**Министерство науки и высшего образования Российской Федерации**

федеральное государственное автономное образовательное учреждение высшего образования

**«НАЦИОНАЛЬНЫЙ ИССЛЕДОВАТЕЛЬСКИЙ УНИВЕРСИТЕТ ИТМО»**

**Отчет**

по лабораторной работе №2  «АНАЛИЗ ДАННЫХ. ПОСТРОЕНИЕ ИНФОЛОГИЧЕСКОЙ МОДЕЛИ ДАННЫХ БД**»**

по дисциплине **«Проектирование и реализация баз данных»**

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Санкт-Петербург 2023

**Оглавление**

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# Цель работы

Овладеть практическими навыками создания таблиц базы данных PostgreSQL 1Х, 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.

# Вариант 20. БД «Автозаправки»

**Описание предметной области:**

Описание предметной области: Фирмы–поставщики автомобильного топлива имеют сеть заправочных станций (АЗС и АЗГС).

На автозаправках реализуется жидкое автомобильное топливо различных видов и газ. Топливо продается за безналичный расчет с помощью специальных пластиковых карт. База данных предназначена для анализа продаж автомобильного топлива клиентам по видам топлива в сети заправок конкретной фирмы-производителя (поставщика топлива), спроса на автомобильное топливо и т.д. Каждая фирма имеет несколько автозаправок. Каждый вид топлива предоставляется несколькими фирмами-производителями.

Для оплаты используется карта-счет клиента.

Цены на топливо могут меняться.

БД должна содержать следующий минимальный набор сведений: Карта-счет клиента. Сумма на счете клиента. Ф.И.О. клиента. Адрес клиента. Телефон клиента. Код автозаправки. Адрес автозаправки. Название фирмы. Юридический адрес. Телефон. Код топлива. Вид топлива. Единица измерения. Цена (руб.) за литр. Дата продажи топлива. Количество топлива. Код фирмы-поставщика. Фирма-поставщик топлива. Юридический адрес. Сроки действия цены на топливо.

# Выполнениевставленный-фильм.png

**Листинг кода:**

**--**

**-- PostgreSQL database dump**

**--**

**-- Dumped from database version 15.5 (Homebrew)**

**-- Dumped by pg\_dump version 16.1**

**-- Started on 2024-03-01 14:44:45 MSK**

**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 4 (class 2615 OID 2200)**

**-- Name: public; Type: SCHEMA; Schema: -; Owner: -**

**--**

**CREATE SCHEMA public;**

**--**

**-- TOC entry 3726 (class 0 OID 0)**

**-- Dependencies: 4**

**-- Name: SCHEMA public; Type: COMMENT; Schema: -; Owner: -**

**--**

**COMMENT ON SCHEMA public IS 'standard public schema';**

**SET default\_tablespace = '';**

**SET default\_table\_access\_method = heap;**

**--**

**-- TOC entry 231 (class 1259 OID 17961)**

**-- Name: autorun; Type: TABLE; Schema: public; Owner: -**

**--**

**CREATE TABLE public.autorun (**

**code\_autorun integer NOT NULL,**

**phone integer NOT NULL,**

**title character varying(100) NOT NULL,**

**fact\_adress character varying(100) NOT NULL,**

**legal\_adress character varying(100) NOT NULL,**

**type\_autorun character varying(100) NOT NULL,**

**code\_firm\_poster integer NOT NULL,**

**code\_sale\_fuel integer NOT NULL,**

**code\_employee integer NOT NULL**

**);**

**--**

**-- TOC entry 230 (class 1259 OID 17960)**

**-- Name: autorun\_code\_autorun\_seq; Type: SEQUENCE; Schema: public; Owner: -**

**--**

**CREATE SEQUENCE public.autorun\_code\_autorun\_seq**

**AS integer**

**START WITH 1**

**INCREMENT BY 1**

**NO MINVALUE**

**NO MAXVALUE**

**CACHE 1;**

**--**

**-- TOC entry 3727 (class 0 OID 0)**

**-- Dependencies: 230**

**-- Name: autorun\_code\_autorun\_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: -**

**--**

**ALTER SEQUENCE public.autorun\_code\_autorun\_seq OWNED BY public.autorun.code\_autorun;**

**--**

**-- TOC entry 229 (class 1259 OID 17947)**

**-- Name: card\_accaunt; Type: TABLE; Schema: public; Owner: -**

**--**

**CREATE TABLE public.card\_accaunt (**

**code\_card integer NOT NULL,**

**personal\_discount double precision,**

**summa\_accaunt double precision NOT NULL,**

**code\_client integer NOT NULL,**

**CONSTRAINT ck\_personal\_discount\_non\_negative CHECK ((personal\_discount >= (0)::double precision)),**

**CONSTRAINT ck\_summa\_accaunt\_non\_negative CHECK ((summa\_accaunt >= (0)::double precision))**

**);**

**--**

**-- TOC entry 228 (class 1259 OID 17946)**

**-- Name: card\_accaunt\_code\_card\_seq; Type: SEQUENCE; Schema: public; Owner: -**

**--**

**CREATE SEQUENCE public.card\_accaunt\_code\_card\_seq**

**AS integer**

**START WITH 1**

**INCREMENT BY 1**

**NO MINVALUE**

**NO MAXVALUE**

**CACHE 1;**

**--**

**-- TOC entry 3728 (class 0 OID 0)**

**-- Dependencies: 228**

**-- Name: card\_accaunt\_code\_card\_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: -**

**--**

**ALTER SEQUENCE public.card\_accaunt\_code\_card\_seq OWNED BY public.card\_accaunt.code\_card;**

**--**

**-- TOC entry 215 (class 1259 OID 17873)**

**-- Name: client; Type: TABLE; Schema: public; Owner: -**

**--**

**CREATE TABLE public.client (**

**code\_client integer NOT NULL,**

**name character varying(50) NOT NULL,**

**phone bigint NOT NULL,**

**address character varying(100) NOT NULL**

**);**

**--**

**-- TOC entry 214 (class 1259 OID 17872)**

**-- Name: client\_code\_client\_seq; Type: SEQUENCE; Schema: public; Owner: -**

**--**

**CREATE SEQUENCE public.client\_code\_client\_seq**

**AS integer**

**START WITH 1**

**INCREMENT BY 1**

**NO MINVALUE**

**NO MAXVALUE**

**CACHE 1;**

**--**

**-- TOC entry 3729 (class 0 OID 0)**

**-- Dependencies: 214**

**-- Name: client\_code\_client\_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: -**

**--**

**ALTER SEQUENCE public.client\_code\_client\_seq OWNED BY public.client.code\_client;**

**--**

**-- TOC entry 227 (class 1259 OID 17935)**

**-- Name: employee; Type: TABLE; Schema: public; Owner: -**

**--**

**CREATE TABLE public.employee (**

**code\_employee integer NOT NULL,**

**name character varying(50) NOT NULL,**

**code\_post integer NOT NULL,**

**pasport\_details character varying(100) NOT NULL**

**);**

**--**

**-- TOC entry 226 (class 1259 OID 17934)**

**-- Name: employee\_code\_employee\_seq; Type: SEQUENCE; Schema: public; Owner: -**

**--**

**CREATE SEQUENCE public.employee\_code\_employee\_seq**

**AS integer**

**START WITH 1**

**INCREMENT BY 1**

**NO MINVALUE**

**NO MAXVALUE**

**CACHE 1;**

**--**

**-- TOC entry 3730 (class 0 OID 0)**

**-- Dependencies: 226**

**-- Name: employee\_code\_employee\_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: -**

**--**

**ALTER SEQUENCE public.employee\_code\_employee\_seq OWNED BY public.employee.code\_employee;**

**--**

**-- TOC entry 221 (class 1259 OID 17897)**

**-- Name: firm\_poster\_fuel; Type: TABLE; Schema: public; Owner: -**

**--**

**CREATE TABLE public.firm\_poster\_fuel (**

**code\_firm\_poster integer NOT NULL,**

**phone bigint NOT NULL,**

**legal\_adress character varying(100) NOT NULL,**

**title character varying(100) NOT NULL,**

**stamp\_fuel character varying(100) NOT NULL**

**);**

**--**

**-- TOC entry 220 (class 1259 OID 17896)**

**-- Name: firm\_poster\_fuel\_code\_firm\_poster\_seq; Type: SEQUENCE; Schema: public; Owner: -**

**--**

**CREATE SEQUENCE public.firm\_poster\_fuel\_code\_firm\_poster\_seq**

**AS integer**

**START WITH 1**

**INCREMENT BY 1**

**NO MINVALUE**

**NO MAXVALUE**

**CACHE 1;**

**--**

**-- TOC entry 3731 (class 0 OID 0)**

**-- Dependencies: 220**

**-- Name: firm\_poster\_fuel\_code\_firm\_poster\_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: -**

**--**

**ALTER SEQUENCE public.firm\_poster\_fuel\_code\_firm\_poster\_seq OWNED BY public.firm\_poster\_fuel.code\_firm\_poster;**

**--**

**-- TOC entry 217 (class 1259 OID 17882)**

**-- Name: fuel; Type: TABLE; Schema: public; Owner: -**

**--**

**CREATE TABLE public.fuel (**

**code\_fuel integer NOT NULL,**

**unit\_measurements double precision NOT NULL,**

**type\_fuel character varying(20) NOT NULL,**

**stamp\_fuel character varying(20) NOT NULL**

**);**

**--**

**-- TOC entry 216 (class 1259 OID 17881)**

**-- Name: fuel\_code\_fuel\_seq; Type: SEQUENCE; Schema: public; Owner: -**

**--**

**CREATE SEQUENCE public.fuel\_code\_fuel\_seq**

**AS integer**

**START WITH 1**

**INCREMENT BY 1**

**NO MINVALUE**

**NO MAXVALUE**

**CACHE 1;**

**--**

**-- TOC entry 3732 (class 0 OID 0)**

**-- Dependencies: 216**

**-- Name: fuel\_code\_fuel\_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: -**

**--**

**ALTER SEQUENCE public.fuel\_code\_fuel\_seq OWNED BY public.fuel.code\_fuel;**

**--**

**-- TOC entry 219 (class 1259 OID 17889)**

**-- Name: post; Type: TABLE; Schema: public; Owner: -**

**--**

**CREATE TABLE public.post (**

**code\_post integer NOT NULL,**

**title character varying(50) NOT NULL,**

**salary double precision NOT NULL,**

**code\_autorun integer NOT NULL,**

**CONSTRAINT ck\_salary\_non\_negative CHECK ((salary > (0)::double precision))**

**);**

**--**

**-- TOC entry 218 (class 1259 OID 17888)**

**-- Name: post\_code\_post\_seq; Type: SEQUENCE; Schema: public; Owner: -**

**--**

**CREATE SEQUENCE public.post\_code\_post\_seq**

**AS integer**

**START WITH 1**

**INCREMENT BY 1**

**NO MINVALUE**

**NO MAXVALUE**

**CACHE 1;**

**--**

**-- TOC entry 3733 (class 0 OID 0)**

**-- Dependencies: 218**

**-- Name: post\_code\_post\_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: -**

**--**

**ALTER SEQUENCE public.post\_code\_post\_seq OWNED BY public.post.code\_post;**

**--**

**-- TOC entry 223 (class 1259 OID 17904)**

**-- Name: produce; Type: TABLE; Schema: public; Owner: -**

**--**

**CREATE TABLE public.produce (**

**code\_produce integer NOT NULL,**

**code\_firm\_poster integer NOT NULL,**

**code\_fuel integer NOT NULL,**

**price timestamp without time zone NOT NULL**

**);**

**--**

**-- TOC entry 222 (class 1259 OID 17903)**

**-- Name: produce\_code\_produce\_seq; Type: SEQUENCE; Schema: public; Owner: -**

**--**

**CREATE SEQUENCE public.produce\_code\_produce\_seq**

**AS integer**

**START WITH 1**

**INCREMENT BY 1**

**NO MINVALUE**

**NO MAXVALUE**

**CACHE 1;**

**--**

**-- TOC entry 3734 (class 0 OID 0)**

**-- Dependencies: 222**

**-- Name: produce\_code\_produce\_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: -**

**--**

**ALTER SEQUENCE public.produce\_code\_produce\_seq OWNED BY public.produce.code\_produce;**

**--**

**-- TOC entry 233 (class 1259 OID 17985)**

**-- Name: purchase; Type: TABLE; Schema: public; Owner: -**

**--**

**CREATE TABLE public.purchase (**

**code\_purchase integer NOT NULL,**

**code\_employee integer NOT NULL,**

**data timestamp without time zone NOT NULL,**

**code\_card integer NOT NULL,**

**quantity integer NOT NULL,**

**stamp\_fuel character varying(100) NOT NULL,**

**code\_sale\_fuel integer NOT NULL,**

**code\_autorun integer NOT NULL**

**);**

**--**

**-- TOC entry 232 (class 1259 OID 17984)**

**-- Name: purchase\_code\_purchase\_seq; Type: SEQUENCE; Schema: public; Owner: -**

**--**

**CREATE SEQUENCE public.purchase\_code\_purchase\_seq**

**AS integer**

**START WITH 1**

**INCREMENT BY 1**

**NO MINVALUE**

**NO MAXVALUE**

**CACHE 1;**

**--**

**-- TOC entry 3735 (class 0 OID 0)**

**-- Dependencies: 232**

**-- Name: purchase\_code\_purchase\_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: -**

**--**

**ALTER SEQUENCE public.purchase\_code\_purchase\_seq OWNED BY public.purchase.code\_purchase;**

**--**

**-- TOC entry 225 (class 1259 OID 17921)**

**-- Name: sale\_fuel; Type: TABLE; Schema: public; Owner: -**

**--**

**CREATE TABLE public.sale\_fuel (**

**code\_sale\_fuel integer NOT NULL,**

**code\_fuel integer NOT NULL,**

**price\_litter double precision NOT NULL,**

**start\_action\_time timestamp without time zone NOT NULL,**

**end\_action\_time timestamp without time zone NOT NULL,**

**CONSTRAINT ck\_deposit\_non\_negative CHECK ((start\_action\_time <= end\_action\_time)),**

**CONSTRAINT ck\_price\_litter\_non\_negative CHECK ((price\_litter >= (0)::double precision))**

**);**

**--**

**-- TOC entry 224 (class 1259 OID 17920)**

**-- Name: sale\_fuel\_code\_sale\_fuel\_seq; Type: SEQUENCE; Schema: public; Owner: -**

**--**

**CREATE SEQUENCE public.sale\_fuel\_code\_sale\_fuel\_seq**

**AS integer**

**START WITH 1**

**INCREMENT BY 1**

**NO MINVALUE**

**NO MAXVALUE**

**CACHE 1;**

**--**

**-- TOC entry 3736 (class 0 OID 0)**

**-- Dependencies: 224**

**-- Name: sale\_fuel\_code\_sale\_fuel\_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: -**

**--**

**ALTER SEQUENCE public.sale\_fuel\_code\_sale\_fuel\_seq OWNED BY public.sale\_fuel.code\_sale\_fuel;**

**--**

**-- TOC entry 3514 (class 2604 OID 17964)**

**-- Name: autorun code\_autorun; Type: DEFAULT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.autorun ALTER COLUMN code\_autorun SET DEFAULT nextval('public.autorun\_code\_autorun\_seq'::regclass);**

**--**

**-- TOC entry 3513 (class 2604 OID 17950)**

**-- Name: card\_accaunt code\_card; Type: DEFAULT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.card\_accaunt ALTER COLUMN code\_card SET DEFAULT nextval('public.card\_accaunt\_code\_card\_seq'::regclass);**

**--**

**-- TOC entry 3506 (class 2604 OID 17876)**

**-- Name: client code\_client; Type: DEFAULT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.client ALTER COLUMN code\_client SET DEFAULT nextval('public.client\_code\_client\_seq'::regclass);**

**--**

**-- TOC entry 3512 (class 2604 OID 17938)**

**-- Name: employee code\_employee; Type: DEFAULT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.employee ALTER COLUMN code\_employee SET DEFAULT nextval('public.employee\_code\_employee\_seq'::regclass);**

**--**

**-- TOC entry 3509 (class 2604 OID 17900)**

**-- Name: firm\_poster\_fuel code\_firm\_poster; Type: DEFAULT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.firm\_poster\_fuel ALTER COLUMN code\_firm\_poster SET DEFAULT nextval('public.firm\_poster\_fuel\_code\_firm\_poster\_seq'::regclass);**

**--**

**-- TOC entry 3507 (class 2604 OID 17885)**

**-- Name: fuel code\_fuel; Type: DEFAULT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.fuel ALTER COLUMN code\_fuel SET DEFAULT nextval('public.fuel\_code\_fuel\_seq'::regclass);**

**--**

**-- TOC entry 3508 (class 2604 OID 17892)**

**-- Name: post code\_post; Type: DEFAULT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.post ALTER COLUMN code\_post SET DEFAULT nextval('public.post\_code\_post\_seq'::regclass);**

**--**

**-- TOC entry 3510 (class 2604 OID 17907)**

**-- Name: produce code\_produce; Type: DEFAULT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.produce ALTER COLUMN code\_produce SET DEFAULT nextval('public.produce\_code\_produce\_seq'::regclass);**

**--**

**-- TOC entry 3515 (class 2604 OID 17988)**

**-- Name: purchase code\_purchase; Type: DEFAULT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.purchase ALTER COLUMN code\_purchase SET DEFAULT nextval('public.purchase\_code\_purchase\_seq'::regclass);**

**--**

**-- TOC entry 3511 (class 2604 OID 17924)**

**-- Name: sale\_fuel code\_sale\_fuel; Type: DEFAULT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.sale\_fuel ALTER COLUMN code\_sale\_fuel SET DEFAULT nextval('public.sale\_fuel\_code\_sale\_fuel\_seq'::regclass);**

**--**

**-- TOC entry 3718 (class 0 OID 17961)**

**-- Dependencies: 231**

**-- Data for Name: autorun; Type: TABLE DATA; Schema: public; Owner: -**

**--**

**INSERT INTO public.autorun VALUES (1, 111222333, 'Toyota Camry', 'ул. Пушкина, 321', 'ул. Лермонтова, 456', 'Легковой автомобиль', 1, 1, 1);**

**INSERT INTO public.autorun VALUES (2, 444555666, 'Ford Focus', 'пр. Чехова, 654', 'ул. Толстого, 789', 'Легковой автомобиль', 2, 2, 2);**

**INSERT INTO public.autorun VALUES (3, 777888999, 'Chevrolet Malibu', 'ул. Гоголя, 987', 'ул. Достоевского, 123', 'Легковой автомобиль', 3, 3, 3);**

**INSERT INTO public.autorun VALUES (4, 123456789, 'Honda Civic', 'пр. Пушкина, 456', 'ул. Тургенева, 789', 'Легковой автомобиль', 4, 4, 4);**

**INSERT INTO public.autorun VALUES (5, 987654321, 'Hyundai Elantra', 'ул. Чехова, 147', 'ул. Горького, 321', 'Легковой автомобиль', 5, 5, 5);**

**--**

**-- TOC entry 3716 (class 0 OID 17947)**

**-- Dependencies: 229**

**-- Data for Name: card\_accaunt; Type: TABLE DATA; Schema: public; Owner: -**

**--**

**INSERT INTO public.card\_accaunt VALUES (1, 0.1, 1000, 1);**

**INSERT INTO public.card\_accaunt VALUES (2, 0.05, 1500, 2);**

**INSERT INTO public.card\_accaunt VALUES (3, 0.08, 800, 3);**

**INSERT INTO public.card\_accaunt VALUES (4, 0.12, 1200, 4);**

**INSERT INTO public.card\_accaunt VALUES (5, 0.15, 2000, 5);**

**--**

**-- TOC entry 3702 (class 0 OID 17873)**

**-- Dependencies: 215**

**-- Data for Name: client; Type: TABLE DATA; Schema: public; Owner: -**

**--**

**INSERT INTO public.client VALUES (1, 'Иванов Иван', 123456789, 'ул. Ленина, 123');**

**INSERT INTO public.client VALUES (2, 'Петров Петр', 987654321, 'пр. Гагарина, 456');**

**INSERT INTO public.client VALUES (3, 'Сидоров Алексей', 5551112233, 'ул. Мира, 789');**

**INSERT INTO public.client VALUES (4, 'Козлов Дмитрий', 999888777, 'пр. Ленина, 147');**

**INSERT INTO public.client VALUES (5, 'Михайлов Андрей', 111222333, 'ул. Советская, 567');**

**--**

**-- TOC entry 3714 (class 0 OID 17935)**

**-- Dependencies: 227**

**-- Data for Name: employee; Type: TABLE DATA; Schema: public; Owner: -**

**--**

**INSERT INTO public.employee VALUES (1, 'Иван', 1, '1234567890');**

**INSERT INTO public.employee VALUES (2, 'Петр', 2, '0987654321');**

**INSERT INTO public.employee VALUES (3, 'Алексей', 3, '5678901234');**

**INSERT INTO public.employee VALUES (4, 'Дмитрий', 4, '4321098765');**

**INSERT INTO public.employee VALUES (5, 'Андрей', 5, '9876543210');**

**--**

**-- TOC entry 3708 (class 0 OID 17897)**

**-- Dependencies: 221**

**-- Data for Name: firm\_poster\_fuel; Type: TABLE DATA; Schema: public; Owner: -**

**--**

**INSERT INTO public.firm\_poster\_fuel VALUES (1, 123456789, 'ул. Кирова, 987', 'ООО "Нефтяная компания"', 'AI-92');**

**INSERT INTO public.firm\_poster\_fuel VALUES (2, 987654321, 'пр. Ленина, 654', 'ООО "Топливные решения"', 'DT');**

**INSERT INTO public.firm\_poster\_fuel VALUES (3, 5551112233, 'ул. Мира, 789', 'ООО "Энергетические топлива"', 'AI-95');**

**INSERT INTO public.firm\_poster\_fuel VALUES (4, 999888777, 'пр. Лермонтова, 147', 'ООО "Эко-Топливо"', 'DT');**

**INSERT INTO public.firm\_poster\_fuel VALUES (5, 111222333, 'ул. Советская, 567', 'ООО "Энерго-Нефть"', 'AI-92');**

**--**

**-- TOC entry 3704 (class 0 OID 17882)**

**-- Dependencies: 217**

**-- Data for Name: fuel; Type: TABLE DATA; Schema: public; Owner: -**

**--**

**INSERT INTO public.fuel VALUES (1, 10.5, 'Бензин', 'AI-92');**

**INSERT INTO public.fuel VALUES (2, 8.2, 'Дизель', 'DT');**

**INSERT INTO public.fuel VALUES (3, 11.8, 'Бензин', 'AI-95');**

**INSERT INTO public.fuel VALUES (4, 9.5, 'Дизель', 'DT');**

**INSERT INTO public.fuel VALUES (5, 12, 'Бензин', 'AI-92');**

**--**

**-- TOC entry 3706 (class 0 OID 17889)**

**-- Dependencies: 219**

**-- Data for Name: post; Type: TABLE DATA; Schema: public; Owner: -**

**--**

**INSERT INTO public.post VALUES (1, 'Менеджер', 120000, 1);**

**INSERT INTO public.post VALUES (2, 'Техник', 60000, 2);**

**INSERT INTO public.post VALUES (3, 'Продавец', 50000, 3);**

**INSERT INTO public.post VALUES (4, 'Бухгалтер', 70000, 4);**

**INSERT INTO public.post VALUES (5, 'Водитель', 55000, 5);**

**--**

**-- TOC entry 3710 (class 0 OID 17904)**

**-- Dependencies: 223**

**-- Data for Name: produce; Type: TABLE DATA; Schema: public; Owner: -**

**--**

**INSERT INTO public.produce VALUES (1, 1, 1, '2024-01-23 16:30:00');**

**INSERT INTO public.produce VALUES (2, 2, 2, '2024-01-23 17:15:00');**

**INSERT INTO public.produce VALUES (3, 3, 3, '2024-01-23 18:30:00');**

**INSERT INTO public.produce VALUES (4, 4, 4, '2024-01-23 19:45:00');**

**INSERT INTO public.produce VALUES (5, 5, 5, '2024-01-23 20:00:00');**

**--**

**-- TOC entry 3720 (class 0 OID 17985)**

**-- Dependencies: 233**

**-- Data for Name: purchase; Type: TABLE DATA; Schema: public; Owner: -**

**--**

**INSERT INTO public.purchase VALUES (1, 1, '2024-01-23 14:30:00', 1, 10, 'AI-92', 1, 1);**

**INSERT INTO public.purchase VALUES (2, 2, '2024-01-23 15:45:00', 2, 8, 'DT', 2, 2);**

**INSERT INTO public.purchase VALUES (3, 3, '2024-01-23 16:30:00', 3, 15, 'AI-95', 3, 3);**

**INSERT INTO public.purchase VALUES (4, 4, '2024-01-23 17:15:00', 4, 12, 'DT', 4, 4);**

**INSERT INTO public.purchase VALUES (5, 5, '2024-01-23 18:00:00', 5, 20, 'AI-92', 5, 5);**

**--**

**-- TOC entry 3712 (class 0 OID 17921)**

**-- Dependencies: 225**

**-- Data for Name: sale\_fuel; Type: TABLE DATA; Schema: public; Owner: -**

**--**

**INSERT INTO public.sale\_fuel VALUES (1, 1, 45.5, '2024-01-23 10:00:00', '2024-01-23 18:00:00');**

**INSERT INTO public.sale\_fuel VALUES (2, 2, 38, '2024-01-23 09:00:00', '2024-01-23 17:00:00');**

**INSERT INTO public.sale\_fuel VALUES (3, 3, 50, '2024-01-23 08:30:00', '2024-01-23 16:30:00');**

**INSERT INTO public.sale\_fuel VALUES (4, 4, 42, '2024-01-23 11:00:00', '2024-01-23 19:00:00');**

**INSERT INTO public.sale\_fuel VALUES (5, 5, 47.5, '2024-01-23 07:45:00', '2024-01-23 15:45:00');**

**--**

**-- TOC entry 3737 (class 0 OID 0)**

**-- Dependencies: 230**

**-- Name: autorun\_code\_autorun\_seq; Type: SEQUENCE SET; Schema: public; Owner: -**

**--**

**SELECT pg\_catalog.setval('public.autorun\_code\_autorun\_seq', 5, true);**

**--**

**-- TOC entry 3738 (class 0 OID 0)**

**-- Dependencies: 228**

**-- Name: card\_accaunt\_code\_card\_seq; Type: SEQUENCE SET; Schema: public; Owner: -**

**--**

**SELECT pg\_catalog.setval('public.card\_accaunt\_code\_card\_seq', 5, true);**

**--**

**-- TOC entry 3739 (class 0 OID 0)**

**-- Dependencies: 214**

**-- Name: client\_code\_client\_seq; Type: SEQUENCE SET; Schema: public; Owner: -**

**--**

**SELECT pg\_catalog.setval('public.client\_code\_client\_seq', 5, true);**

**--**

**-- TOC entry 3740 (class 0 OID 0)**

**-- Dependencies: 226**

**-- Name: employee\_code\_employee\_seq; Type: SEQUENCE SET; Schema: public; Owner: -**

**--**

**SELECT pg\_catalog.setval('public.employee\_code\_employee\_seq', 5, true);**

**--**

**-- TOC entry 3741 (class 0 OID 0)**

**-- Dependencies: 220**

**-- Name: firm\_poster\_fuel\_code\_firm\_poster\_seq; Type: SEQUENCE SET; Schema: public; Owner: -**

**--**

**SELECT pg\_catalog.setval('public.firm\_poster\_fuel\_code\_firm\_poster\_seq', 5, true);**

**--**

**-- TOC entry 3742 (class 0 OID 0)**

**-- Dependencies: 216**

**-- Name: fuel\_code\_fuel\_seq; Type: SEQUENCE SET; Schema: public; Owner: -**

**--**

**SELECT pg\_catalog.setval('public.fuel\_code\_fuel\_seq', 5, true);**

**--**

**-- TOC entry 3743 (class 0 OID 0)**

**-- Dependencies: 218**

**-- Name: post\_code\_post\_seq; Type: SEQUENCE SET; Schema: public; Owner: -**

**--**

**SELECT pg\_catalog.setval('public.post\_code\_post\_seq', 5, true);**

**--**

**-- TOC entry 3744 (class 0 OID 0)**

**-- Dependencies: 222**

**-- Name: produce\_code\_produce\_seq; Type: SEQUENCE SET; Schema: public; Owner: -**

**--**

**SELECT pg\_catalog.setval('public.produce\_code\_produce\_seq', 5, true);**

**--**

**-- TOC entry 3745 (class 0 OID 0)**

**-- Dependencies: 232**

**-- Name: purchase\_code\_purchase\_seq; Type: SEQUENCE SET; Schema: public; Owner: -**

**--**

**SELECT pg\_catalog.setval('public.purchase\_code\_purchase\_seq', 5, true);**

**--**

**-- TOC entry 3746 (class 0 OID 0)**

**-- Dependencies: 224**

**-- Name: sale\_fuel\_code\_sale\_fuel\_seq; Type: SEQUENCE SET; Schema: public; Owner: -**

**--**

**SELECT pg\_catalog.setval('public.sale\_fuel\_code\_sale\_fuel\_seq', 5, true);**

**--**

**-- TOC entry 3540 (class 2606 OID 17966)**

**-- Name: autorun autorun\_pkey; Type: CONSTRAINT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.autorun**

**ADD CONSTRAINT autorun\_pkey PRIMARY KEY (code\_autorun);**

**--**

**-- TOC entry 3538 (class 2606 OID 17954)**

**-- Name: card\_accaunt card\_accaunt\_pkey; Type: CONSTRAINT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.card\_accaunt**

**ADD CONSTRAINT card\_accaunt\_pkey PRIMARY KEY (code\_card);**

**--**

**-- TOC entry 3522 (class 2606 OID 17878)**

**-- Name: client client\_pkey; Type: CONSTRAINT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.client**

**ADD CONSTRAINT client\_pkey PRIMARY KEY (code\_client);**

**--**

**-- TOC entry 3536 (class 2606 OID 17940)**

**-- Name: employee employee\_pkey; Type: CONSTRAINT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.employee**

**ADD CONSTRAINT employee\_pkey PRIMARY KEY (code\_employee);**

**--**

**-- TOC entry 3530 (class 2606 OID 17902)**

**-- Name: firm\_poster\_fuel firm\_poster\_fuel\_pkey; Type: CONSTRAINT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.firm\_poster\_fuel**

**ADD CONSTRAINT firm\_poster\_fuel\_pkey PRIMARY KEY (code\_firm\_poster);**

**--**

**-- TOC entry 3526 (class 2606 OID 17887)**

**-- Name: fuel fuel\_pkey; Type: CONSTRAINT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.fuel**

**ADD CONSTRAINT fuel\_pkey PRIMARY KEY (code\_fuel);**

**--**

**-- TOC entry 3528 (class 2606 OID 17895)**

**-- Name: post post\_pkey; Type: CONSTRAINT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.post**

**ADD CONSTRAINT post\_pkey PRIMARY KEY (code\_post);**

**--**

**-- TOC entry 3532 (class 2606 OID 17909)**

**-- Name: produce produce\_pkey; Type: CONSTRAINT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.produce**

**ADD CONSTRAINT produce\_pkey PRIMARY KEY (code\_produce);**

**--**

**-- TOC entry 3544 (class 2606 OID 17990)**

**-- Name: purchase purchase\_pkey; Type: CONSTRAINT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.purchase**

**ADD CONSTRAINT purchase\_pkey PRIMARY KEY (code\_purchase);**

**--**

**-- TOC entry 3534 (class 2606 OID 17928)**

**-- Name: sale\_fuel sale\_fuel\_pkey; Type: CONSTRAINT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.sale\_fuel**

**ADD CONSTRAINT sale\_fuel\_pkey PRIMARY KEY (code\_sale\_fuel);**

**--**

**-- TOC entry 3542 (class 2606 OID 17968)**

**-- Name: autorun uq\_car\_registration\_number; Type: CONSTRAINT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.autorun**

**ADD CONSTRAINT uq\_car\_registration\_number UNIQUE (phone);**

**--**

**-- TOC entry 3524 (class 2606 OID 17880)**

**-- Name: client uq\_client\_name; Type: CONSTRAINT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.client**

**ADD CONSTRAINT uq\_client\_name UNIQUE (name);**

**--**

**-- TOC entry 3546 (class 2606 OID 17992)**

**-- Name: purchase uq\_purchase\_constraints; Type: CONSTRAINT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.purchase**

**ADD CONSTRAINT uq\_purchase\_constraints UNIQUE (code\_employee, data, code\_card);**

**--**

**-- TOC entry 3555 (class 2606 OID 18008)**

**-- Name: purchase fk\_code\_autorun; Type: FK CONSTRAINT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.purchase**

**ADD CONSTRAINT fk\_code\_autorun FOREIGN KEY (code\_autorun) REFERENCES public.autorun(code\_autorun) ON UPDATE CASCADE ON DELETE CASCADE;**

**--**

**-- TOC entry 3556 (class 2606 OID 17998)**

**-- Name: purchase fk\_code\_card; Type: FK CONSTRAINT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.purchase**

**ADD CONSTRAINT fk\_code\_card FOREIGN KEY (code\_card) REFERENCES public.card\_accaunt(code\_card) ON UPDATE CASCADE ON DELETE CASCADE;**

**--**

**-- TOC entry 3551 (class 2606 OID 17955)**

**-- Name: card\_accaunt fk\_code\_client; Type: FK CONSTRAINT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.card\_accaunt**

**ADD CONSTRAINT fk\_code\_client FOREIGN KEY (code\_client) REFERENCES public.client(code\_client) ON UPDATE CASCADE ON DELETE CASCADE;**

**--**

**-- TOC entry 3552 (class 2606 OID 17979)**

**-- Name: autorun fk\_code\_employee; Type: FK CONSTRAINT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.autorun**

**ADD CONSTRAINT fk\_code\_employee FOREIGN KEY (code\_employee) REFERENCES public.employee(code\_employee) ON UPDATE CASCADE ON DELETE CASCADE;**

**--**

**-- TOC entry 3557 (class 2606 OID 17993)**

**-- Name: purchase fk\_code\_employee; Type: FK CONSTRAINT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.purchase**

**ADD CONSTRAINT fk\_code\_employee FOREIGN KEY (code\_employee) REFERENCES public.employee(code\_employee) ON UPDATE CASCADE ON DELETE CASCADE;**

**--**

**-- TOC entry 3547 (class 2606 OID 17910)**

**-- Name: produce fk\_code\_firm\_poster; Type: FK CONSTRAINT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.produce**

**ADD CONSTRAINT fk\_code\_firm\_poster FOREIGN KEY (code\_firm\_poster) REFERENCES public.firm\_poster\_fuel(code\_firm\_poster) ON UPDATE CASCADE ON DELETE CASCADE;**

**--**

**-- TOC entry 3553 (class 2606 OID 17969)**

**-- Name: autorun fk\_code\_firm\_poster; Type: FK CONSTRAINT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.autorun**

**ADD CONSTRAINT fk\_code\_firm\_poster FOREIGN KEY (code\_firm\_poster) REFERENCES public.firm\_poster\_fuel(code\_firm\_poster) ON UPDATE CASCADE ON DELETE CASCADE;**

**--**

**-- TOC entry 3548 (class 2606 OID 17915)**

**-- Name: produce fk\_code\_fuel; Type: FK CONSTRAINT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.produce**

**ADD CONSTRAINT fk\_code\_fuel FOREIGN KEY (code\_fuel) REFERENCES public.fuel(code\_fuel) ON UPDATE CASCADE ON DELETE CASCADE;**

**--**

**-- TOC entry 3549 (class 2606 OID 17929)**

**-- Name: sale\_fuel fk\_code\_fuel; Type: FK CONSTRAINT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.sale\_fuel**

**ADD CONSTRAINT fk\_code\_fuel FOREIGN KEY (code\_fuel) REFERENCES public.fuel(code\_fuel) ON UPDATE CASCADE ON DELETE CASCADE;**

**--**

**-- TOC entry 3550 (class 2606 OID 17941)**

**-- Name: employee fk\_code\_post; Type: FK CONSTRAINT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.employee**

**ADD CONSTRAINT fk\_code\_post FOREIGN KEY (code\_post) REFERENCES public.post(code\_post) ON UPDATE CASCADE ON DELETE CASCADE;**

**--**

**-- TOC entry 3554 (class 2606 OID 17974)**

**-- Name: autorun fk\_code\_sale\_fuel; Type: FK CONSTRAINT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.autorun**

**ADD CONSTRAINT fk\_code\_sale\_fuel FOREIGN KEY (code\_sale\_fuel) REFERENCES public.sale\_fuel(code\_sale\_fuel) ON UPDATE CASCADE ON DELETE CASCADE;**

**--**

**-- TOC entry 3558 (class 2606 OID 18003)**

**-- Name: purchase fk\_code\_sale\_fuel; Type: FK CONSTRAINT; Schema: public; Owner: -**

**--**

**ALTER TABLE ONLY public.purchase**

**ADD CONSTRAINT fk\_code\_sale\_fuel FOREIGN KEY (code\_sale\_fuel) REFERENCES public.sale\_fuel(code\_sale\_fuel) ON UPDATE CASCADE ON DELETE CASCADE;**

**-- Completed on 2024-03-01 14:44:46 MSK**

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**-- PostgreSQL database dump complete**

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