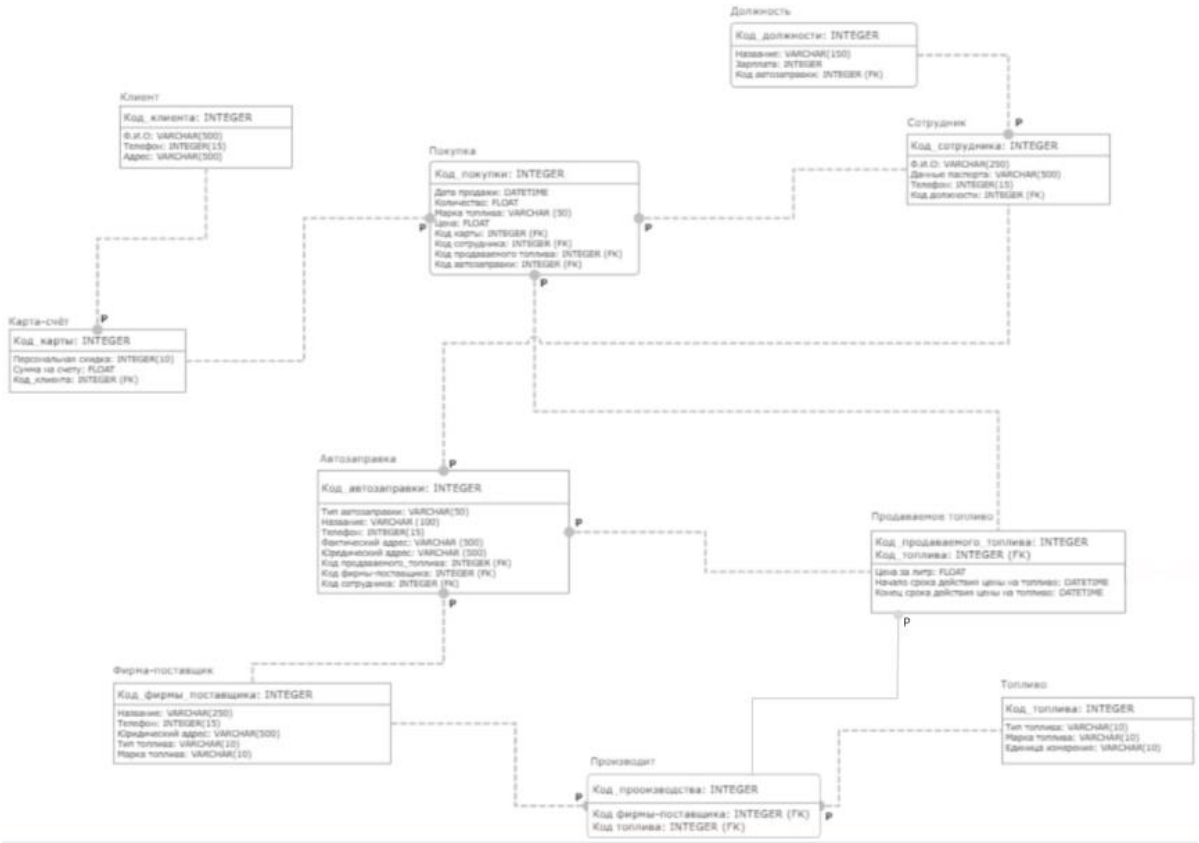
- *с расширением CUSTOM для восстановления БД;*
- *с расширением PLAIN для листинга (в отчете);*
- *при создании резервных копий БД настроить параметры Dump options для Type of objects и Queries .*

7. Восстановить БД.

Выполнение

- Название создаваемой БД – «Автозаправки» Вариант 20.

- Схема логической модели базы данных, сгенерированная в Generate ER



- dump, содержащий скрипты работы с БД.

```
--
-- PostgreSQL database dump
--

-- Dumped from database version 16.0
-- Dumped by pg_dump version 16.0

-- Started on 2023-10-23 18:07:09

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 6 (class 2615 OID 24577)
```

```
-- Name: Refill Schema; Type: SCHEMA; Schema: -; Owner: postgres
--

CREATE SCHEMA "Refill Schema";


ALTER SCHEMA "Refill Schema" OWNER TO postgres;

SET default_tablespace = '';

SET default_table_access_method = heap;

--
-- TOC entry 225 (class 1259 OID 24640)
-- Name: buy; Type: TABLE; Schema: Refill Schema; Owner: postgres
--

CREATE TABLE "Refill Schema".buy (
    "f.code_buy" integer NOT NULL,
    date_of_sale timestamp with time zone NOT NULL,
    quantity double precision NOT NULL,
    grade_fuel character varying(50) NOT NULL,
    price double precision NOT NULL,
    code_card integer NOT NULL,
    code_employee integer NOT NULL,
    code_fuel_sold integer NOT NULL,
    code_refill integer NOT NULL
);


ALTER TABLE "Refill Schema".buy OWNER TO postgres;

--
-- TOC entry 217 (class 1259 OID 24588)
-- Name: card_account; Type: TABLE; Schema: Refill Schema; Owner: postgres
--

CREATE TABLE "Refill Schema".card_account (
    "f.code_card" integer NOT NULL,
    code_client integer NOT NULL,
    amount_on_taccount double precision NOT NULL,
    personal_discount integer NOT NULL
);
```

```
ALTER TABLE "Refill Schema".card_account OWNER TO postgres;

--
-- TOC entry 227 (class 1259 OID 32782)
-- Name: card_account_f.code_card_seq; Type: SEQUENCE; Schema: Refill Schema;
Owner: postgres
--

ALTER TABLE "Refill Schema".card_account ALTER COLUMN "f.code_card" ADD
GENERATED BY DEFAULT AS IDENTITY (
    SEQUENCE NAME "Refill Schema"."card_account_f.code_card_seq"
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1
);



--
-- TOC entry 216 (class 1259 OID 24581)
-- Name: client; Type: TABLE; Schema: Refill Schema; Owner: postgres
--

CREATE TABLE "Refill Schema".client (
    f_code_client integer NOT NULL,
    full_name character varying(500) NOT NULL,
    telephone integer NOT NULL,
    address character varying(500) NOT NULL
);


ALTER TABLE "Refill Schema".client OWNER TO postgres;

--
-- TOC entry 224 (class 1259 OID 24633)
-- Name: employee; Type: TABLE; Schema: Refill Schema; Owner: postgres
--

CREATE TABLE "Refill Schema".employee (
    "f.code_employee" integer NOT NULL,
    full_name character varying(250) NOT NULL,
    telephone integer NOT NULL,
    code_post integer NOT NULL
);
```

```
ALTER TABLE "Refill Schema".employee OWNER TO postgres;

--
-- TOC entry 219 (class 1259 OID 24600)
-- Name: fuel; Type: TABLE; Schema: Refill Schema; Owner: postgres
--

CREATE TABLE "Refill Schema".fuel (
    "f.code_fuel" integer NOT NULL,
    type_fuel character varying(10) NOT NULL,
    grade_fuel character varying(10) NOT NULL,
    unit_of_measurement character varying(10) NOT NULL
);


ALTER TABLE "Refill Schema".fuel OWNER TO postgres;

--
-- TOC entry 220 (class 1259 OID 24607)
-- Name: fuel_sold; Type: TABLE; Schema: Refill Schema; Owner: postgres
--

CREATE TABLE "Refill Schema".fuel_sold (
    "f.code_fuel_sold" integer NOT NULL,
    code_fuel integer NOT NULL,
    price_per_liter double precision NOT NULL,
    "the_beginning_validity_period_fuel_price " timestamp with time zone NOT NULL,
    the_end_validity_period_fuel_price timestamp with time zone NOT NULL
);


ALTER TABLE "Refill Schema".fuel_sold OWNER TO postgres;

--
-- TOC entry 226 (class 1259 OID 24667)
-- Name: fuel_sold_code_fuel_sold_seq; Type: SEQUENCE; Schema: Refill Schema;
Owner: postgres
--

ALTER TABLE "Refill Schema".fuel_sold ALTER COLUMN "f.code_fuel_sold" ADD
GENERATED ALWAYS AS IDENTITY (
    SEQUENCE NAME "Refill Schema".fuel_sold_code_fuel_sold_seq
    START WITH 1
```

```
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1
);


--
-- TOC entry 218 (class 1259 OID 24593)
-- Name: fuel_supplier_company; Type: TABLE; Schema: Refill Schema; Owner:
postgres
--

CREATE TABLE "Refill Schema".fuel_supplier_company (
    "f.code_supplier_company" integer NOT NULL,
    title character varying(250) NOT NULL,
    telephone integer NOT NULL,
    legal_address character varying(500) NOT NULL
);


ALTER TABLE "Refill Schema".fuel_supplier_company OWNER TO postgres;

--
-- TOC entry 223 (class 1259 OID 24626)
-- Name: post; Type: TABLE; Schema: Refill Schema; Owner: postgres
--

CREATE TABLE "Refill Schema".post (
    "f.code_post" integer NOT NULL,
    title character varying(150) NOT NULL,
    salary integer NOT NULL
);


ALTER TABLE "Refill Schema".post OWNER TO postgres;

--
-- TOC entry 222 (class 1259 OID 24621)
-- Name: produces; Type: TABLE; Schema: Refill Schema; Owner: postgres
--

CREATE TABLE "Refill Schema".produces (
    "f.code_production" integer NOT NULL,
    code_supplier_company integer NOT NULL,
```

```
    code_fuel integer NOT NULL
);


ALTER TABLE "Refill Schema".produces OWNER TO postgres;

--
-- TOC entry 221 (class 1259 OID 24614)
-- Name: refill; Type: TABLE; Schema: Refill Schema; Owner: postgres
--

CREATE TABLE "Refill Schema".refill (
    "f.code_refill" integer NOT NULL,
    type_refill character varying(50) NOT NULL,
    title character varying(100) NOT NULL,
    telephone integer NOT NULL,
    actual_address character varying(500) NOT NULL,
    "legal _address" character varying(500) NOT NULL,
    code_fuel_sold integer NOT NULL,
    code_supplier_company integer NOT NULL,
    code_post integer NOT NULL
);


ALTER TABLE "Refill Schema".refill OWNER TO postgres;

--
-- TOC entry 251 (class 1259 OID 41137)
-- Name: buy; Type: TABLE; Schema: public; Owner: postgres
--

CREATE TABLE public.buy (
    code_bye integer NOT NULL,
    date_of_sale date NOT NULL,
    quantity double precision NOT NULL,
    grade_fuel character varying(10) NOT NULL,
    price double precision NOT NULL,
    code_card integer NOT NULL,
    code_post integer NOT NULL,
    code_fuel_sold integer NOT NULL,
    code_refill integer NOT NULL
);


ALTER TABLE public.buy OWNER TO postgres;
```

```
--
-- TOC entry 250 (class 1259 OID 41136)
-- Name: buy_code_bye_seq; Type: SEQUENCE; Schema: public; Owner: postgres
--

CREATE SEQUENCE public.buy_code_bye_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;


ALTER SEQUENCE public.buy_code_bye_seq OWNER TO postgres;

--
-- TOC entry 4990 (class 0 OID 0)
-- Dependencies: 250
-- Name: buy_code_bye_seq; Type: SEQUENCE OWNED BY; Schema: public;
Owner: postgres
--

ALTER SEQUENCE public.buy_code_bye_seq OWNED BY public.buy.code_bye;



--
-- TOC entry 249 (class 1259 OID 41123)
-- Name: bye; Type: TABLE; Schema: public; Owner: postgres
--

CREATE TABLE public.bye (
    code_bye integer NOT NULL,
    date_of_sale date NOT NULL,
    quantity double precision NOT NULL,
    grade_fuel character varying(10) NOT NULL,
    price double precision NOT NULL,
    code_card integer NOT NULL,
    code_post integer NOT NULL,
    code_fuel_sold integer NOT NULL,
    code_refill integer NOT NULL
);
```

```
ALTER TABLE public.bye OWNER TO postgres;

--
-- TOC entry 248 (class 1259 OID 41122)
-- Name: bye_code_bye_seq; Type: SEQUENCE; Schema: public; Owner: postgres
--

CREATE SEQUENCE public.bye_code_bye_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;


ALTER SEQUENCE public.bye_code_bye_seq OWNER TO postgres;

--
-- TOC entry 4991 (class 0 OID 0)
-- Dependencies: 248
-- Name: bye_code_bye_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner:
postgres
--

ALTER SEQUENCE public.bye_code_bye_seq OWNED BY public.bye.code_bye;



--
-- TOC entry 233 (class 1259 OID 40988)
-- Name: card_account; Type: TABLE; Schema: public; Owner: postgres
--

CREATE TABLE public.card_account (
    f_code_card integer NOT NULL,
    code_client integer,
    amount_on_account numeric,
    personal_discount numeric
);


ALTER TABLE public.card_account OWNER TO postgres;

--
-- TOC entry 232 (class 1259 OID 40987)
```

```
-- Name: card_account_f_code_card_seq; Type: SEQUENCE; Schema: public; Owner: postgres
--

CREATE SEQUENCE public.card_account_f_code_card_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;


ALTER SEQUENCE public.card_account_f_code_card_seq OWNER TO postgres;

--
-- TOC entry 4992 (class 0 OID 0)
-- Dependencies: 232
-- Name: card_account_f_code_card_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: postgres
--

ALTER SEQUENCE public.card_account_f_code_card_seq OWNED BY public.card_account.f_code_card;


--
-- TOC entry 229 (class 1259 OID 40971)
-- Name: client; Type: TABLE; Schema: public; Owner: postgres
--

CREATE TABLE public.client (
    code_client integer NOT NULL,
    full_name character varying(100),
    telephone character varying(20),
    address character varying(255)
);


ALTER TABLE public.client OWNER TO postgres;

--
-- TOC entry 228 (class 1259 OID 40970)
-- Name: client_code_client_seq; Type: SEQUENCE; Schema: public; Owner: postgres
--
```

```
CREATE SEQUENCE public.client_code_client_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;


ALTER SEQUENCE public.client_code_client_seq OWNER TO postgres;

--
-- TOC entry 4993 (class 0 OID 0)
-- Dependencies: 228
-- Name: client_code_client_seq; Type: SEQUENCE OWNED BY; Schema: public;
Owner: postgres
--

ALTER SEQUENCE public.client_code_client_seq OWNED BY
public.client.code_client;



--
-- TOC entry 247 (class 1259 OID 41102)
-- Name: employee; Type: TABLE; Schema: public; Owner: postgres
--

CREATE TABLE public.employee (
    code_employee integer NOT NULL,
    full_name character varying(250) NOT NULL,
    telephone character varying(15) NOT NULL,
    code_post integer NOT NULL
);


ALTER TABLE public.employee OWNER TO postgres;

--
-- TOC entry 246 (class 1259 OID 41101)
-- Name: employee_code_employee_seq; Type: SEQUENCE; Schema: public; Owner:
postgres
--

CREATE SEQUENCE public.employee_code_employee_seq
```

```
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;


ALTER SEQUENCE public.employee_code_employee_seq OWNER TO postgres;

--
-- TOC entry 4994 (class 0 OID 0)
-- Dependencies: 246
-- Name: employee_code_employee_seq; Type: SEQUENCE OWNED BY; Schema:
public; Owner: postgres
--

ALTER SEQUENCE public.employee_code_employee_seq OWNED BY
public.employee.code_employee;



--
-- TOC entry 235 (class 1259 OID 41009)
-- Name: fuel; Type: TABLE; Schema: public; Owner: postgres
--

CREATE TABLE public.fuel (
    code_fuel integer NOT NULL,
    type_fuel character varying(100) NOT NULL,
    grade_fuel character varying(100) NOT NULL,
    unit_of_measurement character varying(100) NOT NULL
);


ALTER TABLE public.fuel OWNER TO postgres;

--
-- TOC entry 234 (class 1259 OID 41008)
-- Name: fuel_code_fuel_seq; Type: SEQUENCE; Schema: public; Owner: postgres
--

CREATE SEQUENCE public.fuel_code_fuel_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
```

```
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;


ALTER SEQUENCE public.fuel_code_fuel_seq OWNER TO postgres;

--
-- TOC entry 4995 (class 0 OID 0)
-- Dependencies: 234
-- Name: fuel_code_fuel_seq; Type: SEQUENCE OWNED BY; Schema: public;
Owner: postgres
--

ALTER SEQUENCE public.fuel_code_fuel_seq OWNED BY public.fuel.code_fuel;



--
-- TOC entry 239 (class 1259 OID 41039)
-- Name: fuel_sold; Type: TABLE; Schema: public; Owner: postgres
--

CREATE TABLE public.fuel_sold (
    code_fuel_sold integer NOT NULL,
    code_fuel integer NOT NULL,
    price_per_liter double precision NOT NULL,
    the_beginning_validity_period_fuel_price date NOT NULL,
    the_end_validity_period_fuel_price date NOT NULL
);


ALTER TABLE public.fuel_sold OWNER TO postgres;

--
-- TOC entry 238 (class 1259 OID 41038)
-- Name: fuel_sold_code_fuel_sold_seq; Type: SEQUENCE; Schema: public; Owner:
postgres
--

CREATE SEQUENCE public.fuel_sold_code_fuel_sold_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
```

```
    CACHE 1;


ALTER SEQUENCE public.fuel_sold_code_fuel_sold_seq OWNER TO postgres;

--
-- TOC entry 4996 (class 0 OID 0)
-- Dependencies: 238
-- Name: fuel_sold_code_fuel_sold_seq; Type: SEQUENCE OWNED BY; Schema:
public; Owner: postgres
--

ALTER SEQUENCE public.fuel_sold_code_fuel_sold_seq OWNED BY
public.fuel_sold.code_fuel_sold;



--
-- TOC entry 237 (class 1259 OID 41019)
-- Name: fuel_supplier_company; Type: TABLE; Schema: public; Owner: postgres
--

CREATE TABLE public.fuel_supplier_company (
    code_supplier_company integer NOT NULL,
    title character varying(250) NOT NULL,
    telephone character varying(15) NOT NULL,
    legal_address character varying(500) NOT NULL,
    fuel_grade character varying(10) NOT NULL,
    fuel_type character varying(10) NOT NULL
);


ALTER TABLE public.fuel_supplier_company OWNER TO postgres;

--
-- TOC entry 236 (class 1259 OID 41018)
-- Name: fuel_supplier_company_code_supplier_company_seq; Type: SEQUENCE;
Schema: public; Owner: postgres
--

CREATE SEQUENCE public.fuel_supplier_company_code_supplier_company_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
```

```
    CACHE 1;


ALTER SEQUENCE public.fuel_supplier_company_code_supplier_company_seq
OWNER TO postgres;

--
-- TOC entry 4997 (class 0 OID 0)
-- Dependencies: 236
-- Name: fuel_supplier_company_code_supplier_company_seq; Type: SEQUENCE
OWNED BY; Schema: public; Owner: postgres
--

ALTER SEQUENCE public.fuel_supplier_company_code_supplier_company_seq
OWNED BY public.fuel_supplier_company.code_supplier_company;



--
-- TOC entry 231 (class 1259 OID 40979)
-- Name: gost; Type: TABLE; Schema: public; Owner: postgres
--

CREATE TABLE public.gost (
    code_client integer NOT NULL,
    full_name character varying(100),
    telephone character varying(20),
    address character varying(255)
);


ALTER TABLE public.gost OWNER TO postgres;

--
-- TOC entry 230 (class 1259 OID 40978)
-- Name: gost_code_client_seq; Type: SEQUENCE; Schema: public; Owner: postgres
--

CREATE SEQUENCE public.gost_code_client_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;
```

```
ALTER SEQUENCE public.gost_code_client_seq OWNER TO postgres;

--
-- TOC entry 4998 (class 0 OID 0)
-- Dependencies: 230
-- Name: gost_code_client_seq; Type: SEQUENCE OWNED BY; Schema: public;
Owner: postgres
--

ALTER SEQUENCE public.gost_code_client_seq OWNED BY
public.gost.code_client;



--
-- TOC entry 245 (class 1259 OID 41086)
-- Name: post; Type: TABLE; Schema: public; Owner: postgres
--

CREATE TABLE public.post (
    code_post integer NOT NULL,
    title character varying(150) NOT NULL,
    salary integer NOT NULL,
    code_refill integer NOT NULL
);


ALTER TABLE public.post OWNER TO postgres;

--
-- TOC entry 244 (class 1259 OID 41085)
-- Name: post_code_post_seq; Type: SEQUENCE; Schema: public; Owner: postgres
--

CREATE SEQUENCE public.post_code_post_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;


ALTER SEQUENCE public.post_code_post_seq OWNER TO postgres;
```

```
--
-- TOC entry 4999 (class 0 OID 0)
-- Dependencies: 244
-- Name: post_code_post_seq; Type: SEQUENCE OWNED BY; Schema: public;
Owner: postgres
--

ALTER SEQUENCE public.post_code_post_seq OWNED BY public.post.code_post;


--
-- TOC entry 243 (class 1259 OID 41076)
-- Name: produces; Type: TABLE; Schema: public; Owner: postgres
--

CREATE TABLE public.produces (
    code_production integer NOT NULL,
    code_supplier_company integer NOT NULL,
    code_fuel integer NOT NULL
);


ALTER TABLE public.produces OWNER TO postgres;

--
-- TOC entry 242 (class 1259 OID 41075)
-- Name: produces_code_production_seq; Type: SEQUENCE; Schema: public; Owner:
postgres
--

CREATE SEQUENCE public.produces_code_production_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;


ALTER SEQUENCE public.produces_code_production_seq OWNER TO postgres;

--
-- TOC entry 5000 (class 0 OID 0)
-- Dependencies: 242
-- Name: produces_code_production_seq; Type: SEQUENCE OWNED BY; Schema:
```

```
public; Owner: postgres
--

ALTER SEQUENCE public.produces_code_production_seq OWNED BY
public.produces.code_production;


--
-- TOC entry 241 (class 1259 OID 41046)
-- Name: refill; Type: TABLE; Schema: public; Owner: postgres
--

CREATE TABLE public.refill (
    code_refill integer NOT NULL,
    type_fuel character varying(10) NOT NULL,
    title character varying(100) NOT NULL,
    telephone character varying(15) NOT NULL,
    actual_address character varying(500) NOT NULL,
    legal_address character varying(500) NOT NULL,
    code_fuel_sold integer NOT NULL,
    code_supplier_company integer NOT NULL,
    code_post integer NOT NULL
);


ALTER TABLE public.refill OWNER TO postgres;

--
-- TOC entry 240 (class 1259 OID 41045)
-- Name: refill_code_refill_seq; Type: SEQUENCE; Schema: public; Owner: postgres
--

CREATE SEQUENCE public.refill_code_refill_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;


ALTER SEQUENCE public.refill_code_refill_seq OWNER TO postgres;

--
-- TOC entry 5001 (class 0 OID 0)
```

```
-- Dependencies: 240
-- Name: refill_code_refill_seq; Type: SEQUENCE OWNED BY; Schema: public;
Owner: postgres
--

ALTER SEQUENCE public.refill_code_refill_seq OWNED BY
public.refill.code_refill;



--
-- TOC entry 4743 (class 2604 OID 41168)
-- Name: buy code_bye; Type: DEFAULT; Schema: public; Owner: postgres
--

ALTER TABLE ONLY public.buy ALTER COLUMN code_bye SET DEFAULT
nextval('public.buy_code_bye_seq'::regclass);



--
-- TOC entry 4742 (class 2604 OID 41169)
-- Name: bye code_bye; Type: DEFAULT; Schema: public; Owner: postgres
--

ALTER TABLE ONLY public.bye ALTER COLUMN code_bye SET DEFAULT
nextval('public.bye_code_bye_seq'::regclass);



--
-- TOC entry 4734 (class 2604 OID 41170)
-- Name: card_account f_code_card; Type: DEFAULT; Schema: public; Owner:
postgres
--

ALTER TABLE ONLY public.card_account ALTER COLUMN f_code_card SET
DEFAULT nextval('public.card_account_f_code_card_seq'::regclass);



--
-- TOC entry 4732 (class 2604 OID 41171)
-- Name: client code_client; Type: DEFAULT; Schema: public; Owner: postgres
--

ALTER TABLE ONLY public.client ALTER COLUMN code_client SET DEFAULT
nextval('public.client_code_client_seq'::regclass);
```

```
--
-- TOC entry 4741 (class 2604 OID 41172)
-- Name: employee code_employee; Type: DEFAULT; Schema: public; Owner:
postgres
--

ALTER TABLE ONLY public.employee ALTER COLUMN code_employee SET
DEFAULT nextval('public.employee_code_employee_seq'::regclass);


--
-- TOC entry 4735 (class 2604 OID 41173)
-- Name: fuel code_fuel; Type: DEFAULT; Schema: public; Owner: postgres
--

ALTER TABLE ONLY public.fuel ALTER COLUMN code_fuel SET DEFAULT
nextval('public.fuel_code_fuel_seq'::regclass);


--
-- TOC entry 4737 (class 2604 OID 41174)
-- Name: fuel_sold code_fuel_sold; Type: DEFAULT; Schema: public; Owner: postgres
--

ALTER TABLE ONLY public.fuel_sold ALTER COLUMN code_fuel_sold SET
DEFAULT nextval('public.fuel_sold_code_fuel_sold_seq'::regclass);


--
-- TOC entry 4736 (class 2604 OID 41175)
-- Name: fuel_supplier_company code_supplier_company; Type: DEFAULT; Schema:
public; Owner: postgres
--

ALTER TABLE ONLY public.fuel_supplier_company ALTER COLUMN
code_supplier_company SET DEFAULT
nextval('public.fuel_supplier_company_code_supplier_company_seq'::regclass);


--
-- TOC entry 4733 (class 2604 OID 41176)
-- Name: gost code_client; Type: DEFAULT; Schema: public; Owner: postgres
--
```

```
ALTER TABLE ONLY public.gost ALTER COLUMN code_client SET DEFAULT
nextval('public.gost_code_client_seq'::regclass);


--
-- TOC entry 4740 (class 2604 OID 41177)
-- Name: post code_post; Type: DEFAULT; Schema: public; Owner: postgres
--

ALTER TABLE ONLY public.post ALTER COLUMN code_post SET DEFAULT
nextval('public.post_code_post_seq'::regclass);


--
-- TOC entry 4739 (class 2604 OID 41178)
-- Name: produces code_production; Type: DEFAULT; Schema: public; Owner:
postgres
--

ALTER TABLE ONLY public.produces ALTER COLUMN code_production SET
DEFAULT nextval('public.produces_code_production_seq'::regclass);


--
-- TOC entry 4738 (class 2604 OID 41179)
-- Name: refill code_refill; Type: DEFAULT; Schema: public; Owner: postgres
--

ALTER TABLE ONLY public.refill ALTER COLUMN code_refill SET DEFAULT
nextval('public.refill_code_refill_seq'::regclass);


--
-- TOC entry 4958 (class 0 OID 24640)
-- Dependencies: 225
-- Data for Name: buy; Type: TABLE DATA; Schema: Refill Schema; Owner: postgres
--

COPY "Refill Schema".buy ("f.code_buy", date_of_sale, quantity, grade_fuel, price,
code_card, code_employee, code_fuel_sold, code_refill) FROM stdin;
\.


--
-- TOC entry 4950 (class 0 OID 24588)
```

```
-- Dependencies: 217
-- Data for Name: card_account; Type: TABLE DATA; Schema: Refill Schema; Owner: postgres
--

COPY "Refill Schema".card_account ("f.code_card", code_client, amount_on_taccount, personal_discount) FROM stdin;
\.


--
-- TOC entry 4949 (class 0 OID 24581)
-- Dependencies: 216
-- Data for Name: client; Type: TABLE DATA; Schema: Refill Schema; Owner: postgres
--

COPY "Refill Schema".client (f_code_client, full_name, telephone, address) FROM stdin;
\.


--
-- TOC entry 4957 (class 0 OID 24633)
-- Dependencies: 224
-- Data for Name: employee; Type: TABLE DATA; Schema: Refill Schema; Owner: postgres
--

COPY "Refill Schema".employee ("f.code_employee", full_name, telephone, code_post) FROM stdin;
\.


--
-- TOC entry 4952 (class 0 OID 24600)
-- Dependencies: 219
-- Data for Name: fuel; Type: TABLE DATA; Schema: Refill Schema; Owner: postgres
--

COPY "Refill Schema".fuel ("f.code_fuel", type_fuel, grade_fuel, unit_of_measurement) FROM stdin;
\.
```

```
--
-- TOC entry 4953 (class 0 OID 24607)
-- Dependencies: 220
-- Data for Name: fuel_sold; Type: TABLE DATA; Schema: Refill Schema; Owner:
postgres
--

COPY "Refill Schema".fuel_sold ("f.code_fuel_sold", code_fuel, price_per_liter,
"the_beginning_validity_period_fuel_price ", the_end_validity_period_fuel_price)
FROM stdin;
\.


--
-- TOC entry 4951 (class 0 OID 24593)
-- Dependencies: 218
-- Data for Name: fuel_supplier_company; Type: TABLE DATA; Schema: Refill
Schema; Owner: postgres
--

COPY "Refill Schema".fuel_supplier_company ("f.code_supplier_company", title,
telephone, legal_address) FROM stdin;
\.


--
-- TOC entry 4956 (class 0 OID 24626)
-- Dependencies: 223
-- Data for Name: post; Type: TABLE DATA; Schema: Refill Schema; Owner: postgres
--

COPY "Refill Schema".post ("f.code_post", title, salary) FROM stdin;
\.


--
-- TOC entry 4955 (class 0 OID 24621)
-- Dependencies: 222
-- Data for Name: produces; Type: TABLE DATA; Schema: Refill Schema; Owner:
postgres
--

COPY "Refill Schema".produces ("f.code_production", code_supplier_company,
code_fuel) FROM stdin;
\.
```

--
-- TOC entry 4954 (class 0 OID 24614)
-- Dependencies: 221
-- Data for Name: refill; Type: TABLE DATA; Schema: Refill Schema; Owner: postgres
--

COPY "Refill Schema".refill ("f.code_refill", type_refill, title, telephone, actual_address, "legal _address", code_fuel_sold, code_supplier_company, code_post) FROM stdin;
\.

--
-- TOC entry 4984 (class 0 OID 41137)
-- Dependencies: 251
-- Data for Name: buy; Type: TABLE DATA; Schema: public; Owner: postgres
--

COPY public.buy (code_bye, date_of_sale, quantity, grade_fuel, price, code_card, code_post, code_fuel_sold, code_refill) FROM stdin;
1	2023-10-01	10.5	95	45.7	1	3	5	7
2	2023-10-02	8.2	98	50.2	2	4	6	8
3	2023-10-03	12.1	95	46.1	3	2	7	9
4	2023-10-04	9.7	92	42.5	4	1	8	10
5	2023-10-05	7.5	98	49.8	5	7	9	1
6	2023-10-06	11.3	95	47	6	5	10	2
7	2023-10-07	13.6	92	43.2	7	8	1	3
8	2023-10-08	6.8	95	46.3	8	6	2	4
9	2023-10-09	10.2	98	50.5	9	10	3	5
10	2023-10-10	8.9	92	42.8	10	9	4	6
\.

--
-- TOC entry 4982 (class 0 OID 41123)
-- Dependencies: 249
-- Data for Name: bye; Type: TABLE DATA; Schema: public; Owner: postgres
--

COPY public.bye (code_bye, date_of_sale, quantity, grade_fuel, price, code_card, code_post, code_fuel_sold, code_refill) FROM stdin;
1	2023-10-01	10.5	95	45.7	1	3	5	7
2	2023-10-02	8.2	98	50.2	2	4	6	8

```
3	2023-10-03	12.1	95	46.1	3	2	7	9
4	2023-10-04	9.7	92	42.5	4	1	8	10
5	2023-10-05	7.5	98	49.8	5	7	9	1
6	2023-10-06	11.3	95	47	6	5	10	2
7	2023-10-07	13.6	92	43.2	7	8	1	3
8	2023-10-08	6.8	95	46.3	8	6	2	4
9	2023-10-09	10.2	98	50.5	9	10	3	5
10	2023-10-10	8.9	92	42.8	10	9	4	6
11	2023-10-01	10.5	95	45.7	1	3	5	7
12	2023-10-02	8.2	98	50.2	2	4	6	8
13	2023-10-03	12.1	95	46.1	3	2	7	9
14	2023-10-04	9.7	92	42.5	4	1	8	10
15	2023-10-05	7.5	98	49.8	5	7	9	1
16	2023-10-06	11.3	95	47	6	5	10	2
17	2023-10-07	13.6	92	43.2	7	8	1	3
18	2023-10-08	6.8	95	46.3	8	6	2	4
19	2023-10-09	10.2	98	50.5	9	10	3	5
20	2023-10-10	8.9	92	42.8	10	9	4	6
\.


--
-- TOC entry 4966 (class 0 OID 40988)
-- Dependencies: 233
-- Data for Name: card_account; Type: TABLE DATA; Schema: public; Owner: postgres
--

COPY public.card_account (f_code_card, code_client, amount_on_account, personal_discount) FROM stdin;
11	720	14828.368842122	0.0567176548980419
12	888	88462.3752183921	0.0654105959051179
13	410	59233.9071813509	0.0232446888266168
14	518	72127.2818492286	0.073583481974124
15	844	10150.6433511414	0.0999422999204849
16	873	61734.4676924009	0.0238046789186136
17	458	19183.1567526061	0.0481174456978346
18	90	70599.8940547669	0.092482072212593
19	293	24943.7988011318	0.0914082160421154
20	12	64390.1636318074	0.0226365428090514
\.


--
-- TOC entry 4962 (class 0 OID 40971)
```

```
-- Dependencies: 229
-- Data for Name: client; Type: TABLE DATA; Schema: public; Owner: postgres
--

COPY public.client (code_client, full_name, telephone, address) FROM stdin;
28	Ivanov Pavel Alexandrovich	234567890	123 Volgograd Street, Moscow, 105064, Russia
29	Smirnova Ekaterina Dmitrievna	1987654321	456 Siberian Avenue, Saint Petersburg, 190000, Russia
30	Kozlov Andrei Igorevich	1555123456	789 Ural Lane, Yekaterinburg, 620014, Russia
31	Petrova Olga Nikolaevna	1888777666	101 Krasnoyarsk Road, Novosibirsk, 630000, Russia
32	Sokolov Maxim Sergeevich	1444999888	234 Baikal Avenue, Irkutsk, 664000, Russia
33	Ivanov Pavel Alexandrovich	234567890	123 Volgograd Street, Moscow, 105064, Russia
34	Smirnova Ekaterina Dmitrievna	1987654321	456 Siberian Avenue, Saint Petersburg, 190000, Russia
35	Kozlov Andrei Igorevich	1555123456	789 Ural Lane, Yekaterinburg, 620014, Russia
36	Petrova Olga Nikolaevna	1888777666	101 Krasnoyarsk Road, Novosibirsk, 630000, Russia
37	Sokolov Maxim Sergeevich	1444999888	234 Baikal Avenue, Irkutsk, 664000, Russia
\.


--
-- TOC entry 4980 (class 0 OID 41102)
-- Dependencies: 247
-- Data for Name: employee; Type: TABLE DATA; Schema: public; Owner: postgres
--

COPY public.employee (code_employee, full_name, telephone, code_post) FROM stdin;
1	Ivan Aleksandrovich Petrov	+1234567890	8
2	Maria Sergeyevna Smirnova	+2345678901	2
3	Dmitry Andreyevich Ivanov	+3456789012	5
4	Olga Vitalyevna Kuznetsova	+4567890123	4
5	Sergey Mikhailovich Volkov	+5678901234	1
6	Ekaterina Ivanovna Sokolova	+6789012345	6
7	Alexander Yuryevich Popov	+7890123456	7
8	Natalia Viktorovna Fedorova	+8901234567	2
9	Andrei Vladimirovich Morozov	+9012345678	9
```

```
10	Yulia Ivanovna Orlova	+0123456789	3
\.


--
-- TOC entry 4968 (class 0 OID 41009)
-- Dependencies: 235
-- Data for Name: fuel; Type: TABLE DATA; Schema: public; Owner: postgres
--

COPY public.fuel (code_fuel, type_fuel, grade_fuel, unit_of_measurement) FROM stdin;
11	бензин	АИ-95	литр
12	газ	газ	литр
13	бензин	Аи-98	литр
14	дизель	дт	литр
15	бензин	АИ-92	литр
16	газ	газ	литр
17	бензин	АИ-92	литр
18	дизель	дт	литр
19	бензин	АИ-100	литр
\.


--
-- TOC entry 4972 (class 0 OID 41039)
-- Dependencies: 239
-- Data for Name: fuel_sold; Type: TABLE DATA; Schema: public; Owner: postgres
--

COPY public.fuel_sold (code_fuel_sold, code_fuel, price_per_liter, the_beginning_validity_period_fuel_price, the_end_validity_period_fuel_price) FROM stdin;
1	100	45.5	2023-01-10	2023-02-10
2	92	50.2	2023-02-15	2023-03-15
3	98	48.8	2023-03-20	2023-04-20
4	92	47.3	2023-04-25	2023-05-25
5	95	46.9	2023-05-30	2023-06-30
6	100	44.7	2023-07-05	2023-08-05
7	98	49.1	2023-08-10	2023-09-10
8	92	51.3	2023-09-15	2023-10-15
9	0	45.8	2023-10-20	2023-11-20
10	11	47.5	2023-11-25	2023-12-25
\.
```

```
--
-- TOC entry 4970 (class 0 OID 41019)
-- Dependencies: 237
-- Data for Name: fuel_supplier_company; Type: TABLE DATA; Schema: public;
Owner: postgres
--

COPY public.fuel_supplier_company (code_supplier_company, title, telephone,
legal_address, fuel_grade, fuel_type) FROM stdin;
41	Gazprom Neft Gas Station	+1234567890	123 Main Street, Moscow,
Russia	Газ	Газ
42	Lukoil Fuel Station	+2345678901	456 Oak Avenue, St. Petersburg,
Russia	Дизиль	ДТ
43	Rosneft Gas Station	+3456789012	789 Elm Lane, Novosibirsk, Russia
	Бензин	АИ-92
44	Shell Service Station	+4567890123	101 Maple Road, Yekaterinburg,
Russia	Бензин	АИ-100
45	TNK Gas Station	+5678901234	222 Birch Street, Nizhny Novgorod, Russia
	Дизиль	ДТ
46	BP Fuel Station	+6789012345	333 Pine Drive, Kazan, Russia	Бензин
	АИ-92
47	ExxonMobil Gas Station	+7890123456	444 Cedar Lane, Samara, Russia
	Бензин	АИ-95
48	Sibur Petroleum Station	+8901234567	555 Walnut Avenue, Omsk, Russia
	Бензин	АИ-98
49	Tatneft Fuel Station	+9012345678	666 Willow Road, Chelyabinsk,
Russia	Газ	Газ
50	Surgutneftegas Gas Station	+0123456789	777 Spruce Lane, Rostov-on-
Don, Russia Бензин	АИ-92
\.


--
-- TOC entry 4964 (class 0 OID 40979)
-- Dependencies: 231
-- Data for Name: gost; Type: TABLE DATA; Schema: public; Owner: postgres
--

COPY public.gost (code_client, full_name, telephone, address) FROM stdin;
\.


--
-- TOC entry 4978 (class 0 OID 41086)
```

```
-- Dependencies: 245
-- Data for Name: post; Type: TABLE DATA; Schema: public; Owner: postgres
--

COPY public.post (code_post, title, salary, code_refill) FROM stdin;
1	Менеджер	500001
2	Кассир	450002
3	Техник	550003
4	Охранник	400003
5	Продавец	470005
6	Мойщик	460006
7	Инженер	600007
8	Администратор	520005
9	Бухгалтер	580009
10	Уборщик	420007
\.


--
-- TOC entry 4976 (class 0 OID 41076)
-- Dependencies: 243
-- Data for Name: produces; Type: TABLE DATA; Schema: public; Owner: postgres
--

COPY public.produces (code_production, code_supplier_company, code_fuel) FROM
stdin;
1	6	95
2	2	100
3	5	0
4	4	92
5	5	98
6	1	11
7	9	95
8	6	95
9	3	100
10	10	0
\.


--
-- TOC entry 4974 (class 0 OID 41046)
-- Dependencies: 241
-- Data for Name: refill; Type: TABLE DATA; Schema: public; Owner: postgres
--
```

```
COPY public.refill (code_refill, type_fuel, title, telephone, actual_address,
legal_address, code_fuel_sold, code_supplier_company, code_post) FROM stdin;
1	АЗС	Sibur Petroleum Station	+1234567890	Адрес 1	456 Oak Avenue,
St. Petersburg, Russia	2	1	1
2	АЗС	Lukoil Fuel Statio	+2345678901	Адрес 2	123 Main Street,
Moscow, Russia	2	2	2
3	АГЗС	Gazprom Neft Gas Station	+3456789012	Адрес 3	444 Cedar
Lane, Samara, Russia	3	3	2
4	АЗС	Sibur Petroleum Station	+4567890123	Адрес 4	666 Willow Road,
Chelyabinsk, Russia\n4	4	9	4
5	АЗС	Lukoil Fuel Statio	+5678901234	Адрес 5	123 Main Street,
Moscow, Russia	5	5	5
6	АГЗС	Gazprom Neft Gas Station	+6789012345	Адрес 6	444 Cedar
Lane, Samara, Russia6	6	7	6
7	АГЗС	Rosneft Gas Station	+7890123456	Адрес 7	666 Willow Road,
Chelyabinsk, Russia\n	7	2	7
8	АЗС	Shell Service Station	+8901234567	Адрес 8	789 Elm Lane,
Novosibirsk, Russia	5	8	9
9	АГЗС	Rosneft Gas Station	+9012345678	Адрес 9	222 Birch Street,
Nizhny Novgorod, Russia	9	3	9
10	АЗС	Tatneft Fuel Station	+0123456789	Адрес 10	222 Birch Street,
Nizhny Novgorod, Russia	8	10	1
\.


--
-- TOC entry 5002 (class 0 OID 0)
-- Dependencies: 227
-- Name: card_account_f.code_card_seq; Type: SEQUENCE SET; Schema: Refill
Schema; Owner: postgres
--

SELECT pg_catalog.setval('"Refill Schema"."card_account_f.code_card_seq"', 1, false);


--
-- TOC entry 5003 (class 0 OID 0)
-- Dependencies: 226
-- Name: fuel_sold_code_fuel_sold_seq; Type: SEQUENCE SET; Schema: Refill
Schema; Owner: postgres
--

SELECT pg_catalog.setval('"Refill Schema".fuel_sold_code_fuel_sold_seq', 1, false);
```

--
-- TOC entry 5004 (class 0 OID 0)
-- Dependencies: 250
-- Name: buy_code_bye_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres
--

SELECT pg_catalog.setval('public.buy_code_bye_seq', 10, true);

--
-- TOC entry 5005 (class 0 OID 0)
-- Dependencies: 248
-- Name: bye_code_bye_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres
--

SELECT pg_catalog.setval('public.bye_code_bye_seq', 20, true);

--
-- TOC entry 5006 (class 0 OID 0)
-- Dependencies: 232
-- Name: card_account_f_code_card_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres
--

SELECT pg_catalog.setval('public.card_account_f_code_card_seq', 20, true);

--
-- TOC entry 5007 (class 0 OID 0)
-- Dependencies: 228
-- Name: client_code_client_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres
--

SELECT pg_catalog.setval('public.client_code_client_seq', 37, true);

--
-- TOC entry 5008 (class 0 OID 0)
-- Dependencies: 246
-- Name: employee_code_employee_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres
--

```
SELECT pg_catalog.setval('public.employee_code_employee_seq', 10, true);


--
-- TOC entry 5009 (class 0 OID 0)
-- Dependencies: 234
-- Name: fuel_code_fuel_seq; Type: SEQUENCE SET; Schema: public; Owner:
postgres
--

SELECT pg_catalog.setval('public.fuel_code_fuel_seq', 19, true);


--
-- TOC entry 5010 (class 0 OID 0)
-- Dependencies: 238
-- Name: fuel_sold_code_fuel_sold_seq; Type: SEQUENCE SET; Schema: public;
Owner: postgres
--

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


--
-- TOC entry 5011 (class 0 OID 0)
-- Dependencies: 236
-- Name: fuel_supplier_company_code_supplier_company_seq; Type: SEQUENCE
SET; Schema: public; Owner: postgres
--

SELECT
pg_catalog.setval('public.fuel_supplier_company_code_supplier_company_seq', 50,
true);


--
-- TOC entry 5012 (class 0 OID 0)
-- Dependencies: 230
-- Name: gost_code_client_seq; Type: SEQUENCE SET; Schema: public; Owner:
postgres
--

SELECT pg_catalog.setval('public.gost_code_client_seq', 1, false);
```

```
--
-- TOC entry 5013 (class 0 OID 0)
-- Dependencies: 244
-- Name: post_code_post_seq; Type: SEQUENCE SET; Schema: public; Owner:
postgres
--

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


--
-- TOC entry 5014 (class 0 OID 0)
-- Dependencies: 242
-- Name: produces_code_production_seq; Type: SEQUENCE SET; Schema: public;
Owner: postgres
--

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


--
-- TOC entry 5015 (class 0 OID 0)
-- Dependencies: 240
-- Name: refill_code_refill_seq; Type: SEQUENCE SET; Schema: public; Owner:
postgres
--

SELECT pg_catalog.setval('public.refill_code_refill_seq', 10, true);


--
-- TOC entry 4762 (class 2606 OID 24620)
-- Name: refill Refill_pkey; Type: CONSTRAINT; Schema: Refill Schema; Owner:
postgres
--

ALTER TABLE ONLY "Refill Schema".refill
    ADD CONSTRAINT "Refill_pkey" PRIMARY KEY ("f.code_refill");


--
-- TOC entry 4771 (class 2606 OID 24646)
-- Name: buy buy_pkey; Type: CONSTRAINT; Schema: Refill Schema; Owner:
postgres
```

```
--

ALTER TABLE ONLY "Refill Schema".buy
    ADD CONSTRAINT buy_pkey PRIMARY KEY ("f.code_buy");



--
-- TOC entry 4752 (class 2606 OID 24592)
-- Name: card_account card account_pkey; Type: CONSTRAINT; Schema: Refill
Schema; Owner: postgres
--

ALTER TABLE ONLY "Refill Schema".card_account
    ADD CONSTRAINT "card account_pkey" PRIMARY KEY ("f.code_card");



--
-- TOC entry 4747 (class 2606 OID 24714)
-- Name: fuel_sold ch_code_fuel; Type: CHECK CONSTRAINT; Schema: Refill
Schema; Owner: postgres
--

ALTER TABLE "Refill Schema".fuel_sold
    ADD CONSTRAINT ch_code_fuel CHECK ((code_fuel = code_fuel)) NOT VALID;



--
-- TOC entry 4745 (class 2606 OID 41199)
-- Name: card_account chk_personal_discount; Type: CHECK CONSTRAINT;
Schema: Refill Schema; Owner: postgres
--

ALTER TABLE "Refill Schema".card_account
    ADD CONSTRAINT chk_personal_discount CHECK (((personal_discount > 0)
AND (personal_discount < 100))) NOT VALID;



--
-- TOC entry 4748 (class 2606 OID 41269)
-- Name: post chk_salary; Type: CHECK CONSTRAINT; Schema: Refill Schema;
Owner: postgres
--

ALTER TABLE "Refill Schema".post
    ADD CONSTRAINT chk_salary CHECK ((salary > 0)) NOT VALID;
```

```
--
-- TOC entry 4744 (class 2606 OID 32781)
-- Name: client chk_telephone; Type: CHECK CONSTRAINT; Schema: Refill Schema;
Owner: postgres
--

ALTER TABLE "Refill Schema".client
    ADD CONSTRAINT chk_telephone CHECK ((telephone < '99999999999'::bigint))
NOT VALID;



--
-- TOC entry 4750 (class 2606 OID 24587)
-- Name: client client_pkey; Type: CONSTRAINT; Schema: Refill Schema; Owner:
postgres
--

ALTER TABLE ONLY "Refill Schema".client
    ADD CONSTRAINT client_pkey PRIMARY KEY (f_code_client);



--
-- TOC entry 4768 (class 2606 OID 24639)
-- Name: employee employee_pkey; Type: CONSTRAINT; Schema: Refill Schema;
Owner: postgres
--

ALTER TABLE ONLY "Refill Schema".employee
    ADD CONSTRAINT employee_pkey PRIMARY KEY ("f.code_employee");



--
-- TOC entry 4754 (class 2606 OID 24599)
-- Name: fuel_supplier_company fuel supplier company_pkey; Type: CONSTRAINT;
Schema: Refill Schema; Owner: postgres
--

ALTER TABLE ONLY "Refill Schema".fuel_supplier_company
    ADD CONSTRAINT "fuel supplier company_pkey" PRIMARY KEY
("f.code_supplier_company");



--
```

```
-- TOC entry 4756 (class 2606 OID 24606)
-- Name: fuel fuel_pkey; Type: CONSTRAINT; Schema: Refill Schema; Owner:
postgres
--

ALTER TABLE ONLY "Refill Schema".fuel
    ADD CONSTRAINT fuel_pkey PRIMARY KEY ("f.code_fuel");



--
-- TOC entry 4760 (class 2606 OID 24613)
-- Name: fuel_sold fuel_sold_pkey; Type: CONSTRAINT; Schema: Refill Schema;
Owner: postgres
--

ALTER TABLE ONLY "Refill Schema".fuel_sold
    ADD CONSTRAINT fuel_sold_pkey PRIMARY KEY ("f.code_fuel_sold");



--
-- TOC entry 4766 (class 2606 OID 24632)
-- Name: post post_pkey; Type: CONSTRAINT; Schema: Refill Schema; Owner:
postgres
--

ALTER TABLE ONLY "Refill Schema".post
    ADD CONSTRAINT post_pkey PRIMARY KEY ("f.code_post");



--
-- TOC entry 4764 (class 2606 OID 24625)
-- Name: produces produces_pkey; Type: CONSTRAINT; Schema: Refill Schema;
Owner: postgres
--

ALTER TABLE ONLY "Refill Schema".produces
    ADD CONSTRAINT produces_pkey PRIMARY KEY ("f.code_production");



--
-- TOC entry 4746 (class 2606 OID 41301)
-- Name: fuel r3; Type: CHECK CONSTRAINT; Schema: Refill Schema; Owner:
postgres
--
```

```
ALTER TABLE "Refill Schema".fuel
    ADD CONSTRAINT r3 CHECK (((unit_of_measurement)::text = ANY
((ARRAY['л'::character varying, 'кг'::character varying])::text[]))) NOT VALID;


--
-- TOC entry 4796 (class 2606 OID 41142)
-- Name: buy buy_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres
--

ALTER TABLE ONLY public.buy
    ADD CONSTRAINT buy_pkey PRIMARY KEY (code_bye);


--
-- TOC entry 4794 (class 2606 OID 41128)
-- Name: bye bye_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres
--

ALTER TABLE ONLY public.bye
    ADD CONSTRAINT bye_pkey PRIMARY KEY (code_bye);


--
-- TOC entry 4778 (class 2606 OID 40995)
-- Name: card_account card_account_pkey; Type: CONSTRAINT; Schema: public;
Owner: postgres
--

ALTER TABLE ONLY public.card_account
    ADD CONSTRAINT card_account_pkey PRIMARY KEY (f_code_card);


--
-- TOC entry 4774 (class 2606 OID 40976)
-- Name: client client_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres
--

ALTER TABLE ONLY public.client
    ADD CONSTRAINT client_pkey PRIMARY KEY (code_client);


--
-- TOC entry 4792 (class 2606 OID 41107)
-- Name: employee employee_pkey; Type: CONSTRAINT; Schema: public; Owner:
```

```
postgres
--

ALTER TABLE ONLY public.employee
    ADD CONSTRAINT employee_pkey PRIMARY KEY (code_employee);



--
-- TOC entry 4780 (class 2606 OID 41014)
-- Name: fuel fuel_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres
--

ALTER TABLE ONLY public.fuel
    ADD CONSTRAINT fuel_pkey PRIMARY KEY (code_fuel);



--
-- TOC entry 4784 (class 2606 OID 41044)
-- Name: fuel_sold fuel_sold_pkey; Type: CONSTRAINT; Schema: public; Owner:
postgres
--

ALTER TABLE ONLY public.fuel_sold
    ADD CONSTRAINT fuel_sold_pkey PRIMARY KEY (code_fuel_sold);



--
-- TOC entry 4782 (class 2606 OID 41026)
-- Name: fuel_supplier_company fuel_supplier_company_pkey; Type: CONSTRAINT;
Schema: public; Owner: postgres
--

ALTER TABLE ONLY public.fuel_supplier_company
    ADD CONSTRAINT fuel_supplier_company_pkey PRIMARY KEY
(code_supplier_company);



--
-- TOC entry 4776 (class 2606 OID 40984)
-- Name: gost gost_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres
--

ALTER TABLE ONLY public.gost
    ADD CONSTRAINT gost_pkey PRIMARY KEY (code_client);
```

```
--
-- TOC entry 4790 (class 2606 OID 41091)
-- Name: post post_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres
--

ALTER TABLE ONLY public.post
    ADD CONSTRAINT post_pkey PRIMARY KEY (code_post);


--
-- TOC entry 4788 (class 2606 OID 41081)
-- Name: produces produces_pkey; Type: CONSTRAINT; Schema: public; Owner:
postgres
--

ALTER TABLE ONLY public.produces
    ADD CONSTRAINT produces_pkey PRIMARY KEY (code_production);


--
-- TOC entry 4786 (class 2606 OID 41053)
-- Name: refill refill_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres
--

ALTER TABLE ONLY public.refill
    ADD CONSTRAINT refill_pkey PRIMARY KEY (code_refill);


--
-- TOC entry 4757 (class 1259 OID 41289)
-- Name: fki_r1; Type: INDEX; Schema: Refill Schema; Owner: postgres
--

CREATE INDEX fki_r1 ON "Refill Schema".fuel_sold USING btree (code_fuel);


--
-- TOC entry 4772 (class 1259 OID 41300)
-- Name: fki_r2; Type: INDEX; Schema: Refill Schema; Owner: postgres
--

CREATE INDEX fki_r2 ON "Refill Schema".buy USING btree (code_employee);
```

```
--
-- TOC entry 4769 (class 1259 OID 41307)
-- Name: fki_r4; Type: INDEX; Schema: Refill Schema; Owner: postgres
--

CREATE INDEX fki_r4 ON "Refill Schema".employee USING btree (code_post);


--
-- TOC entry 4758 (class 1259 OID 41283)
-- Name: fki_v; Type: INDEX; Schema: Refill Schema; Owner: postgres
--

CREATE INDEX fki_v ON "Refill Schema".fuel_sold USING btree (code_fuel);


--
-- TOC entry 4798 (class 2606 OID 41284)
-- Name: fuel_sold r1; Type: FK CONSTRAINT; Schema: Refill Schema; Owner:
postgres
--

ALTER TABLE ONLY "Refill Schema".fuel_sold
    ADD CONSTRAINT r1 FOREIGN KEY (code_fuel) REFERENCES "Refill
Schema".produces("f.code_production") NOT VALID;


--
-- TOC entry 4802 (class 2606 OID 41295)
-- Name: buy r2; Type: FK CONSTRAINT; Schema: Refill Schema; Owner: postgres
--

ALTER TABLE ONLY "Refill Schema".buy
    ADD CONSTRAINT r2 FOREIGN KEY (code_employee) REFERENCES "Refill
Schema".employee("f.code_employee") NOT VALID;


--
-- TOC entry 4801 (class 2606 OID 41302)
-- Name: employee r4; Type: FK CONSTRAINT; Schema: Refill Schema; Owner:
postgres
--

ALTER TABLE ONLY "Refill Schema".employee
    ADD CONSTRAINT r4 FOREIGN KEY (code_post) REFERENCES "Refill
```

```
Schema".post("f.code_post") NOT VALID;


--
-- TOC entry 4803 (class 2606 OID 32840)
-- Name: buy vk_buy_code_card; Type: FK CONSTRAINT; Schema: Refill Schema;
Owner: postgres
--

ALTER TABLE ONLY "Refill Schema".buy
    ADD CONSTRAINT vk_buy_code_card FOREIGN KEY (code_card)
REFERENCES "Refill Schema".card_account("f.code_card") MATCH FULL NOT
VALID;


--
-- TOC entry 4804 (class 2606 OID 32850)
-- Name: buy vk_buy_code_fuel_sold; Type: FK CONSTRAINT; Schema: Refill
Schema; Owner: postgres
--

ALTER TABLE ONLY "Refill Schema".buy
    ADD CONSTRAINT vk_buy_code_fuel_sold FOREIGN KEY (code_fuel_sold)
REFERENCES "Refill Schema".fuel_sold("f.code_fuel_sold") MATCH FULL NOT
VALID;


--
-- TOC entry 4805 (class 2606 OID 32855)
-- Name: buy vk_buy_code_refil; Type: FK CONSTRAINT; Schema: Refill Schema;
Owner: postgres
--

ALTER TABLE ONLY "Refill Schema".buy
    ADD CONSTRAINT vk_buy_code_refil FOREIGN KEY (code_refill)
REFERENCES "Refill Schema".refill("f.code_refill") MATCH FULL NOT VALID;


--
-- TOC entry 4797 (class 2606 OID 32800)
-- Name: card_account vk_code_client; Type: FK CONSTRAINT; Schema: Refill
Schema; Owner: postgres
--

ALTER TABLE ONLY "Refill Schema".card_account
```

```
    ADD CONSTRAINT vk_code_client FOREIGN KEY (code_client) REFERENCES
"Refill Schema".client(f_code_client) MATCH FULL;


--
-- TOC entry 4799 (class 2606 OID 40965)
-- Name: produces vk_produces_code_fuel; Type: FK CONSTRAINT; Schema: Refill
Schema; Owner: postgres
--

ALTER TABLE ONLY "Refill Schema".produces
    ADD CONSTRAINT vk_produces_code_fuel FOREIGN KEY (code_fuel)
REFERENCES "Refill Schema".fuel("f.code_fuel") MATCH FULL NOT VALID;


--
-- TOC entry 4800 (class 2606 OID 32825)
-- Name: produces vk_produces_code_fuel_supplier_company; Type: FK
CONSTRAINT; Schema: Refill Schema; Owner: postgres
--

ALTER TABLE ONLY "Refill Schema".produces
    ADD CONSTRAINT vk_produces_code_fuel_supplier_company FOREIGN KEY
(code_supplier_company) REFERENCES "Refill
Schema".fuel_supplier_company("f.code_supplier_company") MATCH FULL NOT
VALID;


-- Completed on 2023-10-23 18:07:10

--
-- PostgreSQL database dump complete
--
```

Вывод:

В данной лабораторной работе я успешно овладела практическими навыками работы с базой данных PostgreSQL. Важными этапами работы были создание таблиц, заполнение их данными, резервное копирование и восстановление БД. Вот основные моменты, которые я усвоила:

Создание таблиц: Научилась создавать таблицы в базе данных PostgreSQL, определяя структуру таблицы, столбцы и их типы данных. Также уделила внимание определению первичных и внешних ключей, что позволяет устанавливать связи между таблицами.

Заполнение таблиц данными: Научились добавлять данные в таблицы с помощью SQL-запросов, используя операторы INSERT INTO. Генерировать случайные данные и вставляли их в таблицу для тестирования.

Резервное копирование базы данных: Освоила создание резервных копий базы данных с помощью инструмента pg_dump. Резервные копии позволяют сохранить целостность данных и восстановить базу данных в случае сбоев.

Восстановление базы данных: Узнала, как восстановить базу данных из резервной копии, используя инструмент pg_restore. Это важное действие при восстановлении данных после потери или повреждения.

Эти навыки важны для администраторов баз данных, разработчиков и всех, кто работает с базами данных PostgreSQL. Работа с данными, создание таблиц и обеспечение их безопасности - это важные аспекты управления базой данных. Надеюсь, что этот опыт поможет вам в будущем в решении задач, связанных с PostgreSQL и базами данных в целом.