A6: Indexes, triggers, user functions and population

This artefact contains the physical schema of the database, the identification and characterisation of the indexes, the support of data integrity rules with triggers and the definition of the database user-defined functions. This artefact also contains the database's workload as well as the complete database creation script, including all SQL necessary to define all integrity constraints, indexes and triggers.

1. Database Workload

1.1. Tuple Estimation

Relation reference	Relation Name	Order of magnitude	Estimated growth
R01	users	thousands	units per day
R02	addresses	thousands	units per day
R03	faqs	tens	units per year
R04	purchases	thousands	dozens per day
R05	delivery_types	units	units per year
R06	product_carts	thousands	hundreds per day
R07	products	hundreds	units per month
R08	product_purchases	thousands	dozens per day
R09	photos	thousands	units per month
R10	categories	units	units per year
R11	properties	tens	dozens per year
R12	category_properties	hundreds	dozens per year
R13	reviews	thousands	dozens per day
R14	wishlists	thousands	units per day
R15	admins	units	units per year
R16	archived_products	tens	units per year
R17	values_lists	hundreds	units per month
R18	values	thousands	dozens per month
R19	countries	units	unit per year
R20	cities	hundreds	units per year

1.2. Frequent Queries

Query reference	SELECT01
Query description	get user info
Query frequency	thousands per day

```
SELECT users.name, users.username, users.email FROM users WHERE id = $id;
```

Query reference	SELECT02
Query description	get user addresses
Query frequency	dozens per day

```
SELECT A.id, A.name, A.street, A."postal_code", CTY.name, CNTR.name FROM
addresses AS A,
cities AS CTY,countries AS CNTR
WHERE A."user_id" = $id AND A."city_id" = CTY.id
AND CTY."country_id" = CNTR.id
AND A.isArchived = false;
```

Query reference	SELECT03
Query description	sign in
Query frequency	hundreds per day

```
SELECT id FROM users WHERE username = $username AND password =
$hashedPassword;

SELECT id FROM users WHERE email = $email AND password = $hashedPassword;
```

Query reference	SELECT04
Query description	User purchases of a certain type
Query frequency	dozens per day

```
SELECT PRCHS.id, PRCHS."date", PRCHS.status, PRCHS.total
FROM purchases AS PRCHS
WHERE PRCHS."user_id" = $id
AND PRCHS.status = $type;
```

Query reference	SELECT05
Query description	Get purchase products
Query frequency	dozens per day

```
SELECT PRDCT.id, PRDCT.name, PP.price, PP.quantity
FROM purchases AS PRCHS, products AS PRDCT, product_purchases AS PP
WHERE PRCHS.id = $id
AND PP."purchase_id" = PRCHS.id
AND PP."product_id" = PRDCT.id;
```

Query reference	SELECT06
Query description	Get purchase address
Query frequency	dozens per day

```
SELECT A.street, A."postal_code", CTY.name, CNTR.name
FROM purchases AS P, addresses AS A, cities AS CTY, countries AS CNTR
WHERE P.id = $id
AND P."address_id" = A.id
AND A."city_id" = CTY.id
AND CTY."country_id" = CNTR.id;
```

Query reference	SELECT07
Query description	Get purchases from any user of a certain type
Query frequency	dozens per day

```
SELECT PRCHS.id, PRCHS."date", PRCHS.status, PRCHS.total, PRCHS.user_id
FROM users AS U, purchases AS PRCHS
WHERE PRCHS.status = $type;
```

Query reference	SELECT08
Query description	Get purchase user name
Query frequency	dozens per day

```
SELECT users.username
FROM purchases
WHERE purchases.user_id = $userId;
```

Query reference	SELECT09
Query description	Get properties
Query frequency	dozens per day

```
SELECT name
FROM properties;
```

Query reference	SELECT10
Query description	Get all properties' names from each category
Query frequency	dozens per day

```
SELECT categories.id,categories.name
FROM categories;

SELECT
category_properties.property_id,category_properties.is_required_property
FROM category_properties
WHERE category_id = $category_id;

SELECT name
FROM properties
WHERE properties.id = $id;
```

Query reference	SELECT11
Query description	Get faqs
Query frequency	units per day

```
SELECT question,answer
FROM faqs;
```

Query reference	SELECT12
Query description	Dropdown navigation admin
Query frequency	dozens per day

```
SELECT Categories.name
FROM categories AS Categories
WHERE  (SELECT COUNT(*)
```

```
        FROM products AS Products
        WHERE Products.category_id = Categories.id) > 1;
```

Query reference	SELECT13
Query description	Get all products from category
Query frequency	hundreds per day

```
SELECT id
FROM categories
WHERE name = $categoryName;

SELECT products.id, products.name, products.price
FROM products
WHERE category_id = $categoryId
AND products.id NOT IN(SELECT * FROM archived_products);
```

Query reference	SELECT14
Query description	Get products from a category that are in specified price range
Query frequency	hundreds per day

```
SELECT products.id, products.name, products.price
FROM products
WHERE category_id = $categoryId
AND price < $maxPrice AND products.id NOT IN(SELECT * FROM
archived_products);
```

Query reference	SELECT15
Query description	Search products
Query frequency	hundreds per day

```
SELECT *
FROM products
WHERE search @@ plainto_ts_query('english', $nameSearched)
AND products.id NOT IN(SELECT * FROM archived_products);
```

Query reference	SELECT16
Query description	Homepage products
Query frequency	hundreds per day

```
SELECT name, price
FROM products
WHERE id = $prod_id;
```

Query reference	SELECT17
Query description	Get isNavBar categories
Query frequency	hundreds per day

```
SELECT id, name
FROM categories
WHERE is_navbar_category = TRUE;
```

Query reference	SELECT18
Query description	Get Categories product not archived
Query frequency	hundreds per day

```
SELECT P.id, P.name, P.price
FROM products AS P
WHERE category_id = $cat_id
AND P.id NOT IN (SELECT product_id FROM archived_products);

SELECT path
FROM photos
WHERE product_id = $prod_id
ORDER BY id
LIMIT 1;
```

Query reference	SELECT19
Query description	Get for each category (required properties-only x first) - get categories' properties values
Query frequency	dozens per day

```
SELECT V.id, V.name
FROM values AS V
JOIN values_lists AS VL
JOIN category_properties AS CP
WHERE CP.is_required_property = true
LIMIT 5;
```

Query reference	SELECT20
Query description	Get Checkout
Query frequency	hundreds per day

```
SELECT name, cost
FROM delivery_types;
```

Query reference	SELECT21
Query description	Get cart
Query frequency	hundreds per day

```
SELECT product_id, quantity
FROM product_carts
WHERE user_id = $user_id;
```

Query reference	SELECT22
Query description	Get wishlist
Query frequency	hundreds per day

```
SELECT product_id
FROM wishlists
WHERE user_id = $user_id;
```

Query reference	SELECT23
Query description	Get city and coutries
Query frequency	units per day

```
SELECT *
FROM countries;

SELECT name
FROM cities
WHERE country_id = $countryId;
```

Query reference	SELECT24
Query description	Get product info for product page

Query reference	SELECT24
Query frequency	hundreds per day

```
SELECT name, price, score, brand,quantity
FROM products
WHERE id = $prod_id;
```

Query reference	SELECT25
Query description	Get photos of product
Query frequency	hundreds per day

```
SELECT path
FROM photos
WHERE product_id = $prod_id;
```

Query reference	SELECT26
Query description	Get properties of product
Query frequency	hundreds per day

```
SELECT V.name, P.name
FROM values AS V, values_lists AS VL, category_properties AS CP,
properties AS P
WHERE VL.product_id = $prod_id
AND V.values_list_id = VL.id
AND VL.category_property_id = CP.id AND CP.property_id = P.id;
```

Query reference	SELECT27
Query description	Get reviews
Query frequency	hundreds per day

```
SELECT R.title, R.content, R.date, R.score, U.name
FROM reviews AS R, users AS U
WHERE R.user_id = U.id AND R.product_id = $prod_id;
```

1.3. Frequent Updates

Query reference	UPDATE01

Query reference	UPDATE01
Query description	update user info
Query frequency	units per day

```
UPDATE users SET name=$name, username=$username,
email=$email,password=$hashedPassword WHERE id=$id;
```

Query reference	UPDATE02
Query description	Update Archive Address
Query frequency	units per day

```
UPDATE addresses SET is_archived=$isArchived WHERE id=$id;
```

Query reference	UPDATE03
Query description	Update on hold purchase status
Query frequency	hundreds per day

```
UPDATE purchases SET status=$status WHERE purchase_id=$purchaseId
```

Query reference	UPDATE04
Query description	Update product quantity from cart
Query frequency	units per day

```
UPDATE product_carts SET quantity=$quantity WHERE product_id=$prodId AND
user_id=$id
```

Query reference	UPDATE05
Query description	change products values
Query frequency	units per month

```
UPDATE products SET
name=$name,price=$price,quantity=$quantity,brand=$brand WHERE id=$id;

UPDATE photos SET path=$pathname WHERE product_id=$prod_id;
```

```
UPDATE "values" SET name=$name
WHERE values_list_id IN (SELECT * FROM values_lists WHERE
product_id=$product_id)
```

Query reference	INSERT01
Query description	Add address
Query frequency	units per day

```
INSERT INTO addresses (name,street,postal_code,city_id,user_id)
VALUES($name,$street,$postal_code,$city_id,$id)
```

Query reference	INSERT02
Query description	sign up
Query frequency	units per day

```
INSERT INTO users (name, username, email,password) VALUES($name,
$username, $email, $hashedPassword)
```

Query reference	INSERT03
Query description	insert review
Query frequency	dozens per day

```
INSERT INTO reviews
(user_id,product_id,score,title,content)VALUES($userID,$productID,$score,$
title,$content)
```

Query reference	INSERT04
Query description	add property
Query frequency	dozens per year

```
INSERT INTO properties (name)VALUES($name)
```

Query reference	INSERT05
Query description	add category

Query reference	INSERT05
Query frequency	units per year

```
INSERT INTO categories (name,is_navbar_category)VALUES($name,$required)
```

Query reference	INSERT06
Query description	add category properties
Query frequency	dozens per year

```
INSERT INTO category_properties
(category_id,property_id)VALUES($category_id,$property_id)
```

Query reference	INSERT07
Query description	delete product
Query frequency	units per year

```
INSERT INTO archived_products(product_id)VALUES($productId);
```

Query reference	INSERT08
Query description	insert wishlist
Query frequency	units per day

```
INSERT INTO wishlists (user_id,product_id) VALUES ($userid,$productid)
```

Query reference	INSERT09
Query description	insert new product to cart
Query frequency	hundreds per day

```
INSERT INTO product_carts (product_id,user_id,quantity) VALUES
($proId,$id,$quantity)
```

Query reference	INSERT10

Query reference	INSERT10
Query description	add purchase and products of that purchase
Query frequency	dozens per day

```
INSERT INTO purchases (total,user_id,address_id) VALUES
($total,$userid,$address_id)

INSERT INTO product_purchases (product_id,purchase_id,quantity,price)
VALUES ($proId,$purchId,$quantity,$price)
```

Query reference	INSERT11
Query description	insert products
Query frequency	units per month

```
INSERT INTO products
(name,price,quantity_available,score,category_id,brand)
VALUES ($name,$price,$quantity_available,$score,$category_id,$brand)

INSERT INTO photos (path,product_id) VALUES ($pathname,$proID)

INSERT INTO "values" (name,values_list_id) VALUES ($name,$values_list_id)
```

Query reference	DELETE01
Query description	delete user review
Query frequency	dozens per day

```
DELETE FROM reviews where user_id=$user_id AND product_id=$product_id
```

Query reference	DELETE02
Query description	delete properties
Query frequency	units per month

```
DELETE FROM properties WHERE properties.name = $name;
```

Query reference	DELETE03
Query description	delete faqs
Query frequency	units per year

```
DELETE FROM faqs WHERE question=$question;
```

Query reference	DELETE04
Query description	delete product Wishlist
Query frequency	units per day

```
DELETE FROM whishlist WHERE user_id=$user_id AND product_id=$product_id
```

Query reference	DELETE05
Query description	Remove Cart
Query frequency	dozens per day

```
DELETE FROM product_carts WHERE product_id=$prodId AND user_id=$id;
```

2. Proposed Indices

2.1. Performance Indices

Index reference	IDX01
Related queries	SELECT01
Index relation	users
Index attribute	username
Index type	Hash
Cardinality	High
Clustering	No

Index reference	**IDX01**
Justification	Query SELECT01 that gets the information of a user is executed several times so it has to be fast; doesn´t need range query support; cardinality is high because the username is a unique key and so it's not a good candidate for clustering.

```
CREATE INDEX username_users ON users USING hash (username);
```

Index reference	**IDX02**
Related queries	SELECT02
Index relation	addresses
Index attribute	"user_id"
Index type	Hash
Cardinality	Medium
Clustering	Yes
Justification	Query SELECT02 that gets the addresses of a user is executed several times so it has to be fast; doesn´t need range query support; it's a good candidate for clustering because its cardinality is medium.

```
CREATE INDEX userid_addresses ON addresses USING hash (user_id);
```

Index reference	**IDX03**
Related queries	SELECT04
Index relation	purchases
Index attribute	"user_id"
Index type	Hash
Cardinality	Medium

Index reference	**IDX03**
Clustering	Yes
Justification	Query SELECT04 that gets the history of purchases of a user is executed several times so it has to be fast; doesn´t need range query support; it's a good candidate for clustering because its cardinality is medium.

```
CREATE INDEX userid_purchases ON purchases USING hash (user_id);
```

Index reference	**IDX04**
Related queries	SELECT27
Index relation	reviews
Index attribute	"product_id"
Index type	Hash
Cardinality	Medium
Clustering	Yes
Justification	Query SELECT27 that gets the reviews of a certain product is executed several times so it has to be fast; doesn´t need range query support; it's a good candidate for clustering because its cardinality is medium.

```
CREATE INDEX productid_reviews ON reviews USING hash (product_id);
```

Index reference	**IDX05**
Related queries	SELECT18
Index relation	products
Index attribute	"category_id"

Index reference	**IDX05**
Index type	Hash
Cardinality	Medium
Clustering	No
Justification	Query SELECT18 that gets the products of a certain category is executed several times so it has to be fast; doesn´t need range query support; it's a good candidate for clustering because its cardinality is medium, but it won't be clustered because it's better if the clustered index for the relation products is index IDX06, since it will be used for quick range queries.

```
CREATE INDEX categoryid_products ON products USING hash (category_id);
```

Index reference	**IDX06**
Related queries	SELECT14
Index relation	products
Index attribute	price
Index type	B-tree
Cardinality	High
Clustering	Yes
Justification	To allow searching products of a certain product that have the price lower than a certain value faster; It's B-tree and clustered to allow for quick range queries.

```
CREATE INDEX price_products ON products USING btree (price);
```

2.2. Full-text Search Indices

Index reference	**IDX07**
Related queries	SELECT15

Index reference	IDX07
Index relation	products
Index attribute	name
Index type	GiST
Cardinality	High
Clustering	No
Justification	To improve the performance of full-text searches while searching for products by name; GiST because it's better for dynamic data.

```
CREATE INDEX search_product ON products USING GIST (search);
```

3. Triggers

Trigger reference	TRIGGER01
Trigger description	Update products' score according to all existing reviews

```
CREATE FUNCTION update_product_score() RETURNS TRIGGER AS
$BODY$
BEGIN
        UPDATE products
        SET score = (AVG(score) FROM reviews WHERE product_id =
New.product_id)
        WHERE "product_id" = New."product_id"
END
$BODY$
LANGUAGE plpgsql;

CREATE TRIGGER product_score AFTER INSERT OR UPDATE OR DELETE
ON reviews
EXECUTE PROCEDURE update_product_score();
```

Trigger reference	TRIGGER02
Trigger description	An user can only review products that he bought

```
CREATE FUNCTION add_review() RETURNS TRIGGER AS
$BODY$
BEGIN
```

```
    IF NOT EXISTS (SELECT Product.product_id
                   FROM purchases AS Purchases, product_purchases AS
Product, users AS Users
                   WHERE Purchases.id = Product.purchase_id AND New.user_id
= Purchases.user_id
                   AND New.product_id = Product.product_id AND Users.id =
*LOGGED_USER_ID*) THEN
        RAISE EXCEPTION 'You can not review a product you have not
purchased.';
    END IF;
    RETURN NEW;
END
$BODY$
LANGUAGE plpgsql;

CREATE TRIGGER add_review
BEFORE INSERT OR UPDATE ON review
FOR EACH ROW
EXECUTE PROCEDURE add_review();
```

Trigger reference	**TRIGGER03**
Trigger description	An user can't buy more than the available quantity

```
CREATE FUNCTION check_purchases_quantities() RETURNS TRIGGER AS
$BODY$
BEGIN
        IF
                NOT EXISTS
                        (SELECT quantity_available FROM products
                        WHERE id = New.product_id
                        AND quantity_available >= New.quantity)
        THEN
                RAISE EXCEPTION 'You can't buy % items of product %' ,
New.quantity, New.product_id
        END IF;
        RETURN NEW;
END
$BODY$
LANGUAGE plpgsql;

CREATE TRIGGER check_purchase_quantities BEFORE INSERT
ON product_purchases
FOR EACH ROW
EXECUTE PROCEDURE check_purchases_quantities();
```

Trigger reference	**TRIGGER04**
Trigger description	When a user buy a product it is removed from it's cart

```
CREATE FUNCTION clear_cart() RETURNS TRIGGER AS
$BODY$
BEGIN
        DELETE FROM product_carts
        WHERE "user_id" = New."user_id"
END
$BODY$
LANGUAGE plpgsql;

CREATE TRIGGER clear_cart AFTER INSERT
ON purchases
EXECUTE PROCEDURE clear_cart();
```

Trigger reference	**TRIGGER05**
Trigger description	If a wishlist's product is added to the cart it is removed from the wishlist

```
CREATE FUNCTION remove_wishlist_product() RETURNS TRIGGER AS
$BODY$
BEGIN
        DELETE FROM wishlist
        WHERE "user_id" = New."user_id"
  AND "product_id" = New."product_id"
END
$BODY$
LANGUAGE plpgsql;

CREATE TRIGGER remove_wishlist_product AFTER INSERT
ON product_carts
EXECUTE PROCEDURE remove_wishlist_product();
```

Trigger reference	**TRIGGER06**
Trigger description	When a product is bought its available quantity is reduced

```
CREATE FUNCTION update_available_products() RETURNS TRIGGER AS
$BODY$
BEGIN
  UPDATE products
  SET quantity = quantity - New.quantity
  WHERE "product_id" = New."product_id"
END
$BODY$
LANGUAGE plpgsql;

CREATE TRIGGER update_available_products AFTER INSERT
ON product_purchases
EXECUTE PROCEDURE update_available_products();
```

Trigger reference	TRIGGER07
Trigger description	An archived product should be removed from any cart or wishlist

```
CREATE FUNCTION archive_product() RETURN TRIGGER AS
$BODY$
BEGIN
        DELETE FROM whishlists
        WHERE product_id = NEW.id
        DELETE FROM product_carts
        WHERE product_id = NEW.id

END
$BODY$
LANGUAGE plpgsql;

CREATE TRIGGER archive_product AFTER INSERT
ON archived_products
FOR EACH ROW
EXECUTE PROCEDURE archive_product();
```

Trigger reference	TRIGGER08
Trigger description	To keep TSVECTOR in sync

```
CREATE FUNCTION product_search_update() RETURN TRIGGER AS
$BODY$
BEGIN
        IF TG_OP = 'INSERT' THEN
                NEW.search = to_tsvector ('english', NEW.name);
        END IF;
        IF TG_OP = 'UPDATE THEN
                IF NEW.name <> OLD.name THEN
                        NEW.search = to_tsvector ('english', NEW.name);
                ENDIF;
        ENDIF;
        RETURN NEW;
END
$BODY$
LANGUAGE plpgsql;

CREATE TRIGGER product_search_update() BEFORE INSERT OR UPDATE
ON Products
FOR EACH ROW
EXECUTE PROCEDURE tsvector_update_trigger();
```

4. Complete SQL Code

```
--Tables
CREATE DOMAIN "Today" AS date NOT NULL DEFAULT ('now'::text)::date;


CREATE TABLE countries (
    id serial PRIMARY KEY,
    name text NOT NULL UNIQUE
);

CREATE TABLE cities (
    id serial PRIMARY KEY,
    name text NOT NULL UNIQUE,
    "country_id" integer NOT NULL REFERENCES countries(id) ON DELETE
CASCADE
);

CREATE TABLE users (
    id serial PRIMARY KEY,
    name text NOT NULL,
    username text NOT NULL UNIQUE,
    email text NOT NULL UNIQUE,
    password text NOT NULL,
    nif integer UNIQUE
);

CREATE TABLE addresses (
    id serial PRIMARY KEY,
    name text NOT NULL,
    street text NOT NULL,
    "postal_code" text NOT NULL,
    "city_id" integer NOT NULL REFERENCES cities(id) ON DELETE CASCADE,
    "user_id" integer NOT NULL REFERENCES users(id) ON DELETE CASCADE,
    "is_archived" boolean DEFAULT false NOT NULL
);

CREATE TABLE admins (
    "user_id" integer PRIMARY KEY REFERENCES users(id) ON DELETE CASCADE
);

CREATE TABLE categories (
    id serial PRIMARY KEY,
    name text NOT NULL UNIQUE,
    "is_navbar_category" boolean DEFAULT false NOT NULL
);


CREATE TABLE properties (
    id serial PRIMARY KEY,
    name text NOT NULL UNIQUE
);
```

```
CREATE TABLE category_properties (
    id serial PRIMARY KEY,
    "category_id" integer NOT NULL REFERENCES categories(id) ON DELETE
CASCADE,
    "property_id" integer NOT NULL REFERENCES properties(id) ON DELETE
CASCADE,
    "is_required_property" boolean DEFAULT false NOT NULL
);

CREATE TABLE products (
    id serial PRIMARY KEY,
    name text NOT NULL,
    price double precision NOT NULL,
    "quantity_available" integer NOT NULL,
    score double precision NOT NULL,
    "category_id" integer NOT NULL REFERENCES categories(id) ON DELETE
CASCADE,
    CONSTRAINT price CHECK ((price > (0)::double precision)),
    CONSTRAINT quantity_available CHECK ((quantity_available >= 0)),
    CONSTRAINT score CHECK (score >= 0 AND score <= 5)
);

CREATE TABLE archived_products (
    "product_id" integer PRIMARY KEY REFERENCES products(id) ON DELETE
CASCADE
);

CREATE TABLE delivery_types (
    id serial PRIMARY KEY,
    name text NOT NULL UNIQUE,
    cost double precision NOT NULL UNIQUE
);

CREATE TABLE faqs (
    id serial PRIMARY KEY,
    question text NOT NULL UNIQUE,
    answer text NOT NULL
);

CREATE TABLE photos (
    id serial PRIMARY KEY,
    path text NOT NULL,
    "product_id" integer NOT NULL REFERENCES products(id) ON DELETE
CASCADE
);

CREATE TABLE product_carts (
    id serial PRIMARY KEY,
    "user_id" integer NOT NULL REFERENCES users(id) ON DELETE CASCADE,
    "product_id" integer NOT NULL REFERENCES products(id) ON DELETE
CASCADE,
    quantity integer NOT NULL,
    CONSTRAINT quantity CHECK ((quantity > 0))
);
```

```
CREATE TABLE purchases (
    id serial PRIMARY KEY,
    "date" TIMESTAMP WITH TIME zone DEFAULT now() NOT NULL,
    total double precision NOT NULL,
    "user_id" integer NOT NULL REFERENCES users(id) ON DELETE CASCADE,
    "address_id" integer NOT NULL REFERENCES addresses(id) ON DELETE
CASCADE,
    status text DEFAULT 'Processing'::text NOT NULL,
    CONSTRAINT status CHECK (status IN ('Processing', 'Shipped',
'Delivered')),
    CONSTRAINT total CHECK ((total > (0)::double precision))
);

CREATE TABLE product_purchases (
    "product_id" integer NOT NULL REFERENCES products(id) ON DELETE
CASCADE,
    "purchase_id" integer NOT NULL REFERENCES purchases(id) ON DELETE
CASCADE,
    quantity integer NOT NULL,
    price double precision NOT NULL,
    CONSTRAINT price CHECK ((price > (0)::double precision)),
    CONSTRAINT quantity CHECK ((quantity > 0)),
    PRIMARY KEY ("product_id", "purchase_id")
);


CREATE TABLE reviews (
    "user_id" integer REFERENCES users(id) ON DELETE CASCADE,
    "product_id" integer REFERENCES products(id) ON DELETE CASCADE,
    score integer NOT NULL,
    title text NOT NULL,
    content text NOT NULL,
    CONSTRAINT score CHECK (((score >= 0) AND (score <= 5))),
    PRIMARY KEY ("user_id", "product_id")
);

CREATE TABLE values_lists (
    id serial PRIMARY KEY,
    "category_property_id" integer NOT NULL REFERENCES
category_properties(id) ON DELETE CASCADE,
    "product_id" integer NOT NULL REFERENCES products(id) ON DELETE
CASCADE,
    UNIQUE("category_property_id", "product_id")
);

CREATE TABLE values (
    id serial PRIMARY KEY,
    name text,
    "values_list_id" integer NOT NULL REFERENCES values_lists(id) ON
DELETE CASCADE
);
```

```
CREATE TABLE wishlists (
    "user_id" integer REFERENCES users(id) ON DELETE CASCADE,
    "product_id" integer REFERENCES products(id) ON DELETE CASCADE,
    PRIMARY KEY ("user_id", "product_id")
);

--Indexs

CREATE INDEX username_users ON users USING hash (username);

CREATE INDEX userid_addresses ON addresses USING hash (user_id);

CREATE INDEX userid_purchases ON purchases USING hash (user_id);

CREATE INDEX productid_reviews ON reviews USING hash (product_id);

CREATE INDEX categoryid_products ON products USING hash (category_id);

CREATE INDEX price_products ON products USING btree (price);

CREATE INDEX search_product ON products USING GIST (name);

--Triggers

CREATE FUNCTION update_product_score() RETURNS TRIGGER AS
$BODY$
BEGIN
        UPDATE products
        SET score = (AVG(score) FROM reviews WHERE product_id =
New.product_id)
        WHERE "product_id" = New."product_id"
END
$BODY$
LANGUAGE plpgsql;

CREATE TRIGGER product_score AFTER INSERT OR UPDATE OR DELETE
ON reviews
EXECUTE PROCEDURE update_product_score();


CREATE FUNCTION add_review() RETURNS TRIGGER AS
$BODY$
BEGIN
    IF NOT EXISTS (SELECT Product.product_id
                FROM purchases AS Purchases, product_purchases AS
Product, users AS Users
                WHERE Purchases.id = Product.purchase_id AND New.user_id
= Purchases.user_id
                AND New.product_id = Product.product_id AND Users.id =
*LOGGED_USER_ID*) THEN
        RAISE EXCEPTION 'You can not review a product you have not
purchased.';
    END IF;
    RETURN NEW;
```

```
END
$BODY$
LANGUAGE plpgsql;

CREATE TRIGGER add_review
BEFORE INSERT OR UPDATE ON review
FOR EACH ROW
EXECUTE PROCEDURE add_review();

CREATE FUNCTION check_purchases_quantities() RETURNS TRIGGER AS
$BODY$
BEGIN
        IF
                NOT EXISTS (SELECT quantity_available FROM products WHERE
id = New.product_id AND quantity_available >= New.quantity)
        THEN
                RAISE EXCEPTION 'You can't buy % items of product %' ,
New.quantity, New.product_id
        END IF;
        RETURN NEW;
END
$BODY$
LANGUAGE plpgsql;

CREATE TRIGGER check_purchase_quantities BEFORE INSERT
ON product_purchases
FOR EACH ROW
EXECUTE PROCEDURE check_purchases_quantities();

CREATE FUNCTION clear_cart() RETURNS TRIGGER AS
$BODY$
BEGIN
        DELETE FROM product_carts
        WHERE "user_id" = New."user_id"
END
$BODY$
LANGUAGE plpgsql;

CREATE TRIGGER clear_cart AFTER INSERT
ON purchases
EXECUTE PROCEDURE clear_cart();


CREATE FUNCTION remove_wishlist_product() RETURNS TRIGGER AS
$BODY$
BEGIN
        DELETE FROM wishlist
        WHERE "user_id" = New."user_id"
  AND "product_id" = New."product_id"
END
$BODY$
LANGUAGE plpgsql;

CREATE TRIGGER remove_wishlist_product AFTER INSERT
```

```
ON product_carts
EXECUTE PROCEDURE remove_wishlist_product();

CREATE FUNCTION update_available_products() RETURNS TRIGGER AS
$BODY$
BEGIN
  UPDATE products
  SET quantity = quantity - New.quantity
  WHERE "product_id" = New."product_id"
END
$BODY$
LANGUAGE plpgsql;

CREATE TRIGGER update_available_products AFTER INSERT
ON product_purchases
EXECUTE PROCEDURE update_available_products();

CREATE FUNCTION archive_product() RETURN TRIGGER AS
$BODY$
BEGIN
        DELETE FROM whishlists
        WHERE product_id = NEW.id
        DELETE FROM product_carts
        WHERE product_id = NEW.id

END
$BODY$
LANGUAGE plpgsql;

CREATE TRIGGER archive_product AFTER INSERT
ON archived_products
FOR EACH ROW
EXECUTE PROCEDURE archive_product();
```

DATA

```
/*ADDRESSES*/
INSERT INTO addresses (name, street, "postal_code", "city_id", "user_id")
VALUES ('home', 'Dennis', '18740-000', 1, 7);
INSERT INTO addresses (name, street, "postal_code", "city_id", "user_id")
VALUES ('country house', 'Dahle', '18740-000', 2, 3);
INSERT INTO addresses (name, street, "postal_code", "city_id", "user_id")
VALUES ('company', 'Luster', '22205', 3, 18);
INSERT INTO addresses (name, street, "postal_code", "city_id", "user_id")
VALUES ('home', 'Monica', '88000-000', 4, 2);
INSERT INTO addresses (name, street, "postal_code", "city_id", "user_id")
VALUES ('work', 'Manitowish', '151287', 5, 16);
INSERT INTO addresses (name, street, "postal_code", "city_id", "user_id")
VALUES ('work', 'Dovetail', '22205', 6, 19);
INSERT INTO addresses (name, street, "postal_code", "city_id", "user_id")
VALUES ('home', 'Garrison', '88000-000', 7, 2);
INSERT INTO addresses (name, street, "postal_code", "city_id", "user_id")
```

```
VALUES ('home', 'Loeprich', '88000-000', 8, 13);
INSERT INTO addresses (name, street, "postal_code", "city_id", "user_id")
VALUES ('work', 'Prairieview', '169060', 9, 8);
INSERT INTO addresses (name, street, "postal_code", "city_id", "user_id")
VALUES ('work', 'Fairfield', '88000-000', 10, 16);
INSERT INTO addresses (name, street, "postal_code", "city_id", "user_id")
VALUES ('home', '1st', '18740-000', 11, 2);
INSERT INTO addresses (name, street, "postal_code", "city_id", "user_id")
VALUES ('work', 'Waxwing', '22205', 12, 15);
INSERT INTO addresses (name, street, "postal_code", "city_id", "user_id")
VALUES ('work', 'Memorial', '14908 CEDEX 9', 13, 16);
INSERT INTO addresses (name, street, "postal_code", "city_id", "user_id")
VALUES ('work', 'Nova', '88000-000', 14, 12);
INSERT INTO addresses (name, street, "postal_code", "city_id", "user_id")
VALUES ('home', 'Ramsey', '18740-000', 15, 4);
INSERT INTO addresses (name, street, "postal_code", "city_id", "user_id")
VALUES ('home', 'Monument', '2530-254', 16, 9);
INSERT INTO addresses (name, street, "postal_code", "city_id", "user_id")
VALUES ('home', 'Valley Edge', '456209', 17, 9);
INSERT INTO addresses (name, street, "postal_code", "city_id", "user_id")
VALUES ('work', 'Thierer', '88000-000', 18, 14);
INSERT INTO addresses (name, street, "postal_code", "city_id", "user_id")
VALUES ('work', 'Meadow Vale', '456209', 19, 13);
INSERT INTO addresses (name, street, "postal_code", "city_id", "user_id")
VALUES ('home', 'Veith', '18740-000', 20, 10);

/*ADMINS*/
INSERT INTO admins ("user_id") VALUES (1);
INSERT INTO admins ("user_id") VALUES (2);
INSERT INTO admins ("user_id") VALUES (3);
INSERT INTO admins ("user_id") VALUES (4);

/*ARCHIVED-PRODUCTS*/
INSERT INTO archived_products ("product_id") VALUES (10);
INSERT INTO archived_products ("product_id") VALUES (12);

/*CATEGORIES*/
INSERT INTO categories (name, "is_navbar_category") VALUES ('Smartphones',
true);
INSERT INTO categories (name, "is_navbar_category") VALUES ('Tablets',
true);
INSERT INTO categories (name, "is_navbar_category") VALUES ('Computers',
true);
INSERT INTO categories (name, "is_navbar_category") VALUES ('Monitors',
true);
INSERT INTO categories (name, "is_navbar_category") VALUES ('Accessories',
true);

/*CATEGORIES-PROPERTIES*/
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (1, 1, false);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (1, 2, true);
INSERT INTO category_properties ("category_id", "property_id",
```

```
"is_required_property") VALUES (1, 3, true);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (1, 4, true);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (1, 7, true);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (1, 8, true);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (1, 10, true);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (1, 11, false);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (1, 12, true);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (1, 13, false);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (1, 15, true);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (1, 16, true);

INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (2, 1, false);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (2, 2, true);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (2, 3, true);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (2, 4, true);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (2, 5, true);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (2, 6, true);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (2, 7, true);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (2, 8, true);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (2, 9, false);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (2, 10, false);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (2, 11, false);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (2, 12, true);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (2, 13, true);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (2, 14, false);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (2, 16, true);

INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (3, 1, false);
INSERT INTO category_properties ("category_id", "property_id",
```

```
"is_required_property") VALUES (3, 2, true);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (3, 3, true);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (3, 4, true);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (3, 7, true);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (3, 8, true);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (3, 10, false);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (3, 11, false);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (3, 12, true);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (3, 13, false);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (3, 14, false);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (3, 15, false);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (3, 16, true);

INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (4, 1, false);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (4, 3, true);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (4, 8, true);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (4, 13, true);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (4, 16, false);

INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (5, 1, false);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (5, 7, false);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (5, 8, false);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (5, 11, false);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (5, 12, false);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (5, 13, false);
INSERT INTO category_properties ("category_id", "property_id",
"is_required_property") VALUES (5, 16, false);

/*CITIES*/
INSERT INTO cities (name, "country_id") VALUES ('Rubio', 1);
INSERT INTO cities (name, "country_id") VALUES ('Jiayuguan', 2);
INSERT INTO cities (name, "country_id") VALUES ('Huanggang', 2);
```

```
INSERT INTO cities (name, "country_id") VALUES ('Ereencav', 3);
INSERT INTO cities (name, "country_id") VALUES ('El Cocuy', 4);
INSERT INTO cities (name, "country_id") VALUES ('Xinzheng', 2);
INSERT INTO cities (name, "country_id") VALUES ('Gawul', 7);
INSERT INTO cities (name, "country_id") VALUES ('Trà My', 5);
INSERT INTO cities (name, "country_id") VALUES ('Mikun’', 6);
INSERT INTO cities (name, "country_id") VALUES ('Ambarita', 7);
INSERT INTO cities (name, "country_id") VALUES ('Taquarituba', 8);
INSERT INTO cities (name, "country_id") VALUES ('Arlington', 9);
INSERT INTO cities (name, "country_id") VALUES ('Caen', 10);
INSERT INTO cities (name, "country_id") VALUES ('Itacorubi', 8);
INSERT INTO cities (name, "country_id") VALUES ('Darband', 11);
INSERT INTO cities (name, "country_id") VALUES ('Seixal', 12);
INSERT INTO cities (name, "country_id") VALUES ('Zlatoust', 6);
INSERT INTO cities (name, "country_id") VALUES ('Muclo', 13);
INSERT INTO cities (name, "country_id") VALUES ('Dashi', 2);
INSERT INTO cities (name, "country_id") VALUES ('Kuta', 14);

/*COUNTRIES*/
INSERT INTO countries (name) VALUES ('Venezuela');
INSERT INTO countries (name) VALUES ('China');
INSERT INTO countries (name) VALUES ('Mongolia');
INSERT INTO countries (name) VALUES ('Colombia');
INSERT INTO countries (name) VALUES ('Vietnam');
INSERT INTO countries (name) VALUES ('Russia');
INSERT INTO countries (name) VALUES ('Indonesia');
INSERT INTO countries (name) VALUES ('Brazil');
INSERT INTO countries (name) VALUES ('United States');
INSERT INTO countries (name) VALUES ('France');
INSERT INTO countries (name) VALUES ('Tajikistan');
INSERT INTO countries (name) VALUES ('Portugal');
INSERT INTO countries (name) VALUES ('Peru');
INSERT INTO countries (name) VALUES ('Nigeria');

/*DELIVERY_TYPES*/
INSERT INTO delivery_types (name, cost) VALUES ('Standard Delivery',
'0.99');
INSERT INTO delivery_types (name, cost) VALUES ('Express Delivery',
'9.99');
INSERT INTO delivery_types (name, cost) VALUES ('Priority Delivery',
'19.99');

/*FAQS*/
INSERT INTO faqs (question, answer)
VALUES ('Sed sagittis?', 'Duis mattis egestas metus. Aenean fermentum.
Donec ut mauris eget massa tempor convallis.');
INSERT INTO faqs (question, answer)
VALUES ('Nullam varius?', 'Aliquam quis turpis eget elit sodales
scelerisque.');
INSERT INTO faqs (question, answer)
VALUES ('Ut tellus. Nulla ut erat id mauris vulputate elementum?',
'Aliquam augue quam, sollicitudin vitae, consectetuer eget, rutrum at,
lorem. Integer tincidunt ante vel ipsum. Praesent blandit lacinia erat.');
INSERT INTO faqs (question, answer)
```

```
VALUES ('Suspendisse accumsan tortor quis turpi?', 'Aenean fermentum.');
INSERT INTO faqs (question, answer)
VALUES ('Curabitur at ipsum ac tellus semper interdum?', 'Morbi porttitor
lorem id ligula.');
INSERT INTO faqs (question, answer)
VALUES ('Nullam sit amet turpis elementum ligula vehicula consequat. Morbi
a ipsum?', 'Quisque id justo sit amet sapien dignissim vestibulum.
Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere
cubilia Curae; Nulla dapibus dolor vel est.');
INSERT INTO faqs (question, answer)
VALUES ('Nullam sit amet turpis elementum ligula vehicula consequat?',
'Suspendisse potenti. In eleifend quam a odio.');

/*PHOTOS*/
INSERT INTO photos (path, "product_id") VALUES
('http://dummyimage.com/1000x810.jpg/5fa2dd/ffffff', 1);
INSERT INTO photos (path, "product_id") VALUES
('http://dummyimage.com/1000x810.jpg/ff4444/ffffff', 2);
INSERT INTO photos (path, "product_id") VALUES
('http://dummyimage.com/1000x810.jpg/5fa2dd/ffffff', 3);
INSERT INTO photos (path, "product_id") VALUES
('http://dummyimage.com/1000x810.jpg/5fa2dd/ffffff', 4);
INSERT INTO photos (path, "product_id") VALUES
('http://dummyimage.com/1000x810.jpg/dddddd/000000', 5);
INSERT INTO photos (path, "product_id") VALUES
('http://dummyimage.com/1000x810.jpg/cc0000/ffffff', 6);
INSERT INTO photos (path, "product_id") VALUES
('http://dummyimage.com/1000x810.jpg/5fa2dd/ffffff', 7);
INSERT INTO photos (path, "product_id") VALUES
('http://dummyimage.com/1000x810.jpg/ff4444/ffffff', 8);
INSERT INTO photos (path, "product_id") VALUES
('http://dummyimage.com/1000x810.jpg/cc0000/ffffff', 9);
INSERT INTO photos (path, "product_id") VALUES
('http://dummyimage.com/1000x810.jpg/dddddd/000000', 10);
INSERT INTO photos (path, "product_id") VALUES
('http://dummyimage.com/1000x810.jpg/5fa2dd/ffffff', 11);
INSERT INTO photos (path, "product_id") VALUES
('http://dummyimage.com/1000x810.jpg/5fa2dd/ffffff', 12);
INSERT INTO photos (path, "product_id") VALUES
('http://dummyimage.com/1000x810.jpg/cc0000/ffffff', 13);
INSERT INTO photos (path, "product_id") VALUES
('http://dummyimage.com/1000x810.jpg/cc0000/ffffff', 14);
INSERT INTO photos (path, "product_id") VALUES
('http://dummyimage.com/1000x810.jpg/dddddd/000000', 15);
INSERT INTO photos (path, "product_id") VALUES
('http://dummyimage.com/1000x810.jpg/ff4444/ffffff', 16);

/*PRODUCT-CARTS*/
INSERT INTO product_carts ("user_id", "product_id", quantity) VALUES (6,
16, 2);
INSERT INTO product_carts ("user_id", "product_id", quantity) VALUES (6,
2, 2);
INSERT INTO product_carts ("user_id", "product_id", quantity) VALUES (19,
7, 1);
```

```
INSERT INTO product_carts ("user_id", "product_id", quantity) VALUES (2,
9, 2);
INSERT INTO product_carts ("user_id", "product_id", quantity) VALUES (3,
13, 3);
INSERT INTO product_carts ("user_id", "product_id", quantity) VALUES (11,
12, 2);
INSERT INTO product_carts ("user_id", "product_id", quantity) VALUES (9,
1, 1);
INSERT INTO product_carts ("user_id", "product_id", quantity) VALUES (10,
5, 1);
INSERT INTO product_carts ("user_id", "product_id", quantity) VALUES (17,
6, 3);
INSERT INTO product_carts ("user_id", "product_id", quantity) VALUES (15,
7, 1);
INSERT INTO product_carts ("user_id", "product_id", quantity) VALUES (12,
12, 1);
INSERT INTO product_carts ("user_id", "product_id", quantity) VALUES (13,
4, 2);

/*PRODUCT-PURCHASES*/
INSERT INTO product_purchases ("product_id", "purchase_id", quantity,
price) VALUES (1, 14, 1, 1106.96);
INSERT INTO product_purchases ("product_id", "purchase_id", quantity,
price) VALUES (2, 4, 2, 717.73);
INSERT INTO product_purchases ("product_id", "purchase_id", quantity,
price) VALUES (3, 8, 1, 1072.94);
INSERT INTO product_purchases ("product_id", "purchase_id", quantity,
price) VALUES (4, 8, 1, 1107.96);
INSERT INTO product_purchases ("product_id", "purchase_id", quantity,
price) VALUES (5, 12, 2, 556.97);
INSERT INTO product_purchases ("product_id", "purchase_id", quantity,
price) VALUES (6, 15, 1, 910.6);
INSERT INTO product_purchases ("product_id", "purchase_id", quantity,
price) VALUES (7, 9, 1, 1015.66);
INSERT INTO product_purchases ("product_id", "purchase_id", quantity,
price) VALUES (8, 7, 2, 1064.08);
INSERT INTO product_purchases ("product_id", "purchase_id", quantity,
price) VALUES (9, 14, 2, 840.37);
INSERT INTO product_purchases ("product_id", "purchase_id", quantity,
price) VALUES (10, 3, 2, 885.43);
INSERT INTO product_purchases ("product_id", "purchase_id", quantity,
price) VALUES (11, 9, 1, 462.09);
INSERT INTO product_purchases ("product_id", "purchase_id", quantity,
price) VALUES (12, 5, 2, 666.96);
INSERT INTO product_purchases ("product_id", "purchase_id", quantity,
price) VALUES (13, 5, 2, 689.05);
INSERT INTO product_purchases ("product_id", "purchase_id", quantity,
price) VALUES (14, 5, 2, 1180.96);
INSERT INTO product_purchases ("product_id", "purchase_id", quantity,
price) VALUES (15, 15, 1, 596.35);

/*PRODUCTS*/
INSERT INTO products (name, price, "quantity_available", score,
"category_id", brand) VALUES ('Apple iPhone X - 64GB - Space Grey',
```

```
'1179.00', 100, 3, 1, 'Apple');
INSERT INTO products (name, price, "quantity_available", score,
"category_id", brand) VALUES ('Apple iPhone 8 - 64GB - Gold', '829.00',
60, 4, 1, 'Apple');
INSERT INTO products (name, price, "quantity_available", score,
"category_id", brand) VALUES ('Samsung Galaxy S9+ - 64GB - Midnight
Black', '969.90', 100, 3, 1, 'Samsung');
INSERT INTO products (name, price, "quantity_available", score,
"category_id", brand) VALUES ('Samsung Galaxy S9 - 64GB - Blue', '869.99',
90, 4, 1, 'Samsung');

INSERT INTO products (name, price, "quantity_available", score,
"category_id", brand) VALUES ('Apple iPad Pro 12,9" - 256GB - Space Grey',
'1249.00', 100, 5, 2, 'Apple');
INSERT INTO products (name, price, "quantity_available", score,
"category_id", brand) VALUES ('Samsung Galaxy Tab S2 9.7" - T819 - Black',
'529.99', 90, 5, 2, 'Samsung');
INSERT INTO products (name, price, "quantity_available", score,
"category_id", brand) VALUES ('Asus ZenPad 10" Z301MF-1H011A - Grey',
'219.99', 20, 5, 2, 'Asus');
INSERT INTO products (name, price, "quantity_available", score,
"category_id", brand) VALUES ('Huawei MediaPad M3 8.4"', '321.00', 100, 1,
2, 'Huawei');

INSERT INTO products (name, price, "quantity_available", score,
"category_id", brand) VALUES ('Apple MacBook Pro 13" Retina i5-2,3GHz -
128GB - Space Gray', '1549.00', 50, 2, 3, 'Apple');
INSERT INTO products (name, price, "quantity_available", score,
"category_id", brand) VALUES ('Apple MacBook Air 13" i5-1,8GHz - 256GB',
'1379.00', 50, 1, 3, 'Apple');
INSERT INTO products (name, price, "quantity_available", score,
"category_id", brand) VALUES ('Asus Zenbook UX430UA-57CHDCB1', '949.99',
80, 1, 3, 'Asus');

INSERT INTO products (name, price, "quantity_available", score,
"category_id", brand) VALUES ('Gaming Asus FHD VP278QG - 27"', '259.99',
80, 3, 4, 'Asus');
INSERT INTO products (name, price, "quantity_available", score,
"category_id", brand) VALUES ('iMac 21,5" Retina 5K - 2,3 GHz - 1 TB',
'1349.00', 90, 3, 4, 'Apple');
INSERT INTO products (name, price, "quantity_available", score,
"category_id", brand) VALUES ('iMac 27" Retina 5K - 3,8 GHz - 2 TB',
'2699.00', 15, 1, 4, 'Apple');

INSERT INTO products (name, price, "quantity_available", score,
"category_id", brand) VALUES ('Headphones Beats Studio3 Wireless - Black
Shadow', '349.99', 10, 2, 5, 'Beats');
INSERT INTO products (name, price, "quantity_available", score,
"category_id", brand) VALUES ('Power Bank Xiaomi Mi Power 20000mAh -
White', '45.99', 50, 1, 5, 'Xiaomi');

/*PROPERTIES*/
INSERT INTO properties (name) VALUES ('Finish');
INSERT INTO properties (name) VALUES ('Operating System');
```

```
INSERT INTO properties (name) VALUES ('Display');
INSERT INTO properties (name) VALUES ('Processor');
INSERT INTO properties (name) VALUES ('RAM Memory');
INSERT INTO properties (name) VALUES ('Graphics');
INSERT INTO properties (name) VALUES ('Storage');
INSERT INTO properties (name) VALUES ('Size and Weight');
INSERT INTO properties (name) VALUES ('Wireless');
INSERT INTO properties (name) VALUES ('Camera');
INSERT INTO properties (name) VALUES ('Audio');
INSERT INTO properties (name) VALUES ('Power and Battery');
INSERT INTO properties (name) VALUES ('Interface');
INSERT INTO properties (name) VALUES ('Software');
INSERT INTO properties (name) VALUES ('Sensors');
INSERT INTO properties (name) VALUES ('Accessories');

/*PURCHASES*/
INSERT INTO purchases (date, total, "user_id", "address_id", status)
VALUES ('2017-08-07', 2914.73, 2, 4, 'Processing');
INSERT INTO purchases (date, total, "user_id", "address_id", status)
VALUES ('2017-10-31', 1709.06, 7, 1, 'Shipped');
INSERT INTO purchases (date, total, "user_id", "address_id", status)
VALUES ('2017-10-04', 3964.32, 7, 1, 'Delivered');
INSERT INTO purchases (date, total, "user_id", "address_id", status)
VALUES ('2017-08-18', 1408.06, 9, 16, 'Processing');
INSERT INTO purchases (date, total, "user_id", "address_id", status)
VALUES ('2017-04-11', 1115.11, 8, 9, 'Shipped');
INSERT INTO purchases (date, total, "user_id", "address_id", status)
VALUES ('2017-12-12', 4507.83, 8, 9, 'Shipped');
INSERT INTO purchases (date, total, "user_id", "address_id", status)
VALUES ('2018-01-20', 899.21, 14, 18, 'Processing');
INSERT INTO purchases (date, total, "user_id", "address_id", status)
VALUES ('2018-02-28', 3471.12, 16, 13, 'Processing');
INSERT INTO purchases (date, total, "user_id", "address_id", status)
VALUES ('2017-02-22', 625.19, 19, 6, 'Shipped');
INSERT INTO purchases (date, total, "user_id", "address_id", status)
VALUES ('2017-04-02', 4929.18, 13, 19, 'Delivered');
INSERT INTO purchases (date, total, "user_id", "address_id", status)
VALUES ('2017-10-10', 3464.1, 3, 2, 'Shipped');
INSERT INTO purchases (date, total, "user_id", "address_id", status)
VALUES ('2017-07-31', 4273.67, 7, 1, 'Processing');
INSERT INTO purchases (date, total, "user_id", "address_id", status)
VALUES ('2017-11-18', 538.7, 9, 17, 'Processing');
INSERT INTO purchases (date, total, "user_id", "address_id", status)
VALUES ('2017-06-15', 3259.77, 14, 18, 'Delivered');
INSERT INTO purchases (date, total, "user_id", "address_id", status)
VALUES ('2017-02-15', 1201.51, 10, 20, 'Shipped');

/*REVIEWS*/
INSERT INTO reviews ("user_id", "product_id", score, title, content, date)
VALUES (9, 2, 1, 'Some title', 'Some content.', '2017-06-22');
INSERT INTO reviews ("user_id", "product_id", score, title, content, date)
VALUES (10, 6, 5, 'Some title', 'Some content.', '2017-08-12');
INSERT INTO reviews ("user_id", "product_id", score, title, content, date)
VALUES (16, 3, 4, 'Some title', 'Some content.', '2018-02-04');
```

```
INSERT INTO reviews ("user_id", "product_id", score, title, content, date)
VALUES (19, 11, 2, 'Some title', 'Some content.', '2017-03-13');
INSERT INTO reviews ("user_id", "product_id", score, title, content, date)
VALUES (10, 15, 3, 'Some title', 'Some content.', '2017-12-28');
INSERT INTO reviews ("user_id", "product_id", score, title, content, date)
VALUES (8, 12, 4, 'Some title', 'Some content.', '2018-03-22');

/*USERS*/
INSERT INTO users (name, username, email, password) VALUES ('Dominik
Courtliff', 'dcourtliff0', 'dcourtliff0@washington.edu', 'AP8LWaw');
INSERT INTO users (name, username, email, password) VALUES ('Chester
Lownes', 'clownes1', 'clownes1@washingtonpost.com', 'LbkRHs');
INSERT INTO users (name, username, email, password) VALUES ('Kathe Omar',
'komar2', 'komar2@e-recht24.de', '2T7AIM');
INSERT INTO users (name, username, email, password) VALUES ('Ethelda
Houseago', 'ehouseago3', 'ehouseago3@acquirethisname.com', 'afSIgLsK6M');
INSERT INTO users (name, username, email, password) VALUES ('Amalia
Glayzer', 'aglayzer4', 'aglayzer4@bandcamp.com', 'X3hO0S54dSG');
INSERT INTO users (name, username, email, password) VALUES ('Bidget
Gehrels', 'bgehrels5', 'bgehrels5@redcross.org', 'YstABQ9w');
INSERT INTO users (name, username, email, password) VALUES ('Davide
Wardale', 'dwardale6', 'dwardale6@e-recht24.de', 'BohbUPUS9LkP');
INSERT INTO users (name, username, email, password) VALUES ('Blondie
MacPhee', 'bmacphee7', 'bmacphee7@dell.com', 'yk1syP');
INSERT INTO users (name, username, email, password) VALUES ('Rubi
Duncklee', 'rduncklee8', 'rduncklee8@npr.org', 'kwDVrx631e');
INSERT INTO users (name, username, email, password) VALUES ('Zorina
Hiseman', 'zhiseman9', 'zhiseman9@usa.gov', 'AKniryg');
INSERT INTO users (name, username, email, password) VALUES ('Zola
Bosquet', 'zbosqueta', 'zbosqueta@un.org', '5h0MqBhj91HU');
INSERT INTO users (name, username, email, password) VALUES ('Colman
Dobey', 'cdobeyb', 'cdobeyb@sciencedaily.com', 'JQGVzuqymhAc');
INSERT INTO users (name, username, email, password) VALUES ('Chrissie
Dudbridge', 'cdudbridgec', 'cdudbridgec@dot.gov', 'QWaoJCPAy');
INSERT INTO users (name, username, email, password) VALUES ('Clare Pash',
'cpashd', 'cpashd@51.la', '1fjSLVI08l9k');
INSERT INTO users (name, username, email, password) VALUES ('Daisy
Matusov', 'dmatusove', 'dmatusove@ucsd.edu', 'FDE5AhcJ');
INSERT INTO users (name, username, email, password) VALUES ('Gualterio
Flanders', 'gflandersf', 'gflandersf@prweb.com', 'QWbc7824');
INSERT INTO users (name, username, email, password) VALUES ('Ulises
Reubel', 'ureubelg', 'ureubelg@etsy.com', 'wu7vgJ');
INSERT INTO users (name, username, email, password) VALUES ('Edy
MacMenamin', 'emacmenaminh', 'emacmenaminh@ed.gov', 'pvwtW3DT');
INSERT INTO users (name, username, email, password) VALUES ('Zachariah
Chadburn', 'zchadburni', 'zchadburni@typepad.com', 'Wcjj8vZSA');
INSERT INTO users (name, username, email, password) VALUES ('Jorry
MacAndie', 'jmacandiej', 'jmacandiej@wordpress.com', 'Q9oAsh5');

/*VALUES*/
INSERT INTO values (name, "values_list_id") VALUES ('cubilia curae', 1);
INSERT INTO values (name, "values_list_id") VALUES ('parturient montes',
2);
INSERT INTO values (name, "values_list_id") VALUES ('platea', 3);
```

```
INSERT INTO values (name, "values_list_id") VALUES ('adipiscing lorem',
4);
INSERT INTO values (name, "values_list_id") VALUES ('nulla tellus in', 5);
INSERT INTO values (name, "values_list_id") VALUES ('imperdiet', 6);
INSERT INTO values (name, "values_list_id") VALUES ('justo eu', 7);
INSERT INTO values (name, "values_list_id") VALUES ('vestibulum
vestibulum', 8);
INSERT INTO values (name, "values_list_id") VALUES ('id justo', 9);
INSERT INTO values (name, "values_list_id") VALUES ('rutrum rutrum neque',
10);
INSERT INTO values (name, "values_list_id") VALUES ('vel', 11);
INSERT INTO values (name, "values_list_id") VALUES ('curabitur in libero',
12);
INSERT INTO values (name, "values_list_id") VALUES ('maecenas ut', 13);
INSERT INTO values (name, "values_list_id") VALUES ('curabitur at ipsum',
14);
INSERT INTO values (name, "values_list_id") VALUES ('sed accumsan felis',
15);
INSERT INTO values (name, "values_list_id") VALUES ('in magna', 16);
INSERT INTO values (name, "values_list_id") VALUES ('quisque', 17);
INSERT INTO values (name, "values_list_id") VALUES ('nulla ultrices', 18);
INSERT INTO values (name, "values_list_id") VALUES ('ac consequat metus',
19);
INSERT INTO values (name, "values_list_id") VALUES ('ac lobortis', 20);
INSERT INTO values (name, "values_list_id") VALUES ('quis', 21);
INSERT INTO values (name, "values_list_id") VALUES ('varius', 22);
INSERT INTO values (name, "values_list_id") VALUES ('vivamus vestibulum',
23);
INSERT INTO values (name, "values_list_id") VALUES ('sed', 24);
INSERT INTO values (name, "values_list_id") VALUES ('suscipit', 25);
INSERT INTO values (name, "values_list_id") VALUES ('est quam pharetra',
26);
INSERT INTO values (name, "values_list_id") VALUES ('luctus ultricies',
27);
INSERT INTO values (name, "values_list_id") VALUES ('quisque id', 28);
INSERT INTO values (name, "values_list_id") VALUES ('sapien cursus
vestibulum', 29);
INSERT INTO values (name, "values_list_id") VALUES ('ultrices aliquet
maecenas', 30);
INSERT INTO values (name, "values_list_id") VALUES ('in faucibus', 31);
INSERT INTO values (name, "values_list_id") VALUES ('quis', 32);
INSERT INTO values (name, "values_list_id") VALUES ('dui', 33);
INSERT INTO values (name, "values_list_id") VALUES ('luctus et', 34);
INSERT INTO values (name, "values_list_id") VALUES ('nulla', 35);
INSERT INTO values (name, "values_list_id") VALUES ('diam', 36);
INSERT INTO values (name, "values_list_id") VALUES ('id pretium iaculis',
37);
INSERT INTO values (name, "values_list_id") VALUES ('lacus at', 38);
INSERT INTO values (name, "values_list_id") VALUES ('nibh quisque id',
39);
INSERT INTO values (name, "values_list_id") VALUES ('posuere', 40);
INSERT INTO values (name, "values_list_id") VALUES ('molestie nibh', 41);
INSERT INTO values (name, "values_list_id") VALUES ('ultrices vel augue',
42);
```

```
INSERT INTO values (name, "values_list_id") VALUES ('turpis sed ante',
43);
INSERT INTO values (name, "values_list_id") VALUES ('in', 44);
INSERT INTO values (name, "values_list_id") VALUES ('sit', 45);
INSERT INTO values (name, "values_list_id") VALUES ('tempus', 46);
INSERT INTO values (name, "values_list_id") VALUES ('nonummy', 47);
INSERT INTO values (name, "values_list_id") VALUES ('nec dui luctus', 48);
INSERT INTO values (name, "values_list_id") VALUES ('vel lectus in', 49);
INSERT INTO values (name, "values_list_id") VALUES ('ultrices erat
tortor', 50);
INSERT INTO values (name, "values_list_id") VALUES ('at', 51);
INSERT INTO values (name, "values_list_id") VALUES ('quis orci eget', 52);
INSERT INTO values (name, "values_list_id") VALUES ('porta', 53);
INSERT INTO values (name, "values_list_id") VALUES ('ut', 54);
INSERT INTO values (name, "values_list_id") VALUES ('est quam pharetra',
55);
INSERT INTO values (name, "values_list_id") VALUES ('erat', 56);
INSERT INTO values (name, "values_list_id") VALUES ('ac', 57);
INSERT INTO values (name, "values_list_id") VALUES ('luctus tincidunt',
58);
INSERT INTO values (name, "values_list_id") VALUES ('tortor', 59);
INSERT INTO values (name, "values_list_id") VALUES ('at turpis donec',
60);
INSERT INTO values (name, "values_list_id") VALUES ('interdum', 61);
INSERT INTO values (name, "values_list_id") VALUES ('in lectus', 62);
INSERT INTO values (name, "values_list_id") VALUES ('pede', 63);
INSERT INTO values (name, "values_list_id") VALUES ('et magnis dis', 64);
INSERT INTO values (name, "values_list_id") VALUES ('amet lobortis
sapien', 65);
INSERT INTO values (name, "values_list_id") VALUES ('morbi', 66);
INSERT INTO values (name, "values_list_id") VALUES ('luctus cum', 67);
INSERT INTO values (name, "values_list_id") VALUES ('donec', 68);
INSERT INTO values (name, "values_list_id") VALUES ('faucibus', 69);
INSERT INTO values (name, "values_list_id") VALUES ('pretium iaculis
justo', 70);
INSERT INTO values (name, "values_list_id") VALUES ('integer ac leo', 71);
INSERT INTO values (name, "values_list_id") VALUES ('nulla sed', 72);
INSERT INTO values (name, "values_list_id") VALUES ('cubilia curae', 73);
INSERT INTO values (name, "values_list_id") VALUES ('est donec odio', 74);
INSERT INTO values (name, "values_list_id") VALUES ('et commodo
vulputate', 75);
INSERT INTO values (name, "values_list_id") VALUES ('sapien urna', 76);
INSERT INTO values (name, "values_list_id") VALUES ('amet consectetuer',
77);
INSERT INTO values (name, "values_list_id") VALUES ('ante', 78);
INSERT INTO values (name, "values_list_id") VALUES ('amet eleifend', 79);
INSERT INTO values (name, "values_list_id") VALUES ('rutrum', 80);
INSERT INTO values (name, "values_list_id") VALUES ('aliquam', 81);
INSERT INTO values (name, "values_list_id") VALUES ('mus', 82);
INSERT INTO values (name, "values_list_id") VALUES ('tristique in tempus',
83);
INSERT INTO values (name, "values_list_id") VALUES ('at', 84);
INSERT INTO values (name, "values_list_id") VALUES ('phasellus', 85);
INSERT INTO values (name, "values_list_id") VALUES ('id consequat', 86);
```

```
INSERT INTO values (name, "values_list_id") VALUES ('pellentesque', 87);
INSERT INTO values (name, "values_list_id") VALUES ('auctor sed', 88);
INSERT INTO values (name, "values_list_id") VALUES ('bibendum', 89);
INSERT INTO values (name, "values_list_id") VALUES ('interdum', 90);
INSERT INTO values (name, "values_list_id") VALUES ('nec dui luctus', 91);
INSERT INTO values (name, "values_list_id") VALUES ('vehicula condimentum
curabitur', 92);
INSERT INTO values (name, "values_list_id") VALUES ('sit amet lobortis',
93);
INSERT INTO values (name, "values_list_id") VALUES ('vivamus vestibulum
sagittis', 94);
INSERT INTO values (name, "values_list_id") VALUES ('duis ac', 95);
INSERT INTO values (name, "values_list_id") VALUES ('erat quisque', 96);
INSERT INTO values (name, "values_list_id") VALUES ('nam', 97);
INSERT INTO values (name, "values_list_id") VALUES ('aliquam', 98);
INSERT INTO values (name, "values_list_id") VALUES ('sapien', 99);
INSERT INTO values (name, "values_list_id") VALUES ('sit amet cursus',
100);
INSERT INTO values (name, "values_list_id") VALUES ('tempus semper', 101);
INSERT INTO values (name, "values_list_id") VALUES ('in', 102);
INSERT INTO values (name, "values_list_id") VALUES ('tortor quis turpis',
103);
INSERT INTO values (name, "values_list_id") VALUES ('vivamus metus', 104);
INSERT INTO values (name, "values_list_id") VALUES ('ante ipsum primis',
105);
INSERT INTO values (name, "values_list_id") VALUES ('consequat morbi a',
106);
INSERT INTO values (name, "values_list_id") VALUES ('dui proin', 107);


/*VALUES-LIST*/
INSERT INTO values_lists ("category_property_id", "product_id") VALUES (2,
1);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES (3,
1);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES (4,
1);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES (5,
1);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES (6,
1);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES (7,
1);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES (9,
1);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(11, 1);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(12, 1);

INSERT INTO values_lists ("category_property_id", "product_id") VALUES (2,
2);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES (3,
2);
```

```
INSERT INTO values_lists ("category_property_id", "product_id") VALUES (4,
2);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES (5,
2);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES (6,
2);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES (7,
2);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES (9,
2);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(11, 2);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(12, 2);

INSERT INTO values_lists ("category_property_id", "product_id") VALUES (2,
3);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES (3,
3);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES (4,
3);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES (5,
3);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES (6,
3);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES (7,
3);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES (9,
3);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(11, 3);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(12, 3);

INSERT INTO values_lists ("category_property_id", "product_id") VALUES (2,
4);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES (3,
4);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES (4,
4);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES (5,
4);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES (6,
4);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES (7,
4);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES (9,
4);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(11, 4);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(12, 4);

/*2*/
```

```
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(14, 5);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(15, 5);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(16, 5);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(17, 5);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(18, 5);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(19, 5);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(20, 5);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(24, 5);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(25, 5);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(27, 5);

INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(14, 6);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(15, 6);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(16, 6);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(17, 6);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(18, 6);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(19, 6);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(20, 6);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(24, 6);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(25, 6);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(27, 6);

INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(14, 7);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(15, 7);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(16, 7);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(17, 7);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(18, 7);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(19, 7);
```

```
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(20, 7);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(24, 7);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(25, 7);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(27, 7);

INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(14, 8);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(15, 8);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(16, 8);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(17, 8);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(18, 8);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(19, 8);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(20, 8);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(24, 8);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(25, 8);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(27, 8);

/*3*/
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(29, 9);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(30, 9);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(31, 9);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(32, 9);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(33, 9);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(36, 9);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(40, 9);

INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(29, 10);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(30, 10);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(31, 10);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(32, 10);
```

```
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(33, 10);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(36, 10);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(40, 10);

INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(29, 11);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(30, 11);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(31, 11);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(32, 11);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(33, 11);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(36, 11);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(40, 11);

/*4*/
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(42, 12);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(43, 12);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(44, 12);

INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(42, 13);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(43, 13);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(44, 13);

INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(42, 14);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(43, 14);
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(44, 14);

/*5*/
INSERT INTO values_lists ("category_property_id", "product_id") VALUES
(50, 16);

/*WISHLIST*/
INSERT INTO wishlists ("user_id", "product_id") VALUES (10, 8);
INSERT INTO wishlists ("user_id", "product_id") VALUES (7, 5);
INSERT INTO wishlists ("user_id", "product_id") VALUES (10, 9);
INSERT INTO wishlists ("user_id", "product_id") VALUES (10, 10);
INSERT INTO wishlists ("user_id", "product_id") VALUES (6, 3);
```

```
INSERT INTO wishlists ("user_id", "product_id") VALUES (10, 13);
INSERT INTO wishlists ("user_id", "product_id") VALUES (2, 2);
INSERT INTO wishlists ("user_id", "product_id") VALUES (8, 7);
INSERT INTO wishlists ("user_id", "product_id") VALUES (5, 15);
INSERT INTO wishlists ("user_id", "product_id") VALUES (6, 4);
```

Revision history

Changes made to the first submission:

1. Indexs have the reference of their related query.
2. There's only one clustered index for the relation products.
3. Fixed full-text-search index.

GROUP1761, 10/04/2018

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