

Shoe Sales System

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1. Task Specification

WHY?

I want to create an information system to manage a website about shoe sales system. This system describes the buying and billing process of customers and product suppliers who can supplement the product.

FOR WHAT?

Shoe Sales System will solve the selling problem, and users will choose which shoes they want to buy. This system will make it easier for the buyers to purchase and access products for payment.

WHO?

The main role of the administrator of Shoe Sales System is to check income and manage the shoes on the website (When the seller wants to sell shoes, the seller posts to the system, and the administrator will check the product on the pictures they posted).

The system has 2 types of user:

The first is the customer who wants to buy the shoe and the second is the seller.

The seller is divided into two types: The first is individuals who want to sell their shoes (selling the second hand), the second is sellers who represent shops or companies that specialize in selling shoes.

INPUT

The system is interested in products uploaded by the seller. Products are paid and the users will be recorded in the payment history.

In case of the seller, we are interested in the product name, shoe type, size, brand, price, picture of the product, and other details. Only the seller is possible to do this, and after the seller uploads the product, the administrator will check and accept the product to be posted through the images and information provided by the seller.

In case of customers, we are interested in the username, surname, first name, address, and phone number. Users can search, choose, and buy the product. After he had chosen the product, that he wanted to buy and, proceeded with payment. The payment information will be passed to the seller, and the seller will deliver the product to the user.

OUTPUT

The output will available to everyone, even the user that is still having not created an account. The system will automatically sort the shoe and display information of the most purchased products. The user after creating an account, logging into the account, the user can select the product. If the shoes are sold out, the seller will mark the product as sold out (SOLD OUT). After the product is selected and paid, the user will be recorded in the payment history.

FUNCTION

The administrator will check the content and value of the product, if the content is spam or the product is not related to shoes, the administrator can remove it before being posted. (Example: if the seller doesn't add the shoe, but he adds e.g. clothes, watches or other things not related to the shoe, the administrator can check them and delete them). The user can search, choose, buy the product and every user can update their data.

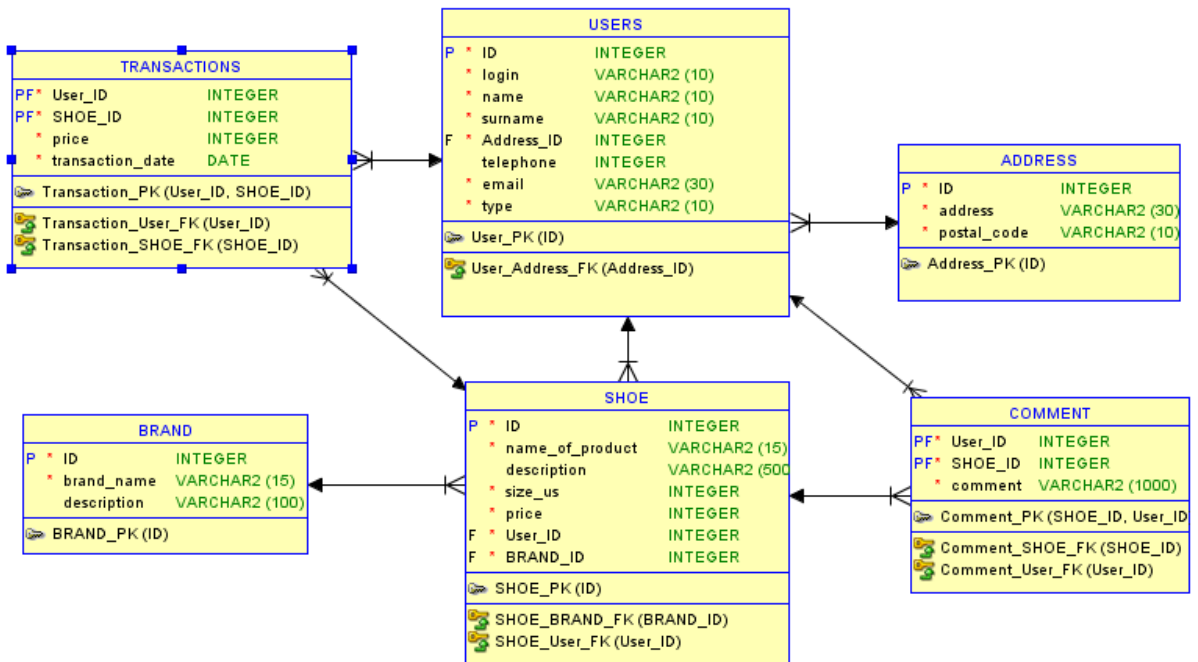
The seller can upload the product they want to sell, or remove if they do not sell it anymore, and the seller will deliver the product after the customer order on the system. When the user pays, the money will be transferred into the system. When the user receives the product, the money will be transferred to the seller.

The system will keep the money of the customer until the administrator confirms that the customer has received the product and the money will be given to the seller, if the customer does not receive the product, the money will be refunded to the customer.

The seller will set the product price, the product price can not be changed. If the seller wants to change the price, the seller will have to delete the current product and post the deleted product with the new price.

2. Conceptual Model

ER Diagram



Entity Types

Legend: **Table**, Primary Key, *Foreign Key*, attribute

USER(ID, Login, Name, Surname, *Address_ID*, Telephone, Email, Type)

SHOE (ID, Name_of_product, Description, Size_US, Price, *User_ID*, *Brand_ID*)

BRAND (ID, brand_name, Description)

COMMENT (*User_ID*, *SHOE_ID*, Comment)

ADDRESS (ID, Address, Postal_code)

TRANSACTION (*User_ID*, *SHOE_ID*, Price, Transaction_date)

3. Data Model

Description of tables is depicted in the following tables.

Table **USERS**

	Data Type	Length	Key	Null	IC	Description
ID	Integer		Primary	N		
login	Varchar	10		N		Login of a user
name	Varchar	20		N		User name
surname	Varchar	20		N		Last name of the user
address_ID	Integer		FK(ADDRESS)	N		
telephone	Number	12		A		Telephone of the user
email	Varchar	30		N		Email of a user
type	Varchar	10		N	1	User type

Table **SHOE**

	Data type	Length	Key	Null	IC	Description
ID	Integer		Primary	N		
name_of_product	Varchar	15		N		Name of product
description	Varchar	100		A		A short description of product
size_us	Integer			N	3	Size of product
price	Integer			N	2	Price of product
User_ID	Integer		FK(USER)	N		
Brand_ID	Integer		FK(BRAND)	N		

Table **BRAND**

	Data type	Length	Key	Null	IC	Description
ID	Integer		Primary	N		
brand_name	Varchar	15		N		Name of brand
description	Varchar	100		A		A short description of brand

Table **COMMENT**

	Data type	Length	Key	Null	IC	Description
User_ID	Integer		PK, FK(USER)	N		
SHOE_ID	Integer		PK, FK(SHOE)	N		
comment	Varchar	100		N		Content of the comment

Table **ADDRESS**

	Data type	Length	Key	Null	IC	Description
ID	Integer		Primary	N		
address	Varchar	30		N		Street and city of the user
postal_code	Varchar	10		N		Postal code of the user

Table **TRANSACTIONS**

	Data type	Length	Key	Null	IC	Description
User_ID	Integer		PK, FK(USER)	N		
SHOE_ID	Integer		PK,FK(SHOE)	N		
price	Integer			N	2	Price of the product
transaction_date	Date			N		Date of transaction

Integrity Constraints:

1. type: Admin, seller or customer
2. price ≥ 0
3. size_us ≥ 4 and size_us ≤ 15