

The database system will support a comprehensive **Hepsiburada** e-commerce platform that includes different types of users, product management, orders, logistics, and payment processing. Below is a description of each entity and its requirements.

Each **User** is identified by a unique account and is described by their full name, phone number, email, hashed password, membership date, and user type (customer, seller, or admin). Each account has a status that indicates whether it is active or not.

A **Customer** is a type of user, distinguished by their unique UserId, and can be categorized into different customer types. Premium accounts have start and end dates for their special account. They earn Hepsimoney from their premium accounts. Premium account receive exclusive discounts. Each customer has addresses for shopping. Customers should be able to like the products they want. Customers create their desired lists with products.

An **Admin** is another type of user, identified by their unique UserId, and is responsible for managing the system. Admins have separate roles for the system and their last login time is recorded.

A **Seller** is also a type of user, identified by their UserId. Sellers manage shops and are described by their ShopId and SellerRate.

Each **Address** is uniquely identified by an AddressId and includes details such as Neighborhood, Province, City, Country, Flat, Apartment, and AddressType. The address type specifies whether the address is for accommodation or a delivery point. Addresses can belong to customers or shops.

A **Shop** has unique RegistrationNumber and includes attributes such as ShopDescription, ShopRate, ShopName, CreationDate, and ShopPhone. Also, a shop has contact information, including a phone number and a contact address. It should have a seller who manages her shop.

A **Product** is uniquely identified by a ProductId and every product has Name, Brand, SKU, ShortDescription, FullDescription, ApprovalStatus, Status, Rating, DateAdded, TaxClass, BarCode, BasePrice. Product has url for media. Products belong to shops.

A **List** is created by customer to organize their products. Each list is identified by a ListID and has attributes like ListName, ListType, Visibility, and CreatedAt.

**Questions** are submitted by customers about products. Each question is identified by a QuestionNumber and includes QuestionText, QuestionDate, AnswerDate, and AnswerText. Questions are answered by sellers.

**ProductOptions** define additional characteristics of products. Each option is identified by an OptionID, has an OptionName, and can be mandatory or optional.

**OptionValues** specify possible values for product options. Each value has an OptionValueID, DimensionImpact, WeightImpact, AdditionalPrice.

**ProductVariations** are specific combinations of product options. Each variation is identified by a VariationID and includes attributes like Status, StockLevel, Weight, OptionCombination, UpdateAt, Price and url for images. Variations are associated with option values through the Combination relationship.

**ProductCategories** organize products into hierarchical categories. Each category is identified by a CategoryId and includes a CategoryName and media. Categories can have parent-child relationships through the Subcategory entity.

**Logistics** entities handle order delivery and are identified by a LogisticID. Attributes include TrackingNumber, DeliveryStatus, Recipient, ShippingDate, DeliveryDate, and use customer's address. The LogisticType attribute distinguishes between different logistics providers. Delivery statuses define the possible statuses of orders, such as "Pending," "InTransit," and "Delivered." Logistic using address for shopping.

**PaymentMethods** define how customers complete their payments, including options such as bank cards, Hepsipay wallets, and other methods like transfers, multiple credits, and digital payments. Each payment method is identified by a unique Payment\_ID. Customers can opt for installment payments when placing an order.

The **HepsiFinans** entity represents a financial option with attributes like PhoneNumber, CalculateDate, LastDate. Hepsifinans generates the user's limit by taking their TC. The **BankCard** entity includes details such as CardHolderName, ExpiryDate, CVV, PaymentType, and the last four digits of

the card (**CardLastFourDigits**) for secure transactions. All these payment methods are integrated through the **HEPSIPAY** system, which acts as the central hub connecting various payment options to streamline the transaction process for customers.

Additionally, other payment methods such as **TRANSFER**, **MULTIPLECREDIT**, and **DIGITAL** are grouped under the **OTHER** category.

**SKUManagement** tracks stock levels and restocking details for products. Each SKU has attributes like **SupplierName**, **RestockDate**, **StockLevel**, and **RestockThreshold**.

**Discounts** provide promotional offers for products. Discounts are identified by a **DiscountID** and have attributes like **Limit**, **Status**, **Rate with Percentage discount**, **Amount with FixedAmount discount**, and **PrimeDiscount**. Coupons applied direct cart items.

**Reviews** allow customers to provide feedback only on products they have purchased and includes attributes like **ResponseDate**, **ResponseText**, **Rating**, **Comment**, **ReviewDate**.

Additionally, orders are linked to an **Approved\_Cart**, which is identified by an **Approved\_Cart\_ID** and contains attributes like **TotalPrice**. The relationship between orders and approved carts is defined through the **approved** action.

**OrderItem** details the individual products in an order. Each item is identified by an **OrderItemID** and includes attributes like **OrderItemId**, **Price**, **OrderStatus**. The **OrderItem** shipped the **Logistic**.

**Returns** are added back to products from order items. Each return includes attributes like **TrackingNo**, **ReturnLocation**, **ReturnDate**, **ReturnReason**, **ReturnStatus**.

**CartItems** place the contents of a customer's cart. Each record includes attributes like **Quantity**, and **CartItemID**. Customer select product and this products form **orderitems**.

**Carts** represent a customer's shopping session. Each cart has a **CartID** and attributes like **CartStatus**, **CreateDate**, **UpdateDate**, and **TotalPrice**. Carts are owned by customers.