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ONLINE HARDWARE STORE

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Description of the database

The primary purpose of the database is the handling the interaction of customer and shop via the Net

The assumptions are following:

1. Each customer has own ID and can have only one Cart where the order data is kept
2. Customers may buy from different countries
3. Each product belongs to one category and also has one manufacturer
4. The product may have a discount, it's unnecessary
5. There are 2 ways of payments for the order(debit card or web wallet)
6. Debit card may be Visa or Mastercard, web wallet – Paypal or Qiwi

The database consists of 7 following tables:

1. Customers – info about shop customers
2. Products – info about production of shop
3. CARTS (dynamic table) – info about customers' order
4. Categories – info about type of product in the shop e.g. TV, Laptop etc.
5. Manufacturers – info about product manufacturer e.g. Apple, Samsung etc.
6. Cart_Orders – info about products in the cart of each customer
7. Payments_Info – info about payments

The reports are as follows:

1. Number of products bought from certain country
2. Customers' age – shows how old is the customer
3. Order total cost – shows total cost of one certain order (sum of products' prices in one cart)
4. Order total cost including discount of product (if it has one)
5. Top most popular manufacturers among customers (products of which are frequently bought) regardless category

Table descriptions

Table Customers

Link	Column	Description	Data type
PK	ID	Customer's identifier	INT
	Name	Customer's Name	VARCHAR(20)
	Birth_Date	Date of birth	DATE
	Email	Mail address	VARCHAR(20)
	Country	Order country	VARCHAR(20)

Table Products

Link	Column	Description	Data type
PK	Product_ID	Product identifier	INT
	Name	Product name	VARCHAR(20)
	Price(\$)	Price in \$	MONEY
	Discount(%)	Discount amount in %	FLOAT
FK	Manufacturer_ID	Manufacturer identifier	VARCHAR(20)
FK	Category_ID	Category identifier	VARCHAR(20)

Table **CARTS**(dynamic)

Link	Column	Description	Data type
PK	Cart_ID	Cart identifier	INT
FK	Customer_ID	Customer identifier	INT
FK	Payment_ID	Payment identifier	INT
	Order_Date	Date of making order	DATE

Table Categories

Link	Column	Description	Data type
PK	Category_ID	Category identifier	INT
	Name	Name	VARCHAR(20)

Table Manufacturers

Link	Column	Description	Data type
PK	Man_ID	Manufacturer identifier	INT
	Name	Name	VARCHAR(20)

Table Cart_Orders

Link	Column	Description	Data type
FK	Product_ID	Product identifier	INT
FK	Order_ID	Cart(Order) identifier	INT

Table Payments_Info

Link	Column	Description	Data type
PK	Payment_ID	Payment identifier	INT
	Payment_Method	Debit card of web wallet	VARCHAR(20)
	Payment_Service	Type of card or wallet	VARCHAR(20)

Description of Reports

Number of products bought from certain country by month of purchase

Procedure "Products_Per_Country" is used for this report. Country and Order date are taken as a parameters. In output we have number of products which were bought from certain country
This info is helpful for advertising of product in further work

Order total cost

View "Total_Cost" is used for this report. This report calculates the sum of all products in one order (cart) made by customer and shows the payment method (Paypal or credit card). It makes payment for customer easier (he doesn't have to calculate it by himself)

Order total cost including discount

View "With_Discount" is used for this report. This report includes current discounts of products in total cost of order and shows order's cost with discount. It may seem that having this view , there's no sense in "Total_Cost". However, it helps customer to consider the saved money

Customers' age

Procedure "Age" is used for this report. Two integers (Birth_Date and Order_Date) are used as parameters. In output we have age of each customer. It used for statistics and further add

Top most popular manufacturers among customers

Procedure "Top3_Most_Popular_Manufacturers" is used for this report. Parameter is Manufacturer ID. As output we have 3 manufacturer grouped by frequency of purchasing their products sorted in descending order(Top 3) It's vital for further supply choice

ERD Diagram

