DETI STORE

Base de Dados

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Introduction

DETI Store

Online merchandising store with database with two main views

User

- Create Account with 2-Step Authentication
- Edit account information
- Add/Remove Items from Cart
- Make orders of products on carts and manage them
- Make reviews on products

Admin

- Manage stock of products
- Add, remove and edit products to the shop
- Manage client's orders
- See shop statistics

Non-functional Requirements

DETI Store

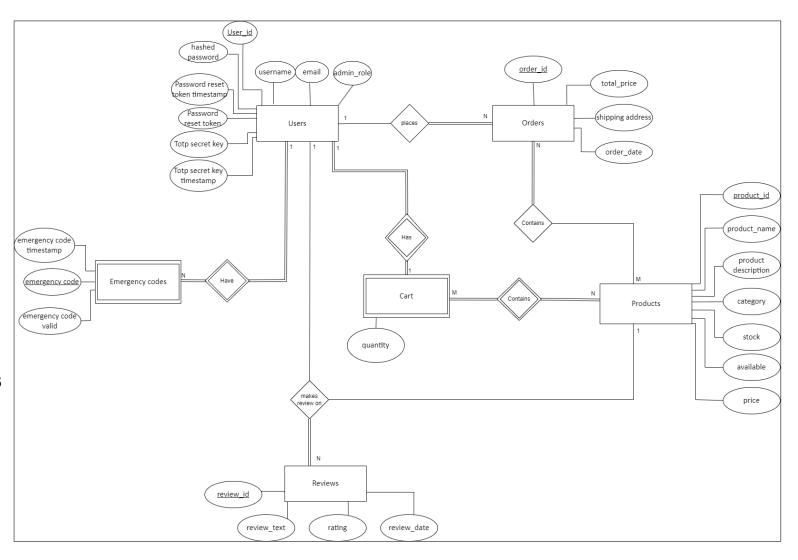
- Security Provide 2FA and Emergency codes for users, securing the authentication process and their accounts
- 2. Performance Ensure smooth usage through quick response times
- 3. Reliability Persist during and after issues, maintaining integrity of critical information
- 4. Ease of use Intuitive and accessible interface

Entity-Relationship Diagram

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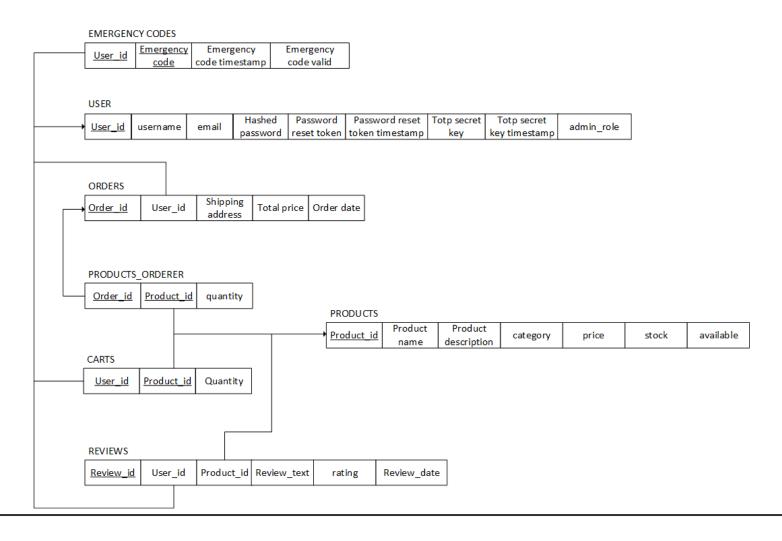
Main Entities and relationships:

Have Emergency Codes → Have Shopping Cart → Contains Products → Have Orders ← Contains Products → Contains Products → Contains Products → On Products

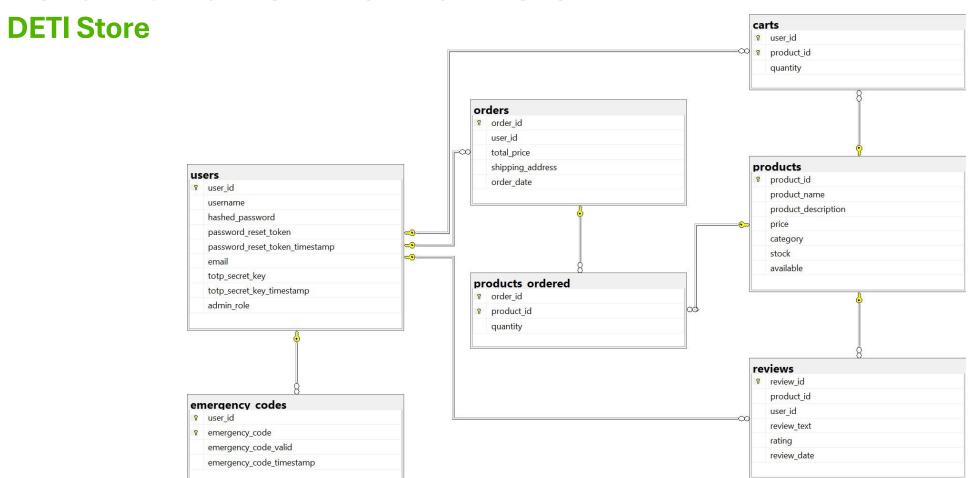


Relational Schema

DETI Store



Relational Schema - SGDB



Database Resources

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View

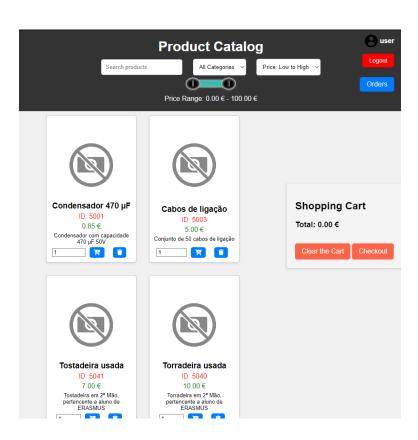
Available_Products CompleteUserData

UDF

searchAvailableProducts getProductById

Trigger

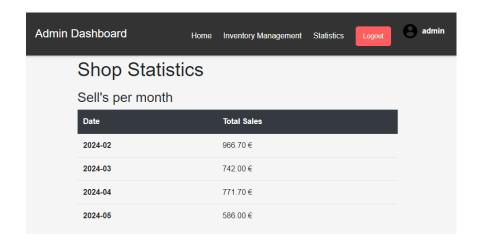
singleReviewPerUser updateTotalOrderPrice deleteZeroItemsCart



Database Resources

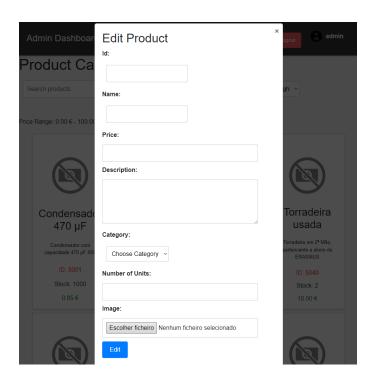
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Procedures

deleteUser updateAccount updateProduct



Database Resources

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In order to boost query's performance we also created several useful index's

Table	CLUSTERED INDEX'S (Primary Keys)	NON-CLUSTERED INDEX
USERS	user_id	username
PRODUCTS	product_id	product_name and category
ORDERS	order_id	user_id
PRODUCTS_ORDERED	(order_od, product_id)	None
CARTS	(user_id, product_id)	None
REVIEWS	review_id	product_id
EMERGENCY_CODES	(user_id, emergency_code)	None

Technology Used

DETI Store









