Tabelas

- users
- products
- reviews
- totp_temp
- emergency_codes
- *_cart
- all_orders
- *_orders

Atributos

- **users**
  - [PK] id
  - username
  - password
  - reset_token
  - reset_token_timestamp
  - email
  - secret_key
  - secret_key_timestamp
  - admin
- **products**
  - [PK] id
  - name
  - description
  - price
  - category
  - stock
- **reviews**
  - [PK] id
  - product_id
  - user_id
  - rating
  - review
- **totp_temp**
  - [PK] id
  - username
  - secret_key
  - secret_key_timestamp
  - email
  - password

- ➢ **emergency_codes**
  - [PK] id
  - code
  - born
- ➢ ***_cart**
  - [PK] product_id
  - quantity
- ➢ **all_orders**
  - [PK] id
  - user_id
  - order_date
- ➢ ***_orders**
  - [PK] id
  - products
  - total_price,
  - shipping_address
  - order_date

Plano para uma implementação melhorada

- ➢ **users**
  - [PK] user_id (INT NOT NULL)
  - username (VARCHAR(255) NOT NULL)
  - hashed_password (VARCHAR(255) NOT NULL)
  - password_reset_token (VARCHAR(255))
  - password_reset_token_timestamp (DATETIMEOFFSET)
  - email (VARCHAR(255) NOT NULL)
  - totp_secret_key (VARCHAR(255) NOT NULL)
  - totp_secret_key_timestamp (DATETIMEOFFSET NOT NULL)
  - admin_role (BIT NOT NULL)
- ➢ **products**
  - [PK] product_id (INT NOT NULL)
  - product_name (VARCHAR(255) NOT NULL)
  - description (VARCHAR(255) NOT NULL)
  - price (MONEY NOT NULL)
  - category (VARCHAR (255) NOT NULL)
  - stock (INT NOT NULL)
- ➢ **reviews**
  - [PK] review_id (INT NOT NULL)
  - [FK] product_id (INT NOT NULL)
  - [FK] user_id (INT NOT NULL)
  - review_text (VARCHAR(255) NOT NULL)
  - rating (INT NOT NULL)
  - review_date DATE NOT NULL,

- ➢ **emergency_codes**
  - [PK] [FK] user_id (INT NOT NULL)
  - [PK] emergency_code (INT NOT NULL)
  - emergency_code_valid(BIT NOT NULL)
  - emergency_code_timestamp (DATETIMEOFFSET NOT NULL)
- ➢ **carts**
  - [PK] cart_id (INT NOT NULL)
  - [PK] [FK] user_id (INT NOT NULL)
  - [PK] [FK] product_id (INT NOT NULL)
  - quantity (INT NOT NULL)
- ➢ **orders**
  - [PK] order_id (INT NOT NULL)
  - [PK] [FK] user_id (INT NOT NULL)
  - [PK] [FK] product_id (INT NOT NULL)
  - quantity (INT NOT NULL)
  - total_price (MONEY NOT NULL)
  - shipping_addr (VARCHAR(255) NOT NULL)
  - order_date (DATETIMEOFFSET NOT NULL)

Métodos/Módulos que usam queries

- ➢ **EmailHandler**
  - sql_to_pdf
- ➢ **ProductManagement**
  - verify_product_exists
  - verify_id_exists
  - create_product
  - remove_product
  - update_product_name
  - update_product_description
  - update_product_price
  - update_product_category
  - update_product_quantity
  - create_review
  - set_cart_item
  - register_order
- ➢ Retrievers
  - get_orders
  - get_all_products
  - verify_product_id_exists

- get_product_by_id
- get_product_reviews
- get_cart
- get_user_email

➢ TOTPHandler
- get_user_emergency_codes
- check_existence_emergency_codes
- store_emergency_codes
- update_totp
- get_totp_secret

➢ UserManagement
- clear_reset_token
- get_user_by_reset_token
- set_reset_token_for_user
- search_user_by_username
- search_user_by_email
- validate_login
- get_id_by_username
- check_id_existence
- check_order_id_existence
- create_user
- change_password
- update_username
- search_user_by_id
- update_email
- update_password
- get_username_by_id
- get_user_role
- get_orders_by_user_id
- get_user_data_by_id

➢ Verifiers
- check_username_exists
- check_email_exists
- check_product_in_cart

➢ Views
- add_item_to_cart
- remove_item_from_cart
- remove_all_items_cart
- checkout