Министерство образования и науки Российской Федерации

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Кафедра программной инженерии

**Отчёт по учебному проекту**

**«Ведение заказов»**

**по дисциплине Технологии баз данных**

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# 1. Исходная задача

## 1.1. Схема базы данных

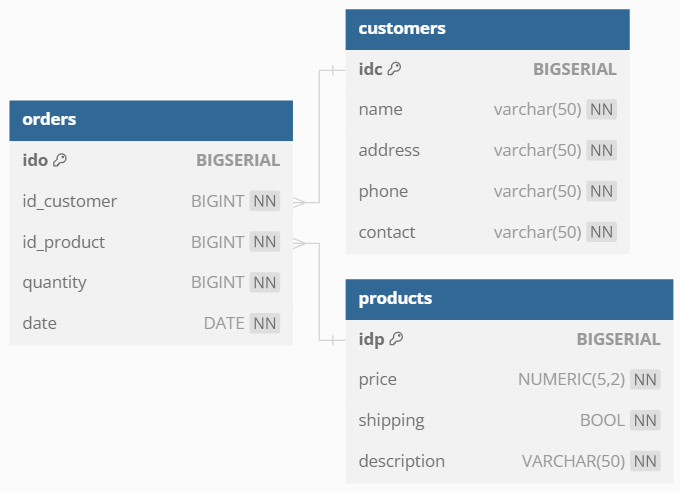


Рис. 1.1.1. Схема базы данных для исходной задачи

## 1.2. Представления для вывода агрегатных данных

### 1.2.1. Представления, основанные на соединении таблиц

* Вывод только тех заказчиков, у которых есть заказы, и информации о всех их заказах:

SELECT \*

FROM customers

JOIN orders

ON customers.idc = orders.id\_customer

ORDER BY customers.idc, orders.ido;

* Вывод всех заказчиков и информации о их заказах (для тех, у кого заказов нет, выводится null):

SELECT \*

FROM customers

LEFT JOIN orders

ON customers.idc = orders.id\_customer

ORDER BY customers.idc, orders.ido;

* Вывод всех заказов и информации о заказанных продуктах:

SELECT \*

FROM orders

JOIN products

ON orders.id\_product = products.idp

ORDER BY orders.date;

### 1.2.2. Представления, основанные на работе с арифметикой

* Вывод всех заказов c информацией о цене одной единицы товара в заказе и суммарной цене заказа:

SELECT orders.\*, products.price,

orders.quantity \* products.price AS "sum"

FROM orders

LEFT JOIN products

ON products.idp = orders.id\_product

ORDER BY orders.ido;

* Вывод всех заказчиков с информацией об общем количестве купленных товаров у каждого (у заказчиков, не сделавших заказ, null):

SELECT customers.\*, SUM(orders.quantity)

FROM customers

LEFT JOIN orders

ON customers.idc = orders.id\_customer

GROUP BY customers.idc

ORDER BY customers.idc;

* Вывод продуктов, цена которых выше средней:

SELECT products.\*, (

SELECT AVG(price)

FROM products)

FROM products

WHERE price > (

SELECT AVG(price)

FROM products)

GROUP BY idp

ORDER BY price;

### 1.2.3. Представления, основанные на работе с датой/временем

* Вывод заказов и информации о том сколько времени прошло с момента заказа:

SELECT orders.\*, AGE(NOW(), orders.date) AS time\_passed

FROM orders

ORDER BY date;

* Вывод заказов за февраль 2024 года:

SELECT \*

FROM orders

WHERE date >= '2024-02-01' AND date <= '2024-02-29'

ORDER BY date;

### 1.2.4. Представления, основанные на работе с текстом и бинарными значениями

* Вывод заказчиков, в адресе которых присутствует цифра ‘3’:

SELECT \*

FROM customers

WHERE address LIKE '3%'

OR address LIKE '%3%'

OR address LIKE '%3';

* Вывод заказчиков с названием компании, состоящим как минимум из трёх слов:

SELECT \*

FROM customers

WHERE name LIKE '% % %';

* Вывод заказов, в которых у продукта есть доставка:

SELECT \*

FROM orders

WHERE (

SELECT shipping

FROM products

WHERE orders.id\_product = products.idp

) = true

ORDER BY id\_product;

### 1.2.5. Представления, связанные с поиском родительских записей, у которых нет дочерних

* Вывод заказчиков которые не сделали ни одного заказа:

SELECT \*

FROM customers

WHERE NOT EXISTS (

SELECT \*

FROM orders

WHERE customers.idc = orders.id\_customer);

## 1.3 Триггер INSERT для проверки правильности вводимых данных

Рассмотрим триггер для проверки правильности вводимых данных в таблицу orders (заказы). Проверка производится на предмет корректности даты заказа (дата заказа не может быть позже чем время вставки CURRENT\_TIMESTAMP.

* Триггерная функция:

BEGIN

IF NEW.date > CURRENT\_TIMESTAMP THEN

RAISE EXCEPTION 'Incorrect date!';

END IF;

RETURN NEW;

END;

* Триггер над таблицей orders:

CREATE OR REPLACE TRIGGER insert

BEFORE INSERT

ON public.orders

FOR EACH ROW

EXECUTE FUNCTION public.insert\_in\_orders();

## 1.4 Процедура с курсором для модификации определённых записей по условию

Рассмотрим процедуру, которая с помощью курсора выбирает записи из таблицы orders, в которых количество купленного в заказе товара больше чем среднее количество за заказ по всей таблице, смотрит что за товар в этом заказе и для этого товара в связи с хорошим спросом увеличивает цену в таблице products:

DECLARE

curs REFCURSOR;

rec RECORD;

BEGIN

OPEN curs FOR

SELECT \*

FROM orders

WHERE quantity > (

SELECT AVG(quantity)

FROM orders

);

LOOP

FETCH curs INTO rec;

EXIT WHEN NOT FOUND;

UPDATE products

SET price = price + 5

WHERE products.idp = rec.id\_product;

END LOOP;

CLOSE curs;

END;

При этом цена продукта может увеличиться значительно в случае если данный продукт несколько раз заказывали в больших количествах.

## 1.5 Процедура для удаления родительской записи с соответствующими дочерними записями в другой таблице без использования параметра CASCADE во внешних ключах

* Процедура для удаления родительской записи в таблице customers (заказчики) и соответствующих дочерних записей в таблице orders, то есть удаления из БД заказчика и всех его заказов (процедура принимает в качестве аргумента arg\_idc BIGINT – idc – ключ, по которому происходит удаление родительской записи из customers):

BEGIN

DELETE FROM orders

WHERE id\_customer = arg\_idc;

DELETE FROM customers

WHERE idc = arg\_idc;

END;

* Процедура для удаления родительской записи в таблице products (товары) и соответствующих дочерних записей в таблице orders, то есть удаления из БД товара и всех заказов с ним (процедура принимает в качестве аргумента arg\_idp BIGINT – idp – ключ, по которому происходит удаление родительской записи из products):

BEGIN

DELETE FROM orders

WHERE id\_product = arg\_idp;

DELETE FROM products

WHERE idp = arg\_idp;

END;

## 1.6. Схема “Star”, добавление атрибута и значения

Схема “Star” по сути уже реализована: таблица фактов – orders (заказы), таблицы измерений это customers и products, связанные с orders посредством внешних ключей id\_customer и id\_product.

Для использования дополнительных аттрибутов с таблицей customers создаётся таблица customers\_optional\_attributes, в ней по внешнему ключу id\_customer хранятся имена атрибутов, значения их актуальности true/false и поле value которое может быть null.

* Процедура добавления (активации) дополнительного атрибута и установки его значения для customers:

DECLARE

curs REFCURSOR;

rec RECORD;

BEGIN

OPEN curs FOR

SELECT \*

FROM customers\_optional\_attributes;

LOOP

FETCH curs INTO rec;

EXIT WHEN NOT FOUND;

UPDATE customers\_optional\_attributes

SET relevance = true, value = arg\_value

WHERE id\_customer = arg\_id\_customer

AND attr\_name = arg\_attr\_name;

END LOOP;

CLOSE curs;

END;

Аналогично с таблицей products.

## 1.7. Полный скрипт базы данных ordermanagment исходной задачи

--

-- PostgreSQL database dump

--

-- Dumped from database version 16.3

-- Dumped by pg\_dump version 16.3

-- Started on 2024-06-05 14:13:14

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 253 (class 1255 OID 16818)

-- Name: add\_optional\_attribute\_in\_customers(bigint, character varying, character varying); Type: PROCEDURE; Schema: public; Owner: postgres

--

CREATE PROCEDURE public.add\_optional\_attribute\_in\_customers(IN arg\_id\_customer bigint, IN arg\_attr\_name character varying, IN arg\_value character varying)

LANGUAGE plpgsql

AS $$DECLARE

curs REFCURSOR;

rec RECORD;

BEGIN

OPEN curs FOR

SELECT \*

FROM customers\_optional\_attributes;

LOOP

FETCH curs INTO rec;

EXIT WHEN NOT FOUND;

UPDATE customers\_optional\_attributes

SET relevance = true, value = arg\_value

WHERE id\_customer = arg\_id\_customer

AND attr\_name = arg\_attr\_name;

END LOOP;

CLOSE curs;

END;$$;

ALTER PROCEDURE public.add\_optional\_attribute\_in\_customers(IN arg\_id\_customer bigint, IN arg\_attr\_name character varying, IN arg\_value character varying) OWNER TO postgres;

--

-- TOC entry 254 (class 1255 OID 16833)

-- Name: add\_optional\_attribute\_in\_products(bigint, character varying, character varying); Type: PROCEDURE; Schema: public; Owner: postgres

--

CREATE PROCEDURE public.add\_optional\_attribute\_in\_products(IN arg\_id\_product bigint, IN arg\_attr\_name character varying, IN arg\_value character varying)

LANGUAGE plpgsql

AS $$DECLARE

curs REFCURSOR;

rec RECORD;

BEGIN

OPEN curs FOR

SELECT \*

FROM products\_optional\_attributes;

LOOP

FETCH curs INTO rec;

EXIT WHEN NOT FOUND;

UPDATE products\_optional\_attributes

SET relevance = true, value = arg\_value

WHERE id\_product = arg\_id\_product

AND attr\_name = arg\_attr\_name;

END LOOP;

CLOSE curs;

END;

$$;

ALTER PROCEDURE public.add\_optional\_attribute\_in\_products(IN arg\_id\_product bigint, IN arg\_attr\_name character varying, IN arg\_value character varying) OWNER TO postgres;

--

-- TOC entry 243 (class 1255 OID 16790)

-- Name: cursor\_inc\_demanded\_products\_price(); Type: PROCEDURE; Schema: public; Owner: postgres

--

CREATE PROCEDURE public.cursor\_inc\_demanded\_products\_price()

LANGUAGE plpgsql

AS $$DECLARE

curs REFCURSOR;

rec RECORD;

BEGIN

OPEN curs FOR

SELECT \*

FROM orders

WHERE quantity > (

SELECT AVG(quantity)

FROM orders

);

LOOP

FETCH curs INTO rec;

EXIT WHEN NOT FOUND;

UPDATE products

SET price = price + 5

WHERE products.idp = rec.id\_product;

END LOOP;

CLOSE curs;

END;$$;

ALTER PROCEDURE public.cursor\_inc\_demanded\_products\_price() OWNER TO postgres;

--

-- TOC entry 251 (class 1255 OID 16795)

-- Name: delete\_from\_customers\_and\_orders(bigint); Type: PROCEDURE; Schema: public; Owner: postgres

--

CREATE PROCEDURE public.delete\_from\_customers\_and\_orders(IN arg\_idc bigint)

LANGUAGE plpgsql

AS $$BEGIN

DELETE FROM orders

WHERE id\_customer = arg\_idc;

DELETE FROM customers

WHERE idc = arg\_idc;

END;$$;

ALTER PROCEDURE public.delete\_from\_customers\_and\_orders(IN arg\_idc bigint) OWNER TO postgres;

--

-- TOC entry 252 (class 1255 OID 16796)

-- Name: delete\_from\_products\_and\_orders(bigint); Type: PROCEDURE; Schema: public; Owner: postgres

--

CREATE PROCEDURE public.delete\_from\_products\_and\_orders(IN arg\_idp bigint)

LANGUAGE plpgsql

AS $$BEGIN

DELETE FROM orders

WHERE id\_product = arg\_idp;

DELETE FROM products

WHERE idp = arg\_idp;

END;$$;

ALTER PROCEDURE public.delete\_from\_products\_and\_orders(IN arg\_idp bigint) OWNER TO postgres;

--

-- TOC entry 238 (class 1255 OID 16768)

-- Name: insert\_in\_orders(); Type: FUNCTION; Schema: public; Owner: postgres

--

CREATE FUNCTION public.insert\_in\_orders() RETURNS trigger

LANGUAGE plpgsql

AS $$BEGIN

IF NEW.date > CURRENT\_TIMESTAMP THEN

RAISE EXCEPTION 'Incorrect date!';

END IF;

RETURN NEW;

END;$$;

ALTER FUNCTION public.insert\_in\_orders() OWNER TO postgres;

SET default\_tablespace = '';

SET default\_table\_access\_method = heap;

--

-- TOC entry 235 (class 1259 OID 16803)

-- Name: customers\_optional\_attributes; Type: TABLE; Schema: public; Owner: postgres

--

CREATE TABLE public.customers\_optional\_attributes (

idoa bigint NOT NULL,

id\_customer bigint NOT NULL,

attr\_name character varying NOT NULL,

relevance boolean NOT NULL,

value character varying

);

ALTER TABLE public.customers\_optional\_attributes OWNER TO postgres;

--

-- TOC entry 234 (class 1259 OID 16802)

-- Name: cusomers\_optional\_attributes\_idoa\_seq; Type: SEQUENCE; Schema: public; Owner: postgres

--

CREATE SEQUENCE public.cusomers\_optional\_attributes\_idoa\_seq

START WITH 1

INCREMENT BY 1

NO MINVALUE

NO MAXVALUE

CACHE 1;

ALTER SEQUENCE public.cusomers\_optional\_attributes\_idoa\_seq OWNER TO postgres;

--

-- TOC entry 4903 (class 0 OID 0)

-- Dependencies: 234

-- Name: cusomers\_optional\_attributes\_idoa\_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: postgres

--

ALTER SEQUENCE public.cusomers\_optional\_attributes\_idoa\_seq OWNED BY public.customers\_optional\_attributes.idoa;

--

-- TOC entry 216 (class 1259 OID 16460)

-- Name: customers; Type: TABLE; Schema: public; Owner: postgres

--

CREATE TABLE public.customers (

idc bigint NOT NULL,

name character varying(50) NOT NULL,

address character varying(50) NOT NULL,

phone character varying(50) NOT NULL,

contact character varying(50) NOT NULL

);

ALTER TABLE public.customers OWNER TO postgres;

--

-- TOC entry 230 (class 1259 OID 16593)

-- Name: customers\_3\_in\_address; Type: VIEW; Schema: public; Owner: postgres

--

CREATE VIEW public.customers\_3\_in\_address AS

SELECT idc,

name,

address,

phone,

contact

FROM public.customers

WHERE (((address)::text ~~ '3%'::text) OR ((address)::text ~~ '%3%'::text) OR ((address)::text ~~ '%3'::text));

ALTER VIEW public.customers\_3\_in\_address OWNER TO postgres;

--

-- TOC entry 231 (class 1259 OID 16597)

-- Name: customers\_3more\_words\_in\_name; Type: VIEW; Schema: public; Owner: postgres

--

CREATE VIEW public.customers\_3more\_words\_in\_name AS

SELECT idc,

name,

address,

phone,

contact

FROM public.customers

WHERE ((name)::text ~~ '% % %'::text);

ALTER VIEW public.customers\_3more\_words\_in\_name OWNER TO postgres;

--

-- TOC entry 215 (class 1259 OID 16459)

-- Name: customers\_id\_seq; Type: SEQUENCE; Schema: public; Owner: postgres

--

CREATE SEQUENCE public.customers\_id\_seq

START WITH 1

INCREMENT BY 1

NO MINVALUE

NO MAXVALUE

CACHE 1;

ALTER SEQUENCE public.customers\_id\_seq OWNER TO postgres;

--

-- TOC entry 4904 (class 0 OID 0)

-- Dependencies: 215

-- Name: customers\_id\_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: postgres

--

ALTER SEQUENCE public.customers\_id\_seq OWNED BY public.customers.idc;

--

-- TOC entry 220 (class 1259 OID 16524)

-- Name: orders; Type: TABLE; Schema: public; Owner: postgres

--

CREATE TABLE public.orders (

ido bigint NOT NULL,

id\_customer bigint NOT NULL,

id\_product bigint NOT NULL,

quantity bigint NOT NULL,

date date NOT NULL

);

ALTER TABLE public.orders OWNER TO postgres;

--

-- TOC entry 222 (class 1259 OID 16561)

-- Name: customers\_join\_orders; Type: VIEW; Schema: public; Owner: postgres

--

CREATE VIEW public.customers\_join\_orders AS

SELECT customers.idc,

customers.name,

customers.address,

customers.phone,

customers.contact,

orders.ido,

orders.id\_customer,

orders.id\_product,

orders.quantity,

orders.date

FROM (public.customers

JOIN public.orders ON ((customers.idc = orders.id\_customer)))

ORDER BY customers.idc, orders.ido;

ALTER VIEW public.customers\_join\_orders OWNER TO postgres;

--

-- TOC entry 223 (class 1259 OID 16565)

-- Name: customers\_leftjoin\_orders; Type: VIEW; Schema: public; Owner: postgres

--

CREATE VIEW public.customers\_leftjoin\_orders AS

SELECT customers.idc,

customers.name,

customers.address,

customers.phone,

customers.contact,

orders.ido,

orders.id\_customer,

orders.id\_product,

orders.quantity,

orders.date

FROM (public.customers

LEFT JOIN public.orders ON ((customers.idc = orders.id\_customer)))

ORDER BY customers.idc, orders.ido;

ALTER VIEW public.customers\_leftjoin\_orders OWNER TO postgres;

--

-- TOC entry 226 (class 1259 OID 16577)

-- Name: customers\_leftjoin\_total\_quantity; Type: VIEW; Schema: public; Owner: postgres

--

CREATE VIEW public.customers\_leftjoin\_total\_quantity AS

SELECT

NULL::bigint AS idc,

NULL::character varying(50) AS name,

NULL::character varying(50) AS address,

NULL::character varying(50) AS phone,

NULL::character varying(50) AS contact,

NULL::numeric AS sum;

ALTER VIEW public.customers\_leftjoin\_total\_quantity OWNER TO postgres;

--

-- TOC entry 232 (class 1259 OID 16601)

-- Name: customers\_with\_no\_orders; Type: VIEW; Schema: public; Owner: postgres

--

CREATE VIEW public.customers\_with\_no\_orders AS

SELECT idc,

name,

address,

phone,

contact

FROM public.customers

WHERE (NOT (EXISTS ( SELECT orders.ido,

orders.id\_customer,

orders.id\_product,

orders.quantity,

orders.date

FROM public.orders

WHERE (customers.idc = orders.id\_customer))));

ALTER VIEW public.customers\_with\_no\_orders OWNER TO postgres;

--

-- TOC entry 229 (class 1259 OID 16589)

-- Name: orders\_february; Type: VIEW; Schema: public; Owner: postgres

--

CREATE VIEW public.orders\_february AS

SELECT ido,

id\_customer,

id\_product,

quantity,

date

FROM public.orders

WHERE ((date >= '2024-02-01'::date) AND (date <= '2024-02-29'::date))

ORDER BY date;

ALTER VIEW public.orders\_february OWNER TO postgres;

--

-- TOC entry 219 (class 1259 OID 16523)

-- Name: orders\_id\_seq; Type: SEQUENCE; Schema: public; Owner: postgres

--

CREATE SEQUENCE public.orders\_id\_seq

START WITH 1

INCREMENT BY 1

NO MINVALUE

NO MAXVALUE

CACHE 1;

ALTER SEQUENCE public.orders\_id\_seq OWNER TO postgres;

--

-- TOC entry 4905 (class 0 OID 0)

-- Dependencies: 219

-- Name: orders\_id\_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: postgres

--

ALTER SEQUENCE public.orders\_id\_seq OWNED BY public.orders.ido;

--

-- TOC entry 218 (class 1259 OID 16512)

-- Name: products; Type: TABLE; Schema: public; Owner: postgres

--

CREATE TABLE public.products (

idp bigint NOT NULL,

price numeric(5,2) NOT NULL,

shipping boolean NOT NULL,

description character varying(50) NOT NULL

);

ALTER TABLE public.products OWNER TO postgres;

--

-- TOC entry 224 (class 1259 OID 16569)

-- Name: orders\_join\_products; Type: VIEW; Schema: public; Owner: postgres

--

CREATE VIEW public.orders\_join\_products AS

SELECT orders.ido,

orders.id\_customer,

orders.id\_product,

orders.quantity,

orders.date,

products.idp,

products.price,

products.shipping,

products.description

FROM (public.orders

JOIN public.products ON ((orders.id\_product = products.idp)))

ORDER BY orders.date;

ALTER VIEW public.orders\_join\_products OWNER TO postgres;

--

-- TOC entry 225 (class 1259 OID 16573)

-- Name: orders\_leftjoin\_price\_mult; Type: VIEW; Schema: public; Owner: postgres

--

CREATE VIEW public.orders\_leftjoin\_price\_mult AS

SELECT orders.ido,

orders.id\_customer,

orders.id\_product,

orders.quantity,

orders.date,

products.price,

((orders.quantity)::numeric \* products.price) AS sum

FROM (public.orders

LEFT JOIN public.products ON ((products.idp = orders.id\_product)))

ORDER BY orders.ido;

ALTER VIEW public.orders\_leftjoin\_price\_mult OWNER TO postgres;

--

-- TOC entry 221 (class 1259 OID 16552)

-- Name: orders\_sorted\_by\_date; Type: VIEW; Schema: public; Owner: postgres

--

CREATE VIEW public.orders\_sorted\_by\_date AS

SELECT ido AS id,

id\_customer,

id\_product,

quantity,

date

FROM public.orders

ORDER BY date;

ALTER VIEW public.orders\_sorted\_by\_date OWNER TO postgres;

--

-- TOC entry 228 (class 1259 OID 16585)

-- Name: orders\_time\_passed; Type: VIEW; Schema: public; Owner: postgres

--

CREATE VIEW public.orders\_time\_passed AS

SELECT ido,

id\_customer,

id\_product,

quantity,

date,

(now() - (date)::timestamp with time zone) AS time\_passed

FROM public.orders

ORDER BY date;

ALTER VIEW public.orders\_time\_passed OWNER TO postgres;

--

-- TOC entry 233 (class 1259 OID 16636)

-- Name: orders\_where\_shipping\_true; Type: VIEW; Schema: public; Owner: postgres

--

CREATE VIEW public.orders\_where\_shipping\_true AS

SELECT ido,

id\_customer,

id\_product,

quantity,

date

FROM public.orders

WHERE (( SELECT products.shipping

FROM public.products

WHERE (orders.id\_product = products.idp)) = true)

ORDER BY id\_product;

ALTER VIEW public.orders\_where\_shipping\_true OWNER TO postgres;

--

-- TOC entry 217 (class 1259 OID 16511)

-- Name: products\_id\_seq; Type: SEQUENCE; Schema: public; Owner: postgres

--

CREATE SEQUENCE public.products\_id\_seq

START WITH 1

INCREMENT BY 1

NO MINVALUE

NO MAXVALUE

CACHE 1;

ALTER SEQUENCE public.products\_id\_seq OWNER TO postgres;

--

-- TOC entry 4906 (class 0 OID 0)

-- Dependencies: 217

-- Name: products\_id\_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: postgres

--

ALTER SEQUENCE public.products\_id\_seq OWNED BY public.products.idp;

--

-- TOC entry 237 (class 1259 OID 16820)

-- Name: products\_optional\_attributes; Type: TABLE; Schema: public; Owner: postgres

--

CREATE TABLE public.products\_optional\_attributes (

idpoa bigint NOT NULL,

id\_product bigint NOT NULL,

attr\_name character varying NOT NULL,

relevance boolean NOT NULL,

value character varying

);

ALTER TABLE public.products\_optional\_attributes OWNER TO postgres;

--

-- TOC entry 236 (class 1259 OID 16819)

-- Name: products\_optional\_attributes\_idpoa\_seq; Type: SEQUENCE; Schema: public; Owner: postgres

--

CREATE SEQUENCE public.products\_optional\_attributes\_idpoa\_seq

START WITH 1

INCREMENT BY 1

NO MINVALUE

NO MAXVALUE

CACHE 1;

ALTER SEQUENCE public.products\_optional\_attributes\_idpoa\_seq OWNER TO postgres;

--

-- TOC entry 4907 (class 0 OID 0)

-- Dependencies: 236

-- Name: products\_optional\_attributes\_idpoa\_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: postgres

--

ALTER SEQUENCE public.products\_optional\_attributes\_idpoa\_seq OWNED BY public.products\_optional\_attributes.idpoa;

--

-- TOC entry 227 (class 1259 OID 16581)

-- Name: products\_price\_morethan\_avgprice; Type: VIEW; Schema: public; Owner: postgres

--

CREATE VIEW public.products\_price\_morethan\_avgprice AS

SELECT

NULL::bigint AS idp,

NULL::numeric(5,2) AS price,

NULL::boolean AS shipping,

NULL::character varying(50) AS description,

NULL::numeric AS avg;

ALTER VIEW public.products\_price\_morethan\_avgprice OWNER TO postgres;

--

-- TOC entry 4712 (class 2604 OID 16463)

-- Name: customers idc; Type: DEFAULT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.customers ALTER COLUMN idc SET DEFAULT nextval('public.customers\_id\_seq'::regclass);

--

-- TOC entry 4715 (class 2604 OID 16806)

-- Name: customers\_optional\_attributes idoa; Type: DEFAULT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.customers\_optional\_attributes ALTER COLUMN idoa SET DEFAULT nextval('public.cusomers\_optional\_attributes\_idoa\_seq'::regclass);

--

-- TOC entry 4714 (class 2604 OID 16527)

-- Name: orders ido; Type: DEFAULT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.orders ALTER COLUMN ido SET DEFAULT nextval('public.orders\_id\_seq'::regclass);

--

-- TOC entry 4713 (class 2604 OID 16515)

-- Name: products idp; Type: DEFAULT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.products ALTER COLUMN idp SET DEFAULT nextval('public.products\_id\_seq'::regclass);

--

-- TOC entry 4716 (class 2604 OID 16823)

-- Name: products\_optional\_attributes idpoa; Type: DEFAULT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.products\_optional\_attributes ALTER COLUMN idpoa SET DEFAULT nextval('public.products\_optional\_attributes\_idpoa\_seq'::regclass);

--

-- TOC entry 4889 (class 0 OID 16460)

-- Dependencies: 216

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

--

COPY public.customers (idc, name, address, phone, contact) FROM stdin;

1 Crooks, Weber and Turner 0869 Lyons Place +86 (104) 145-8483 Kerwinn Sicily

2 Herzog, Larson and Harvey 11219 Armistice Junction +86 (223) 708-3599 Lucien Stirrup

3 Rodriguez, Heaney and Jones 145 Sundown Parkway +45 (423) 770-2320 Gaylene Quinnelly

4 Reilly, Leuschke and Jacobson 84730 Shopko Park +66 (300) 227-9202 Almire Cotgrove

5 Lubowitz and Sons 79 International Parkway +62 (184) 823-9682 Hirsch Strickett

6 Bergnaum, Pacocha and Mayert 76 North Center +82 (128) 882-9803 Ardyth Abela

7 Daugherty, McClure and Walsh 3 Orin Lane +54 (549) 136-2831 Livvy Killock

8 Bode-Medhurst 7902 Gateway Street +81 (619) 367-4752 Othello Lemerle

9 Dare and Sons 23 Kennedy Trail +81 (208) 599-7933 Lynne Vernau

10 Crist LLC 9298 Artisan Drive +86 (525) 857-3012 Beatrix Culcheth

\.

--

-- TOC entry 4895 (class 0 OID 16803)

-- Dependencies: 235

-- Data for Name: customers\_optional\_attributes; Type: TABLE DATA; Schema: public; Owner: postgres

--

COPY public.customers\_optional\_attributes (idoa, id\_customer, attr\_name, relevance, value) FROM stdin;

6 2 director f \N

7 2 subdirector f \N

8 2 country f \N

9 2 city f \N

10 3 director f \N

11 3 subdirector f \N

12 3 country f \N

13 3 city f \N

14 4 director f \N

15 4 subdirector f \N

16 4 country f \N

17 4 city f \N

18 5 director f \N

19 5 subdirector f \N

20 5 country f \N

21 5 city f \N

22 6 director f \N

23 6 subdirector f \N

24 6 country f \N

25 6 city f \N

26 7 director f \N

27 7 subdirector f \N

28 7 country f \N

29 7 city f \N

30 8 director f \N

31 8 subdirector f \N

32 8 country f \N

33 8 city f \N

34 9 director f \N

35 9 subdirector f \N

36 9 country f \N

37 9 city f \N

38 10 director f \N

39 10 subdirector f \N

40 10 country f \N

41 10 city f \N

1 1 director f \N

2 1 subdirector f \N

3 1 country f \N

4 1 city f \N

\.

--

-- TOC entry 4893 (class 0 OID 16524)

-- Dependencies: 220

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

--

COPY public.orders (ido, id\_customer, id\_product, quantity, date) FROM stdin;

1 7 2 73 2024-04-27

2 3 15 15 2024-04-26

3 2 9 16 2024-03-02

4 3 19 14 2024-04-28

5 8 22 44 2024-02-28

6 8 15 77 2024-05-01

7 7 12 95 2024-04-19

8 9 20 73 2024-01-25

9 5 11 93 2024-02-02

10 1 2 29 2024-02-01

11 2 24 12 2024-03-14

12 7 10 24 2024-04-12

13 5 11 27 2024-04-11

14 3 16 60 2024-05-29

15 10 25 30 2024-01-09

16 5 8 36 2024-01-22

17 10 16 28 2024-04-12

18 7 10 87 2024-03-06

19 7 8 29 2024-03-09

20 7 3 84 2024-01-19

21 6 25 17 2024-05-01

22 2 23 68 2024-05-05

23 2 17 99 2024-03-08

25 8 21 1 2024-01-02

26 7 14 30 2024-01-23

27 6 6 24 2024-03-22

28 6 19 100 2024-02-01

29 9 11 82 2024-03-19

30 2 16 15 2024-02-09

31 3 18 89 2024-05-01

32 5 2 99 2024-01-10

33 6 13 77 2024-05-10

34 5 19 86 2024-03-28

35 1 17 70 2024-05-13

36 9 11 36 2024-01-23

37 3 6 72 2024-05-07

38 7 3 19 2024-03-06

39 10 23 27 2024-01-04

40 3 9 17 2024-01-17

41 7 15 66 2024-01-01

42 2 22 1 2024-04-24

43 5 3 30 2024-02-22

44 5 23 95 2024-03-14

45 7 25 17 2024-04-30

46 8 13 57 2024-03-09

47 1 5 26 2024-02-04

48 5 12 6 2024-03-11

50 10 11 91 2024-02-09

24 1 25 89 2024-02-09

49 10 12 95 2024-03-22

\.

--

-- TOC entry 4891 (class 0 OID 16512)

-- Dependencies: 218

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

--

COPY public.products (idp, price, shipping, description) FROM stdin;

1 67.58 t Parsnip

4 29.42 t Ice Cream Bar - Hagen Daz

5 7.79 t Sea Bass - Fillets

7 75.43 t Chinese Foods - Thick Noodles

8 9.16 f Irish Cream - Baileys

9 53.59 t Bread Foccacia Whole

14 6.03 f Lemonade - Black Cherry, 591 Ml

21 12.59 f Fenngreek Seed

22 96.43 f Tomatoes - Orange

24 69.07 f Vodka - Moskovskaya

20 19.94 t Pimento - Canned

16 89.30 t Beans - Fine

10 79.37 t Sauce - Demi Glace

3 30.78 t Soup - Clam Chowder, Dry Mix

18 40.78 f Puree - Mocha

2 48.46 f Wine - Winzer Krems Gruner

19 94.99 f Tuna - Bluefin

17 35.26 t Food Colouring - Orange

6 98.78 f Ice Cream Bar - Drumstick

15 30.65 f Stock - Beef, Brown

23 69.67 t Straws - Cocktale

13 62.72 f Muffin Batt - Choc Chk

11 107.60 t Flour - Cake

25 101.80 t Salmon - Fillets

12 26.34 f Ginger - Fresh

\.

--

-- TOC entry 4897 (class 0 OID 16820)

-- Dependencies: 237

-- Data for Name: products\_optional\_attributes; Type: TABLE DATA; Schema: public; Owner: postgres

--

COPY public.products\_optional\_attributes (idpoa, id\_product, attr\_name, relevance, value) FROM stdin;

2 1 weight f \N

3 1 size f \N

4 2 expiration f \N

5 2 weight f \N

6 2 size f \N

7 3 expiration f \N

8 3 weight f \N

9 3 size f \N

10 4 expiration f \N

11 4 weight f \N

12 4 size f \N

13 5 expiration f \N

14 5 weight f \N

15 5 size f \N

16 6 expiration f \N

17 6 weight f \N

18 6 size f \N

19 7 expiration f \N

20 7 weight f \N

21 7 size f \N

22 8 expiration f \N

23 8 weight f \N

24 8 size f \N

25 9 expiration f \N

26 9 weight f \N

27 9 size f \N

28 10 expiration f \N

29 10 weight f \N

30 10 size f \N

31 11 expiration f \N

32 11 weight f \N

33 11 size f \N

34 12 expiration f \N

35 12 weight f \N

36 12 size f \N

37 13 expiration f \N

38 13 weight f \N

39 13 size f \N

40 14 expiration f \N

41 14 weight f \N

42 14 size f \N

43 15 expiration f \N

44 15 weight f \N

45 15 size f \N

46 16 expiration f \N

47 16 weight f \N

48 16 size f \N

49 17 expiration f \N

50 17 weight f \N

51 17 size f \N

52 18 expiration f \N

53 18 weight f \N

54 18 size f \N

55 19 expiration f \N

56 19 weight f \N

57 19 size f \N

58 20 expiration f \N

59 20 weight f \N

60 20 size f \N

61 21 expiration f \N

62 21 weight f \N

63 21 size f \N

64 22 expiration f \N

65 22 weight f \N

66 22 size f \N

67 23 expiration f \N

68 23 weight f \N

69 23 size f \N

70 24 expiration f \N

71 24 weight f \N

72 24 size f \N

73 25 expiration f \N

74 25 weight f \N

75 25 size f \N

1 1 expiration f \N

\.

--

-- TOC entry 4908 (class 0 OID 0)

-- Dependencies: 234

-- Name: cusomers\_optional\_attributes\_idoa\_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres

--

SELECT pg\_catalog.setval('public.cusomers\_optional\_attributes\_idoa\_seq', 41, true);

--

-- TOC entry 4909 (class 0 OID 0)

-- Dependencies: 215

-- Name: customers\_id\_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres

--

SELECT pg\_catalog.setval('public.customers\_id\_seq', 12, true);

--

-- TOC entry 4910 (class 0 OID 0)

-- Dependencies: 219

-- Name: orders\_id\_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres

--

SELECT pg\_catalog.setval('public.orders\_id\_seq', 66, true);

--

-- TOC entry 4911 (class 0 OID 0)

-- Dependencies: 217

-- Name: products\_id\_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres

--

SELECT pg\_catalog.setval('public.products\_id\_seq', 26, true);

--

-- TOC entry 4912 (class 0 OID 0)

-- Dependencies: 236

-- Name: products\_optional\_attributes\_idpoa\_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres

--

SELECT pg\_catalog.setval('public.products\_optional\_attributes\_idpoa\_seq', 75, true);

--

-- TOC entry 4724 (class 2606 OID 16810)

-- Name: customers\_optional\_attributes cusomers\_optional\_attributes\_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.customers\_optional\_attributes

ADD CONSTRAINT cusomers\_optional\_attributes\_pkey PRIMARY KEY (idoa);

--

-- TOC entry 4718 (class 2606 OID 16465)

-- Name: customers customers\_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.customers

ADD CONSTRAINT customers\_pkey PRIMARY KEY (idc);

--

-- TOC entry 4722 (class 2606 OID 16529)

-- Name: orders orders\_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.orders

ADD CONSTRAINT orders\_pkey PRIMARY KEY (ido);

--

-- TOC entry 4726 (class 2606 OID 16827)

-- Name: products\_optional\_attributes products\_optional\_attributes\_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.products\_optional\_attributes

ADD CONSTRAINT products\_optional\_attributes\_pkey PRIMARY KEY (idpoa);

--

-- TOC entry 4720 (class 2606 OID 16517)

-- Name: products products\_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.products

ADD CONSTRAINT products\_pkey PRIMARY KEY (idp);

--

-- TOC entry 4880 (class 2618 OID 16580)

-- Name: customers\_leftjoin\_total\_quantity \_RETURN; Type: RULE; Schema: public; Owner: postgres

--

CREATE OR REPLACE VIEW public.customers\_leftjoin\_total\_quantity AS

SELECT customers.idc,

customers.name,

customers.address,

customers.phone,

customers.contact,

sum(orders.quantity) AS sum

FROM (public.customers

LEFT JOIN public.orders ON ((customers.idc = orders.id\_customer)))

GROUP BY customers.idc

ORDER BY customers.idc;

--

-- TOC entry 4881 (class 2618 OID 16584)

-- Name: products\_price\_morethan\_avgprice \_RETURN; Type: RULE; Schema: public; Owner: postgres

--

CREATE OR REPLACE VIEW public.products\_price\_morethan\_avgprice AS

SELECT idp,

price,

shipping,

description,

( SELECT avg(products\_1.price) AS avg

FROM public.products products\_1) AS avg

FROM public.products

WHERE (price > ( SELECT avg(products\_1.price) AS avg

FROM public.products products\_1))

GROUP BY idp

ORDER BY price;

--

-- TOC entry 4731 (class 2620 OID 16769)

-- Name: orders insert; Type: TRIGGER; Schema: public; Owner: postgres

--

CREATE TRIGGER insert BEFORE INSERT ON public.orders FOR EACH ROW EXECUTE FUNCTION public.insert\_in\_orders();

--

-- TOC entry 4729 (class 2606 OID 16811)

-- Name: customers\_optional\_attributes cusomers\_optional\_attributes\_id\_customer\_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.customers\_optional\_attributes

ADD CONSTRAINT cusomers\_optional\_attributes\_id\_customer\_fkey FOREIGN KEY (id\_customer) REFERENCES public.customers(idc) NOT VALID;

--

-- TOC entry 4727 (class 2606 OID 16530)

-- Name: orders orders\_id\_customer\_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.orders

ADD CONSTRAINT orders\_id\_customer\_fkey FOREIGN KEY (id\_customer) REFERENCES public.customers(idc) NOT VALID;

--

-- TOC entry 4728 (class 2606 OID 16535)

-- Name: orders orders\_id\_product\_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.orders

ADD CONSTRAINT orders\_id\_product\_fkey FOREIGN KEY (id\_product) REFERENCES public.products(idp) NOT VALID;

--

-- TOC entry 4730 (class 2606 OID 16828)

-- Name: products\_optional\_attributes products\_optional\_attributes\_id\_product\_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.products\_optional\_attributes

ADD CONSTRAINT products\_optional\_attributes\_id\_product\_fkey FOREIGN KEY (id\_product) REFERENCES public.products(idp);

-- Completed on 2024-06-05 14:13:14

--

-- PostgreSQL database dump complete

--

# 2. Модифицированная задача

## 2.1. Схема базы данных

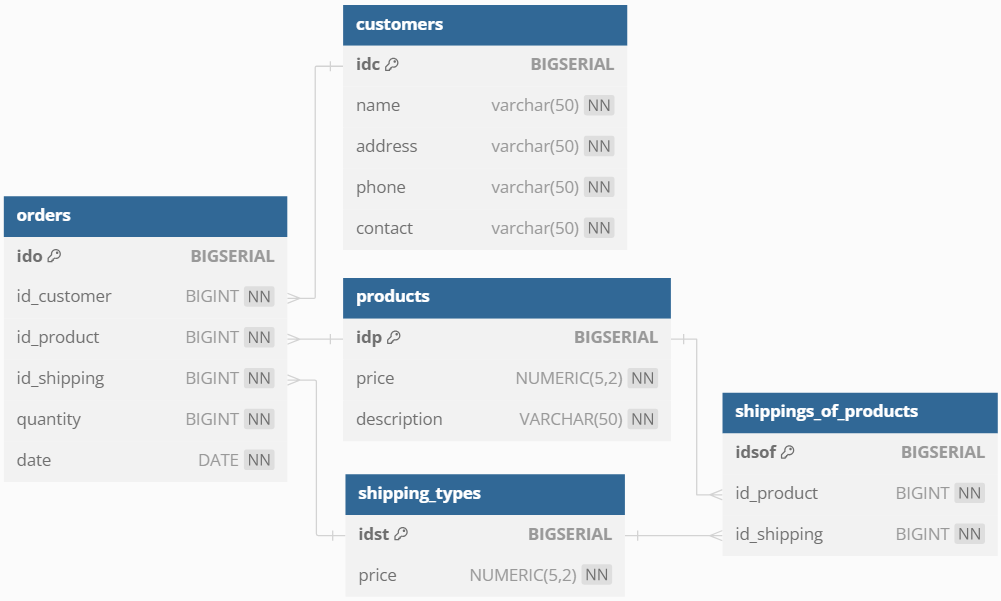


Рис. 2.1.1. Схема базы данных для модифицированной задачи

## 2.2. Представления для вывода агрегатных данных

Все запросы изначальной задачи остаются и для модифицированной, рассмотрим только те что претерпели изменения и добавим новые:

### 2.2.1. Представления, основанные на соединении таблиц

* Вывод всех заказов с информацией о заказанных продуктах и о выбранном способе доставки:

SELECT orders.\*, products,\*, shipping\_types.price AS shipping\_price

FROM orders

JOIN products

ON orders.id\_product = products.idp

JOIN shipping\_types

ON orders.id\_shipping = shipping\_types.idst

ORDER BY orders.date;

### 2.2.2. Представления, основанные на работе с арифметикой

* Вывод всех заказов c информацией о цене одной единицы товара в заказе и суммарной цене заказа с учётом доставки:

SELECT orders.\*, products.price,

(orders.quantity \* products.price) + (

SELECT price

FROM shipping\_types

WHERE orders.id\_shipping = shipping\_types.idst

) AS "sum"

FROM orders

LEFT JOIN products

ON products.idp = orders.id\_product

ORDER BY orders.ido;

### 2.2.3. Представления, основанные на работе с текстом и бинарными значениями

* Вывод заказов, в которых выбрана самая дешёвая доставка из возможных для конкретного продукта:

SELECT \*

FROM orders

WHERE id\_shipping = (

SELECT MIN(id\_shipping)

FROM shippings\_of\_products

WHERE orders.id\_product = shippings\_of\_products.id\_product

)

ORDER BY id\_product;

* Вывод продуктов, у которых возможны все типы доставки:

SELECT \*

FROM products

WHERE 3 = (

SELECT COUNT(\*)

FROM shippings\_of\_products

WHERE products.idp = shippings\_of\_products.id\_product);

## 2.3 Триггер INSERT для проверки правильности вводимых данных

Аналогично исходной задаче.

## 2.4 Процедура с курсором для модификации определённых записей по условию

Аналогично исходной задаче.

## 2.5 Процедура для удаления родительской записи с соответствующими дочерними записями в другой таблице без использования параметра CASCADE во внешних ключах

Аналогично исходной задаче.

## 2.6. Схема “Star”, добавление атрибута и значения

Аналогично исходной задаче.

## 2.7. Полный скрипт базы данных ordermanagmentmodified модифицированной задачи

--

-- PostgreSQL database dump

--

-- Dumped from database version 16.3

-- Dumped by pg\_dump version 16.3

-- Started on 2024-06-05 14:18:16

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 246 (class 1255 OID 16849)

-- Name: add\_optional\_attribute\_in\_customers(bigint, character varying, character varying); Type: PROCEDURE; Schema: public; Owner: postgres

--

CREATE PROCEDURE public.add\_optional\_attribute\_in\_customers(IN arg\_id\_customer bigint, IN arg\_attr\_name character varying, IN arg\_value character varying)

LANGUAGE plpgsql

AS $$DECLARE

curs REFCURSOR;

rec RECORD;

BEGIN

OPEN curs FOR

SELECT \*

FROM customers\_optional\_attributes;

LOOP

FETCH curs INTO rec;

EXIT WHEN NOT FOUND;

UPDATE customers\_optional\_attributes

SET relevance = true, value = arg\_value

WHERE id\_customer = arg\_id\_customer

AND attr\_name = arg\_attr\_name;

END LOOP;

CLOSE curs;

END;

$$;

ALTER PROCEDURE public.add\_optional\_attribute\_in\_customers(IN arg\_id\_customer bigint, IN arg\_attr\_name character varying, IN arg\_value character varying) OWNER TO postgres;

--

-- TOC entry 247 (class 1255 OID 16864)

-- Name: add\_optional\_attribute\_in\_products(bigint, character varying, character varying); Type: PROCEDURE; Schema: public; Owner: postgres

--

CREATE PROCEDURE public.add\_optional\_attribute\_in\_products(IN arg\_id\_product bigint, IN arg\_attr\_name character varying, IN arg\_value character varying)

LANGUAGE plpgsql

AS $$DECLARE

curs REFCURSOR;

rec RECORD;

BEGIN

OPEN curs FOR

SELECT \*

FROM products\_optional\_attributes;

LOOP

FETCH curs INTO rec;

EXIT WHEN NOT FOUND;

UPDATE products\_optional\_attributes

SET relevance = true, value = arg\_value

WHERE id\_product = arg\_id\_product

AND attr\_name = arg\_attr\_name;

END LOOP;

CLOSE curs;

END;

$$;

ALTER PROCEDURE public.add\_optional\_attribute\_in\_products(IN arg\_id\_product bigint, IN arg\_attr\_name character varying, IN arg\_value character varying) OWNER TO postgres;

--

-- TOC entry 243 (class 1255 OID 16791)

-- Name: cursor\_inc\_demanded\_products\_price(); Type: PROCEDURE; Schema: public; Owner: postgres

--

CREATE PROCEDURE public.cursor\_inc\_demanded\_products\_price()

LANGUAGE plpgsql

AS $$DECLARE

curs REFCURSOR;

rec RECORD;

BEGIN

OPEN curs FOR

SELECT \*

FROM orders

WHERE quantity > (

SELECT AVG(quantity)

FROM orders

);

LOOP

FETCH curs INTO rec;

EXIT WHEN NOT FOUND;

UPDATE products

SET price = price + 5

WHERE products.idp = rec.id\_product;

END LOOP;

CLOSE curs;

END;

$$;

ALTER PROCEDURE public.cursor\_inc\_demanded\_products\_price() OWNER TO postgres;

--

-- TOC entry 244 (class 1255 OID 16797)

-- Name: delete\_from\_customers\_and\_orders(bigint); Type: PROCEDURE; Schema: public; Owner: postgres

--

CREATE PROCEDURE public.delete\_from\_customers\_and\_orders(IN arg\_idc bigint)

LANGUAGE plpgsql

AS $$BEGIN

DELETE FROM orders

WHERE id\_customer = arg\_idc;

DELETE FROM customers

WHERE idc = arg\_idc;

END;

$$;

ALTER PROCEDURE public.delete\_from\_customers\_and\_orders(IN arg\_idc bigint) OWNER TO postgres;

--

-- TOC entry 245 (class 1255 OID 16798)

-- Name: delete\_from\_products\_and\_orders(bigint); Type: PROCEDURE; Schema: public; Owner: postgres

--

CREATE PROCEDURE public.delete\_from\_products\_and\_orders(IN arg\_idp bigint)

LANGUAGE plpgsql

AS $$BEGIN

DELETE FROM orders

WHERE id\_product = arg\_idp;

DELETE FROM products

WHERE idp = arg\_idp;

END;

$$;

ALTER PROCEDURE public.delete\_from\_products\_and\_orders(IN arg\_idp bigint) OWNER TO postgres;

--

-- TOC entry 242 (class 1255 OID 16770)

-- Name: insert\_in\_orders(); Type: FUNCTION; Schema: public; Owner: postgres

--

CREATE FUNCTION public.insert\_in\_orders() RETURNS trigger

LANGUAGE plpgsql

AS $$BEGIN

IF NEW.date > CURRENT\_TIMESTAMP THEN

RAISE EXCEPTION 'Incorrect date!';

END IF;

RETURN NEW;

END;

$$;

ALTER FUNCTION public.insert\_in\_orders() OWNER TO postgres;

SET default\_tablespace = '';

SET default\_table\_access\_method = heap;

--

-- TOC entry 216 (class 1259 OID 16607)

-- Name: customers; Type: TABLE; Schema: public; Owner: postgres

--

CREATE TABLE public.customers (

idc bigint NOT NULL,

name character varying(50) NOT NULL,

address character varying(50) NOT NULL,

phone character varying(50) NOT NULL,

contact character varying(50) NOT NULL

);

ALTER TABLE public.customers OWNER TO postgres;

--

-- TOC entry 228 (class 1259 OID 16705)

-- Name: customers\_3\_in\_address; Type: VIEW; Schema: public; Owner: postgres

--

CREATE VIEW public.customers\_3\_in\_address AS

SELECT idc,

name,

address,

phone,

contact

FROM public.customers

WHERE (((address)::text ~~ '3%'::text) OR ((address)::text ~~ '%3%'::text) OR ((address)::text ~~ '%3'::text));

ALTER VIEW public.customers\_3\_in\_address OWNER TO postgres;

--

-- TOC entry 229 (class 1259 OID 16709)

-- Name: customers\_3more\_words\_in\_name; Type: VIEW; Schema: public; Owner: postgres

--

CREATE VIEW public.customers\_3more\_words\_in\_name AS

SELECT idc,

name,

address,

phone,

contact

FROM public.customers

WHERE ((name)::text ~~ '% % %'::text);

ALTER VIEW public.customers\_3more\_words\_in\_name OWNER TO postgres;

--

-- TOC entry 215 (class 1259 OID 16606)

-- Name: customers\_id\_seq; Type: SEQUENCE; Schema: public; Owner: postgres

--

CREATE SEQUENCE public.customers\_id\_seq

START WITH 1

INCREMENT BY 1

NO MINVALUE

NO MAXVALUE

CACHE 1;

ALTER SEQUENCE public.customers\_id\_seq OWNER TO postgres;

--

-- TOC entry 4926 (class 0 OID 0)

-- Dependencies: 215

-- Name: customers\_id\_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: postgres

--

ALTER SEQUENCE public.customers\_id\_seq OWNED BY public.customers.idc;

--

-- TOC entry 222 (class 1259 OID 16648)

-- Name: orders; Type: TABLE; Schema: public; Owner: postgres

--

CREATE TABLE public.orders (

ido bigint NOT NULL,

id\_customer bigint NOT NULL,

id\_product bigint NOT NULL,

id\_shipping bigint NOT NULL,

quantity bigint NOT NULL,

date date NOT NULL

);

ALTER TABLE public.orders OWNER TO postgres;

--

-- TOC entry 224 (class 1259 OID 16673)

-- Name: customers\_join\_orders; Type: VIEW; Schema: public; Owner: postgres

--

CREATE VIEW public.customers\_join\_orders AS

SELECT customers.idc,

customers.name,

customers.address,

customers.phone,

customers.contact,

orders.ido,

orders.id\_customer,

orders.id\_product,

orders.id\_shipping,

orders.quantity,

orders.date

FROM (public.customers

JOIN public.orders ON ((customers.idc = orders.id\_customer)))

ORDER BY customers.idc, orders.ido;

ALTER VIEW public.customers\_join\_orders OWNER TO postgres;

--

-- TOC entry 225 (class 1259 OID 16677)

-- Name: customers\_leftjoin\_orders; Type: VIEW; Schema: public; Owner: postgres

--

CREATE VIEW public.customers\_leftjoin\_orders AS

SELECT customers.idc,

customers.name,

customers.address,

customers.phone,

customers.contact,

orders.ido,

orders.id\_customer,

orders.id\_product,

orders.id\_shipping,

orders.quantity,

orders.date

FROM (public.customers

LEFT JOIN public.orders ON ((customers.idc = orders.id\_customer)))

ORDER BY customers.idc, orders.ido;

ALTER VIEW public.customers\_leftjoin\_orders OWNER TO postgres;

--

-- TOC entry 233 (class 1259 OID 16743)

-- Name: customers\_leftjoin\_total\_quantity; Type: VIEW; Schema: public; Owner: postgres

--

CREATE VIEW public.customers\_leftjoin\_total\_quantity AS

SELECT

NULL::bigint AS idc,

NULL::character varying(50) AS name,

NULL::character varying(50) AS address,

NULL::character varying(50) AS phone,

NULL::character varying(50) AS contact,

NULL::numeric AS sum;

ALTER VIEW public.customers\_leftjoin\_total\_quantity OWNER TO postgres;

--

-- TOC entry 239 (class 1259 OID 16835)

-- Name: customers\_optional\_attributes; Type: TABLE; Schema: public; Owner: postgres

--

CREATE TABLE public.customers\_optional\_attributes (

idcoa bigint NOT NULL,

id\_customer bigint NOT NULL,

attr\_name character varying NOT NULL,

relevance boolean NOT NULL,

value character varying

);

ALTER TABLE public.customers\_optional\_attributes OWNER TO postgres;

--

-- TOC entry 238 (class 1259 OID 16834)

-- Name: customers\_optional\_attributes\_idcoa\_seq; Type: SEQUENCE; Schema: public; Owner: postgres

--

CREATE SEQUENCE public.customers\_optional\_attributes\_idcoa\_seq

START WITH 1

INCREMENT BY 1

NO MINVALUE

NO MAXVALUE

CACHE 1;

ALTER SEQUENCE public.customers\_optional\_attributes\_idcoa\_seq OWNER TO postgres;

--

-- TOC entry 4927 (class 0 OID 0)

-- Dependencies: 238

-- Name: customers\_optional\_attributes\_idcoa\_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: postgres

--

ALTER SEQUENCE public.customers\_optional\_attributes\_idcoa\_seq OWNED BY public.customers\_optional\_attributes.idcoa;

--

-- TOC entry 227 (class 1259 OID 16701)

-- Name: orders\_february; Type: VIEW; Schema: public; Owner: postgres

--

CREATE VIEW public.orders\_february AS

SELECT ido,

id\_customer,

id\_product,

id\_shipping,

quantity,

date

FROM public.orders

WHERE ((date >= '2024-02-01'::date) AND (date <= '2024-02-29'::date))

ORDER BY date;

ALTER VIEW public.orders\_february OWNER TO postgres;

--

-- TOC entry 221 (class 1259 OID 16647)

-- Name: orders\_id\_seq; Type: SEQUENCE; Schema: public; Owner: postgres

--

CREATE SEQUENCE public.orders\_id\_seq

START WITH 1

INCREMENT BY 1

NO MINVALUE

NO MAXVALUE

CACHE 1;

ALTER SEQUENCE public.orders\_id\_seq OWNER TO postgres;

--

-- TOC entry 4928 (class 0 OID 0)

-- Dependencies: 221

-- Name: orders\_id\_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: postgres

--

ALTER SEQUENCE public.orders\_id\_seq OWNED BY public.orders.ido;

--

-- TOC entry 218 (class 1259 OID 16628)

-- Name: products; Type: TABLE; Schema: public; Owner: postgres

--

CREATE TABLE public.products (

idp bigint NOT NULL,

price numeric(5,2) NOT NULL,

description character varying(50) NOT NULL

);

ALTER TABLE public.products OWNER TO postgres;

--

-- TOC entry 220 (class 1259 OID 16641)

-- Name: shipping\_types; Type: TABLE; Schema: public; Owner: postgres

--

CREATE TABLE public.shipping\_types (

idst bigint NOT NULL,

price numeric(5,2) NOT NULL

);

ALTER TABLE public.shipping\_types OWNER TO postgres;

--

-- TOC entry 236 (class 1259 OID 16757)

-- Name: orders\_join\_products\_join\_shipping\_types; Type: VIEW; Schema: public; Owner: postgres

--

CREATE VIEW public.orders\_join\_products\_join\_shipping\_types AS

SELECT orders.ido,

orders.id\_customer,

orders.id\_product,

orders.id\_shipping,

orders.quantity,

orders.date,

products.idp,

products.price,

products.description,

shipping\_types.price AS shipping\_price

FROM ((public.orders

JOIN public.products ON ((orders.id\_product = products.idp)))

JOIN public.shipping\_types ON ((orders.id\_shipping = shipping\_types.idst)))

ORDER BY orders.date;

ALTER VIEW public.orders\_join\_products\_join\_shipping\_types OWNER TO postgres;

--

-- TOC entry 234 (class 1259 OID 16747)

-- Name: orders\_leftjoin\_price\_shipping\_mult; Type: VIEW; Schema: public; Owner: postgres

--

CREATE VIEW public.orders\_leftjoin\_price\_shipping\_mult AS

SELECT orders.ido,

orders.id\_customer,

orders.id\_product,

orders.id\_shipping,

orders.quantity,

orders.date,

products.price,

(((orders.quantity)::numeric \* products.price) + ( SELECT shipping\_types.price

FROM public.shipping\_types

WHERE (orders.id\_shipping = shipping\_types.idst))) AS sum

FROM (public.orders

LEFT JOIN public.products ON ((products.idp = orders.id\_product)))

ORDER BY orders.ido;

ALTER VIEW public.orders\_leftjoin\_price\_shipping\_mult OWNER TO postgres;

--

-- TOC entry 223 (class 1259 OID 16669)

-- Name: orders\_sorted\_by\_date; Type: VIEW; Schema: public; Owner: postgres

--

CREATE VIEW public.orders\_sorted\_by\_date AS

SELECT ido AS id,

id\_customer,

id\_product,

id\_shipping,

quantity,

date

FROM public.orders

ORDER BY date;

ALTER VIEW public.orders\_sorted\_by\_date OWNER TO postgres;

--

-- TOC entry 226 (class 1259 OID 16697)

-- Name: orders\_time\_passed; Type: VIEW; Schema: public; Owner: postgres

--

CREATE VIEW public.orders\_time\_passed AS

SELECT ido,

id\_customer,

id\_product,

id\_shipping,

quantity,

date,

age(now(), (date)::timestamp with time zone) AS time\_passed

FROM public.orders

ORDER BY date;

ALTER VIEW public.orders\_time\_passed OWNER TO postgres;

--

-- TOC entry 232 (class 1259 OID 16722)

-- Name: shippings\_of\_products; Type: TABLE; Schema: public; Owner: postgres

--

CREATE TABLE public.shippings\_of\_products (

idsop bigint NOT NULL,

id\_product bigint NOT NULL,

id\_shipping bigint NOT NULL

);

ALTER TABLE public.shippings\_of\_products OWNER TO postgres;

--

-- TOC entry 235 (class 1259 OID 16752)

-- Name: orders\_where\_shipping\_min; Type: VIEW; Schema: public; Owner: postgres

--

CREATE VIEW public.orders\_where\_shipping\_min AS

SELECT ido,

id\_customer,

id\_product,

id\_shipping,

quantity,

date

FROM public.orders

WHERE (id\_shipping = ( SELECT min(shippings\_of\_products.id\_shipping) AS min

FROM public.shippings\_of\_products

WHERE (orders.id\_product = shippings\_of\_products.id\_product)))

ORDER BY id\_product;

ALTER VIEW public.orders\_where\_shipping\_min OWNER TO postgres;

--

-- TOC entry 217 (class 1259 OID 16627)

-- Name: products\_id\_seq; Type: SEQUENCE; Schema: public; Owner: postgres

--

CREATE SEQUENCE public.products\_id\_seq

START WITH 1

INCREMENT BY 1

NO MINVALUE

NO MAXVALUE

CACHE 1;

ALTER SEQUENCE public.products\_id\_seq OWNER TO postgres;

--

-- TOC entry 4929 (class 0 OID 0)

-- Dependencies: 217

-- Name: products\_id\_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: postgres

--

ALTER SEQUENCE public.products\_id\_seq OWNED BY public.products.idp;

--

-- TOC entry 241 (class 1259 OID 16851)

-- Name: products\_optional\_attributes; Type: TABLE; Schema: public; Owner: postgres

--

CREATE TABLE public.products\_optional\_attributes (

idpoa bigint NOT NULL,

id\_product bigint NOT NULL,

attr\_name character varying NOT NULL,

relevance boolean NOT NULL,

value character varying

);

ALTER TABLE public.products\_optional\_attributes OWNER TO postgres;

--

-- TOC entry 240 (class 1259 OID 16850)

-- Name: products\_optional\_attributes\_idpoa\_seq; Type: SEQUENCE; Schema: public; Owner: postgres

--

CREATE SEQUENCE public.products\_optional\_attributes\_idpoa\_seq

START WITH 1

INCREMENT BY 1

NO MINVALUE

NO MAXVALUE

CACHE 1;

ALTER SEQUENCE public.products\_optional\_attributes\_idpoa\_seq OWNER TO postgres;

--

-- TOC entry 4930 (class 0 OID 0)

-- Dependencies: 240

-- Name: products\_optional\_attributes\_idpoa\_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: postgres

--

ALTER SEQUENCE public.products\_optional\_attributes\_idpoa\_seq OWNED BY public.products\_optional\_attributes.idpoa;

--

-- TOC entry 230 (class 1259 OID 16717)

-- Name: products\_price\_morethan\_avgprice; Type: VIEW; Schema: public; Owner: postgres

--

CREATE VIEW public.products\_price\_morethan\_avgprice AS

SELECT

NULL::bigint AS idp,

NULL::numeric(5,2) AS price,

NULL::character varying(50) AS description,

NULL::numeric AS avg;

ALTER VIEW public.products\_price\_morethan\_avgprice OWNER TO postgres;

--

-- TOC entry 237 (class 1259 OID 16762)

-- Name: products\_where\_all\_shipping\_types; Type: VIEW; Schema: public; Owner: postgres

--

CREATE VIEW public.products\_where\_all\_shipping\_types AS

SELECT idp,

price,

description

FROM public.products

WHERE (3 = ( SELECT count(\*) AS count

FROM public.shippings\_of\_products

WHERE (products.idp = shippings\_of\_products.id\_product)));

ALTER VIEW public.products\_where\_all\_shipping\_types OWNER TO postgres;

--

-- TOC entry 219 (class 1259 OID 16640)

-- Name: shippings\_id\_seq; Type: SEQUENCE; Schema: public; Owner: postgres

--

CREATE SEQUENCE public.shippings\_id\_seq

START WITH 1

INCREMENT BY 1

NO MINVALUE

NO MAXVALUE

CACHE 1;

ALTER SEQUENCE public.shippings\_id\_seq OWNER TO postgres;

--

-- TOC entry 4931 (class 0 OID 0)

-- Dependencies: 219

-- Name: shippings\_id\_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: postgres

--

ALTER SEQUENCE public.shippings\_id\_seq OWNED BY public.shipping\_types.idst;

--

-- TOC entry 231 (class 1259 OID 16721)

-- Name: shippings\_of\_products\_idsop\_seq; Type: SEQUENCE; Schema: public; Owner: postgres

--

CREATE SEQUENCE public.shippings\_of\_products\_idsop\_seq

START WITH 1

INCREMENT BY 1

NO MINVALUE

NO MAXVALUE

CACHE 1;

ALTER SEQUENCE public.shippings\_of\_products\_idsop\_seq OWNER TO postgres;

--

-- TOC entry 4932 (class 0 OID 0)

-- Dependencies: 231

-- Name: shippings\_of\_products\_idsop\_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: postgres

--

ALTER SEQUENCE public.shippings\_of\_products\_idsop\_seq OWNED BY public.shippings\_of\_products.idsop;

--

-- TOC entry 4722 (class 2604 OID 16610)

-- Name: customers idc; Type: DEFAULT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.customers ALTER COLUMN idc SET DEFAULT nextval('public.customers\_id\_seq'::regclass);

--

-- TOC entry 4727 (class 2604 OID 16838)

-- Name: customers\_optional\_attributes idcoa; Type: DEFAULT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.customers\_optional\_attributes ALTER COLUMN idcoa SET DEFAULT nextval('public.customers\_optional\_attributes\_idcoa\_seq'::regclass);

--

-- TOC entry 4725 (class 2604 OID 16651)

-- Name: orders ido; Type: DEFAULT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.orders ALTER COLUMN ido SET DEFAULT nextval('public.orders\_id\_seq'::regclass);

--

-- TOC entry 4723 (class 2604 OID 16631)

-- Name: products idp; Type: DEFAULT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.products ALTER COLUMN idp SET DEFAULT nextval('public.products\_id\_seq'::regclass);

--

-- TOC entry 4728 (class 2604 OID 16854)

-- Name: products\_optional\_attributes idpoa; Type: DEFAULT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.products\_optional\_attributes ALTER COLUMN idpoa SET DEFAULT nextval('public.products\_optional\_attributes\_idpoa\_seq'::regclass);

--

-- TOC entry 4724 (class 2604 OID 16644)

-- Name: shipping\_types idst; Type: DEFAULT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.shipping\_types ALTER COLUMN idst SET DEFAULT nextval('public.shippings\_id\_seq'::regclass);

--

-- TOC entry 4726 (class 2604 OID 16725)

-- Name: shippings\_of\_products idsop; Type: DEFAULT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.shippings\_of\_products ALTER COLUMN idsop SET DEFAULT nextval('public.shippings\_of\_products\_idsop\_seq'::regclass);

--

-- TOC entry 4908 (class 0 OID 16607)

-- Dependencies: 216

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

--

COPY public.customers (idc, name, address, phone, contact) FROM stdin;

1 Crooks, Weber and Turner 0869 Lyons Place +86 (104) 145-8483 Kerwinn Sicily

2 Herzog, Larson and Harvey 11219 Armistice Junction +86 (223) 708-3599 Lucien Stirrup

3 Rodriguez, Heaney and Jones 145 Sundown Parkway +45 (423) 770-2320 Gaylene Quinnelly

4 Reilly, Leuschke and Jacobson 84730 Shopko Park +66 (300) 227-9202 Almire Cotgrove

5 Lubowitz and Sons 79 International Parkway +62 (184) 823-9682 Hirsch Strickett

6 Bergnaum, Pacocha and Mayert 76 North Center +82 (128) 882-9803 Ardyth Abela

7 Daugherty, McClure and Walsh 3 Orin Lane +54 (549) 136-2831 Livvy Killock

8 Bode-Medhurst 7902 Gateway Street +81 (619) 367-4752 Othello Lemerle

9 Dare and Sons 23 Kennedy Trail +81 (208) 599-7933 Lynne Vernau

10 Crist LLC 9298 Artisan Drive +86 (525) 857-3012 Beatrix Culcheth

\.

--

-- TOC entry 4918 (class 0 OID 16835)

-- Dependencies: 239

-- Data for Name: customers\_optional\_attributes; Type: TABLE DATA; Schema: public; Owner: postgres

--

COPY public.customers\_optional\_attributes (idcoa, id\_customer, attr\_name, relevance, value) FROM stdin;

2 1 subdirector f \N

3 1 country f \N

4 1 city f \N

5 2 director f \N

6 2 subdirector f \N

7 2 country f \N

8 2 city f \N

9 3 director f \N

10 3 subdirector f \N

11 3 country f \N

12 3 city f \N

13 4 director f \N

14 4 subdirector f \N

15 4 country f \N

16 4 city f \N

17 5 director f \N

18 5 subdirector f \N

19 5 country f \N

20 5 city f \N

21 6 director f \N

22 6 subdirector f \N

23 6 country f \N

24 6 city f \N

25 7 director f \N

26 7 subdirector f \N

27 7 country f \N

28 7 city f \N

29 8 director f \N

30 8 subdirector f \N

31 8 country f \N

32 8 city f \N

33 9 director f \N

34 9 subdirector f \N

35 9 country f \N

36 9 city f \N

37 10 director f \N

38 10 subdirector f \N

39 10 country f \N

40 10 city f \N

1 1 director f \N

\.

--

-- TOC entry 4914 (class 0 OID 16648)

-- Dependencies: 222

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

--

COPY public.orders (ido, id\_customer, id\_product, id\_shipping, quantity, date) FROM stdin;

1 7 2 2 73 2024-04-27

2 3 15 1 15 2024-04-26

3 2 9 1 16 2024-03-02

4 3 19 3 14 2024-04-28

5 8 22 2 44 2024-02-28

6 8 15 1 77 2024-05-01

7 7 12 1 95 2024-04-19

8 9 20 1 73 2024-01-25

9 5 11 3 93 2024-02-02

10 1 2 2 29 2024-02-01

11 2 24 2 12 2024-03-14

12 7 10 3 24 2024-04-12

13 5 11 2 27 2024-04-11

14 3 16 3 60 2024-05-29

15 10 25 3 30 2024-01-09

16 5 8 1 36 2024-01-22

17 10 16 3 28 2024-04-12

18 7 10 2 87 2024-03-06

19 7 8 1 29 2024-03-09

20 7 3 3 84 2024-01-19

21 6 25 3 17 2024-05-01

22 2 23 2 68 2024-05-05

23 2 17 1 99 2024-03-08

25 8 21 2 1 2024-01-02

26 7 14 1 30 2024-01-23

27 6 6 3 24 2024-03-22

28 6 19 3 100 2024-02-01

29 9 11 3 82 2024-03-19

30 2 16 3 15 2024-02-09

31 3 18 2 89 2024-05-01

32 5 2 2 99 2024-01-10

33 6 13 2 77 2024-05-10

34 5 19 3 86 2024-03-28

35 1 17 1 70 2024-05-13

36 9 11 3 36 2024-01-23

37 3 6 2 72 2024-05-07

38 7 3 3 19 2024-03-06

39 10 23 1 27 2024-01-04

40 3 9 1 17 2024-01-17

41 7 15 1 66 2024-01-01

42 2 22 3 1 2024-04-24

43 5 3 2 30 2024-02-22

44 5 23 1 95 2024-03-14

45 7 25 3 17 2024-04-30

46 8 13 2 57 2024-03-09

47 1 5 1 26 2024-02-04

48 5 12 1 6 2024-03-11

50 10 11 3 91 2024-02-09

24 1 25 3 89 2024-02-09

49 10 12 1 95 2024-03-22

\.

--

-- TOC entry 4910 (class 0 OID 16628)

-- Dependencies: 218

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

--

COPY public.products (idp, price, description) FROM stdin;

1 67.58 Parsnip

4 29.42 Ice Cream Bar - Hagen Daz

5 7.79 Sea Bass - Fillets

7 75.43 Chinese Foods - Thick Noodles

8 9.16 Irish Cream - Baileys

9 53.59 Bread Foccacia Whole

14 6.03 Lemonade - Black Cherry, 591 Ml

21 12.59 Fenngreek Seed

22 96.43 Tomatoes - Orange

24 69.07 Vodka - Moskovskaya

20 14.94 Pimento - Canned

16 84.30 Beans - Fine

10 74.37 Sauce - Demi Glace

3 25.78 Soup - Clam Chowder, Dry Mix

18 35.78 Puree - Mocha

2 38.46 Wine - Winzer Krems Gruner

19 84.99 Tuna - Bluefin

17 25.26 Food Colouring - Orange

6 93.78 Ice Cream Bar - Drumstick

15 20.65 Stock - Beef, Brown

23 59.67 Straws - Cocktale

13 52.72 Muffin Batt - Choc Chk

11 92.60 Flour - Cake

25 96.80 Salmon - Fillets

12 16.34 Ginger - Fresh

\.

--

-- TOC entry 4920 (class 0 OID 16851)

-- Dependencies: 241

-- Data for Name: products\_optional\_attributes; Type: TABLE DATA; Schema: public; Owner: postgres

--

COPY public.products\_optional\_attributes (idpoa, id\_product, attr\_name, relevance, value) FROM stdin;

1 1 expiration f \N

3 1 size f \N

4 2 expiration f \N

5 2 weight f \N

6 2 size f \N

7 3 expiration f \N

8 3 weight f \N

9 3 size f \N

10 4 expiration f \N

11 4 weight f \N

12 4 size f \N

13 5 expiration f \N

14 5 weight f \N

15 5 size f \N

16 6 expiration f \N

17 6 weight f \N

18 6 size f \N

19 7 expiration f \N

20 7 weight f \N

21 7 size f \N

22 8 expiration f \N

23 8 weight f \N

24 8 size f \N

25 9 expiration f \N

26 9 weight f \N

27 9 size f \N

28 10 expiration f \N

29 10 weight f \N

30 10 size f \N

31 11 expiration f \N

32 11 weight f \N

33 11 size f \N

34 12 expiration f \N

35 12 weight f \N

36 12 size f \N

37 13 expiration f \N

38 13 weight f \N

39 13 size f \N

40 14 expiration f \N

41 14 weight f \N

42 14 size f \N

43 15 expiration f \N

44 15 weight f \N

45 15 size f \N

46 16 expiration f \N

47 16 weight f \N

48 16 size f \N

49 17 expiration f \N

50 17 weight f \N

51 17 size f \N

52 18 expiration f \N

53 18 weight f \N

54 18 size f \N

55 19 expiration f \N

56 19 weight f \N

57 19 size f \N

58 20 expiration f \N

59 20 weight f \N

60 20 size f \N

61 21 expiration f \N

62 21 weight f \N

63 21 size f \N

64 22 expiration f \N

65 22 weight f \N

66 22 size f \N

67 23 expiration f \N

68 23 weight f \N

69 23 size f \N

70 24 expiration f \N

71 24 weight f \N

72 24 size f \N

73 25 expiration f \N

74 25 weight f \N

75 25 size f \N

2 1 weight f \N

\.

--

-- TOC entry 4912 (class 0 OID 16641)

-- Dependencies: 220

-- Data for Name: shipping\_types; Type: TABLE DATA; Schema: public; Owner: postgres

--

COPY public.shipping\_types (idst, price) FROM stdin;

1 5.00

2 10.00

3 25.00

\.

--

-- TOC entry 4916 (class 0 OID 16722)

-- Dependencies: 232

-- Data for Name: shippings\_of\_products; Type: TABLE DATA; Schema: public; Owner: postgres

--

COPY public.shippings\_of\_products (idsop, id\_product, id\_shipping) FROM stdin;

1 1 2

2 1 3

3 2 2

4 3 2

5 3 3

6 4 1

7 4 2

8 5 1

9 6 2

10 6 3

11 7 1

12 7 2

13 7 3

14 8 1

15 8 2

16 9 1

17 9 2

18 10 1

19 10 2

20 10 3

21 11 1

22 11 2

23 11 3

24 12 1

25 13 2

26 14 1

27 14 2

28 15 1

29 16 3

30 17 1

31 17 2

32 18 1

33 18 2

34 18 3

35 19 2

36 19 3

37 20 1

38 21 1

39 21 2

40 22 2

41 22 3

42 23 1

43 23 2

44 23 3

45 24 2

46 25 3

\.

--

-- TOC entry 4933 (class 0 OID 0)

-- Dependencies: 215

-- Name: customers\_id\_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres

--

SELECT pg\_catalog.setval('public.customers\_id\_seq', 10, true);

--

-- TOC entry 4934 (class 0 OID 0)

-- Dependencies: 238

-- Name: customers\_optional\_attributes\_idcoa\_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres

--

SELECT pg\_catalog.setval('public.customers\_optional\_attributes\_idcoa\_seq', 40, true);

--

-- TOC entry 4935 (class 0 OID 0)

-- Dependencies: 221

-- Name: orders\_id\_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres

--

SELECT pg\_catalog.setval('public.orders\_id\_seq', 54, true);

--

-- TOC entry 4936 (class 0 OID 0)

-- Dependencies: 217

-- Name: products\_id\_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres

--

SELECT pg\_catalog.setval('public.products\_id\_seq', 25, true);

--

-- TOC entry 4937 (class 0 OID 0)

-- Dependencies: 240

-- Name: products\_optional\_attributes\_idpoa\_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres

--

SELECT pg\_catalog.setval('public.products\_optional\_attributes\_idpoa\_seq', 75, true);

--

-- TOC entry 4938 (class 0 OID 0)

-- Dependencies: 219

-- Name: shippings\_id\_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres

--

SELECT pg\_catalog.setval('public.shippings\_id\_seq', 3, true);

--

-- TOC entry 4939 (class 0 OID 0)

-- Dependencies: 231

-- Name: shippings\_of\_products\_idsop\_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres

--

SELECT pg\_catalog.setval('public.shippings\_of\_products\_idsop\_seq', 46, true);

--

-- TOC entry 4740 (class 2606 OID 16842)

-- Name: customers\_optional\_attributes customers\_optional\_attributes\_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.customers\_optional\_attributes

ADD CONSTRAINT customers\_optional\_attributes\_pkey PRIMARY KEY (idcoa);

--

-- TOC entry 4730 (class 2606 OID 16612)

-- Name: customers customers\_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.customers

ADD CONSTRAINT customers\_pkey PRIMARY KEY (idc);

--

-- TOC entry 4736 (class 2606 OID 16653)

-- Name: orders orders\_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.orders

ADD CONSTRAINT orders\_pkey PRIMARY KEY (ido);

--

-- TOC entry 4742 (class 2606 OID 16858)

-- Name: products\_optional\_attributes products\_optional\_attributes\_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.products\_optional\_attributes

ADD CONSTRAINT products\_optional\_attributes\_pkey PRIMARY KEY (idpoa);

--

-- TOC entry 4732 (class 2606 OID 16635)

-- Name: products products\_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.products

ADD CONSTRAINT products\_pkey PRIMARY KEY (idp);

--

-- TOC entry 4738 (class 2606 OID 16727)

-- Name: shippings\_of\_products shippings\_of\_products\_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.shippings\_of\_products

ADD CONSTRAINT shippings\_of\_products\_pkey PRIMARY KEY (idsop);

--

-- TOC entry 4734 (class 2606 OID 16646)

-- Name: shipping\_types shippings\_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.shipping\_types

ADD CONSTRAINT shippings\_pkey PRIMARY KEY (idst);

--

-- TOC entry 4901 (class 2618 OID 16720)

-- Name: products\_price\_morethan\_avgprice \_RETURN; Type: RULE; Schema: public; Owner: postgres

--

CREATE OR REPLACE VIEW public.products\_price\_morethan\_avgprice AS

SELECT idp,

price,

description,

( SELECT avg(products\_1.price) AS avg

FROM public.products products\_1) AS avg

FROM public.products

WHERE (price > ( SELECT avg(products\_1.price) AS avg

FROM public.products products\_1))

GROUP BY idp

ORDER BY price;

--

-- TOC entry 4902 (class 2618 OID 16746)

-- Name: customers\_leftjoin\_total\_quantity \_RETURN; Type: RULE; Schema: public; Owner: postgres

--

CREATE OR REPLACE VIEW public.customers\_leftjoin\_total\_quantity AS

SELECT customers.idc,

customers.name,

customers.address,

customers.phone,

customers.contact,

sum(orders.quantity) AS sum

FROM (public.customers

LEFT JOIN public.orders ON ((customers.idc = orders.id\_customer)))

GROUP BY customers.idc

ORDER BY customers.idc;

--

-- TOC entry 4750 (class 2620 OID 16771)

-- Name: orders insert; Type: TRIGGER; Schema: public; Owner: postgres

--

CREATE TRIGGER insert BEFORE INSERT ON public.orders FOR EACH ROW EXECUTE FUNCTION public.insert\_in\_orders();

--

-- TOC entry 4748 (class 2606 OID 16843)

-- Name: customers\_optional\_attributes customers\_optional\_attributes\_id\_customer\_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.customers\_optional\_attributes

ADD CONSTRAINT customers\_optional\_attributes\_id\_customer\_fkey FOREIGN KEY (id\_customer) REFERENCES public.customers(idc);

--

-- TOC entry 4743 (class 2606 OID 16654)

-- Name: orders orders\_id\_customer\_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.orders

ADD CONSTRAINT orders\_id\_customer\_fkey FOREIGN KEY (id\_customer) REFERENCES public.customers(idc) NOT VALID;

--

-- TOC entry 4744 (class 2606 OID 16659)

-- Name: orders orders\_id\_product\_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.orders

ADD CONSTRAINT orders\_id\_product\_fkey FOREIGN KEY (id\_product) REFERENCES public.products(idp) NOT VALID;

--

-- TOC entry 4745 (class 2606 OID 16664)

-- Name: orders orders\_id\_shipping\_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.orders

ADD CONSTRAINT orders\_id\_shipping\_fkey FOREIGN KEY (id\_shipping) REFERENCES public.shipping\_types(idst) NOT VALID;

--

-- TOC entry 4749 (class 2606 OID 16859)

-- Name: products\_optional\_attributes products\_optional\_attributes\_id\_product\_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.products\_optional\_attributes

ADD CONSTRAINT products\_optional\_attributes\_id\_product\_fkey FOREIGN KEY (id\_product) REFERENCES public.products(idp);

--

-- TOC entry 4746 (class 2606 OID 16728)

-- Name: shippings\_of\_products shippings\_of\_products\_id\_product\_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.shippings\_of\_products

ADD CONSTRAINT shippings\_of\_products\_id\_product\_fkey FOREIGN KEY (id\_product) REFERENCES public.products(idp) NOT VALID;

--

-- TOC entry 4747 (class 2606 OID 16733)

-- Name: shippings\_of\_products shippings\_of\_products\_id\_shipping\_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.shippings\_of\_products

ADD CONSTRAINT shippings\_of\_products\_id\_shipping\_fkey FOREIGN KEY (id\_shipping) REFERENCES public.shipping\_types(idst) NOT VALID;

-- Completed on 2024-06-05 14:18:16

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-- PostgreSQL database dump complete

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