

Data Requirements for Trendyol Application

1. User Data

- Each user is identified by a unique **User ID**.
 - Users must provide:
 - **First Name, Last Name, Email, Password, and Phone Number.**
 - Users are categorized as:
 - **Customer** or **Seller** (specialized roles of User).
 - For **Elite Members**:
 - Elite status and related benefits are stored.
 - Membership start and end dates are recorded.
 - Customer have multiple **Addresses**, each identified by a unique **Address Name**.
 - Address details include:
 - **Resident Name** and **Description**.
 - Each customer has a **Shopping Cart** linked to their account.
-

2. Seller Data

- Each seller is identified by a unique **Seller ID**.
 - Sellers provide:
 - **Name, Rating, Address, Registration date, Duration to answer customer questions, logistics, number of followers, average shipment duration and relevant Products.**
 - Sellers can have reviews made by customers.
-

3. Product Data

- Each product is identified by a unique **Product ID**.
 - Product details include:
 - **Name, Description, Stock, and Average Rating.**
 - Products are associated with one or more **Categories**, identified by a **Category ID** and **Name**.
 - Categories may have subcategories itself (e.g., **Main Category** and **Subcategory**).
 - Products include **Images** for visual representation.
 - Products are sold by specific **Sellers** with specific **Prices**.
 - Products can have similar recommendations:
 - Each product can have multiple suggested products and also can be suggested underneath multiple products.
-

4. Shopping Cart Data

- Each cart is identified by a unique **Cart ID**.
 - A cart holds multiple **Products**:
 - Each product entry in the cart specifies the **Quantity** and the **Date Added**.
-

5. Order Data

- Each order is identified by a unique **Order ID**.
 - Order details include:
 - **Order Date, Status** (e.g., Pending, Delivered), and associated **Ordered Products**.
 - Ordered products are a special form of **Product**.
 - Orders involve **Payment**, which include:
 - Unique **Payment ID**, and **Amount**.
 - Each order has assigned shipping details:
 - **Shipping Company Name, Tracking ID**, and **Delivery Date**.
 - When a specific order is placed it is held in **Order History** with specific **Sequence Number**.
-

6. Payment Method Data

- Payment methods include:
 - **Credit Card Details** (e.g., Card Holder, Card Number, Expiry Date, CVV) and unique **Card Name**.
 - **Trendyol Loan** option has unique **Loan ID, Amount** and **Installment**.
-

7. Wishlist and Collection

- Each customer has **Wishlists**, identified by **Wishlist IDs**.
 - A wishlist contains multiple products:
 - Each product includes its **Product ID** and the **Date Added**.
 - Users can organize products as different lists, and also save other lists made by different customers. The combination of these two kinds of lists are called **Collection**.
 - **Collections** are identified by a unique **Collection ID, name, the number of products, number of saves by other users and number of views**.
-

8. Notifications

- Each notification is created by an **Admin**.
- Notifications are identified by a unique **Notification ID**.
- Notifications include:

- **Header, Content, Date Sent, and Notification Type** (e.g., Order Update, Promotional).
-

9. Reviews and Comments

- Users can leave reviews only for purchased products:
 - Each review is identified by a **Review ID**.
 - Reviews include:
 - **Rating** (1-5) and **Date**.
 - **Comment** is a special type of review which includes **Description** and **Media**.
 - Reviews are linked to both **User IDs** and **Product IDs**.
-

10. Campaigns

- Campaigns are identified by a unique **Campaign ID**.
 - Campaign details include:
 - **Name, Start Date, End Date**, and associated discounts:
 - **Discount Type** (e.g., Percentage, Fixed Amount, Category Discount).
 - **Conditions** (e.g., "20% off for purchases above 200 TL").
 - Campaigns can apply to specific **Products**.
 - Campaigns can be determined by **Admins** and **Sellers**.
 - **Coupons** are special type of **Campaigns**. They have a lower limit and coupon code to apply in special parts.
-

11. Shipping

- Shipping details include:
 - Unique **Tracking ID, Company Name, Estimated Delivery Date**, and **Delivery Method**.
 - Delivery Method can be either **Home Delivery** or **delivery to a specific drop point location selected by the customer**.
 - The pick-up location's **Address, Name, Working Hours** and unique **Pick-Up ID** are kept in the database.
-

12. Return

- Customers can start the return process for the ordered products.
 - Each return has a unique **Return Code, Date, Amount, Status** and **Reason**
 - Each return process is assigned to a **Shipping** method which again can be either **Home Delivery** or **Pick-up**.
-

14. Trendyol Elite Membership

- Elite Membership **Benefits** (e.g. Free and fast shipping, Exclusive discounts and product access, Dedicated customer support).
 - The system also tracks membership **Start Date** and **End Date**.
-

15. Message Box and Message

- The **Message Box** allows communication and announcements within the Trendyol platform.
- It is linked to the **Customer** entity (each has a personalized message box) and the **Notification** entity (alerts users of new messages).
- **Message Box** holds **Messages** in it.
- Each **Message** has a unique id, content header and type.
- Types of messages include (this information holds in "Type" attribute of **Message**) :
 1. **Product Questions**: General inquiries about specific products.
 2. **Order Questions**: Questions related to orders (e.g., shipment, payment, status).
 3. **Seller Announcements**: Updates or promotions from sellers to their buyers.
- Notifications are created for new messages.

Data Requirements for Hepsiburada Application

1. Common User Requirements (For All Users)

- All users are identified by a unique **User ID**.
 - Users must provide the following details during registration:
 - **First Name, Last Name, Email Address, Password, and Phone Number**.
 - The **Registration Date** is recorded for all users.
 - Users are categorized as:
 - **Buyer**: Regular users who purchase products.
 - **Seller**: Users who list and sell products on the platform.
-

2. Buyer-Specific Requirements

- Buyers can have one or more addresses stored:
 - Each address is identified by an **Address ID**.
 - Address details include:

- **Title** (e.g., Home, Work), **Description**, **Resident Name**, and **Postal Code**.
 - Users' **Registration Date** is recorded.
 - Buyers can receive notifications:
 - Notifications are identified by a **Notification ID** and include:
 - **Header**, **Content**, **Type**, and **Date Sent**.
 - Buyers can place orders for products on the platform.
 - Buyers can manage their **Shopping Cart**.
 - Buyers can leave reviews and comments.
-

3. Seller-Specific Requirements

- Sellers are identified by a unique **Seller ID**.
 - Sellers provide:
 - **Name**, **Rating**, **Address**, **Average Shipment Duration** and **Question Answering Duration** information.
 - Sellers list multiple products.
 - Sellers can participate in campaigns:
 - Campaigns are identified by a **Campaign ID** and include:
 - **Name**, **Start Date**, **End Date**, **Conditions**, and **Discount Type**.
-

4. Premium Membership

- Users can subscribe to **Premium Membership**.
 - Premium membership details include:
 - **Start Date** and **End Date**.
 - **HepsiPara** Balance.
 - Premium members receive specific **Benefits**:
 - Each benefit is identified by a **Benefit ID**.
 - Benefits include:
 - **Name**, **Description**, and the **Term Gain**.
 - **Link Gelir** is a special form of **Benefit** that can also come with **Premium Membership**. It keeps the track of the **HepsiPara Gain** earned by sharing links.
-

3. Product Data

- Each product is identified by a unique **Product ID**.
- Product details include:
 - **Name**, **Description**, **Stock**, **Average Rating**, and **Brand**.
 - Associated **Images** for product visuals.
 - **Price** denoted by specific **Seller**.
- Products belong to one or more **Categories**:

- Each category is identified by a **Category ID**.
 - Categories may have subcategories itself (e.g., **Main Category** and **Subcategory**).
 - Products can have **similar recommendations**:
 - Each product can have multiple **suggested products** and also can be suggested underneath multiple products.
-

4. Shopping Cart Data

- Each shopping cart is identified by a unique **Cart ID**.
 - Each **shopping cart** belongs to a specific **buyer**.
 - Each cart contains multiple products with their **Quantity**, **Unit Price** and **Date Added** are stored.
-

5. Order Data

- Each order is identified by a unique **Order ID**.
 - Order details include:
 - **Order Date**, **Status** (e.g., Pending, Shipped, Delivered, Returned), **HepsiPara Gain** and the associated **Amount**.
 - Orders include multiple ordered products.
 - Ordered products are a special form of **Product**.
 - Each order has assigned shipping details:
 - **Shipping Company Name**, **Tracking ID**, and **Delivery Date**.
 - When a specific order is placed it held in **Order History** with specific **Sequence Number**.
-

6. Payment Data

- Payments are identified by a unique **Payment ID**.
 - Payment methods include:
 - **Credit Card**:
 - **Card Holder Name**, **Card Number**, **Expiration Date**, **CVV**, and a **Card Name** which is given by the user to name the card.
 - **HepsiPay**: A balance-based payment system:
 - **HepsiPay Balance** and **HepsiPay Gain** are stored.
-

7. Notifications

- Each notification is created by an **Admin**.
- Notifications are identified by a unique **Notification ID**.
- Notifications include:

- **Header, Content, Date Sent, and Notification Type** (e.g., Order Update, Promotional).
-

8. Reviews and Comments

- Users can leave reviews for products they have purchased:
 - Each review is identified by a **Review ID**.
 - Reviews include:
 - **Rating** (1-5), **Comment Description**(optional), and associated **Media** (optional).
 - The **Date Written** is stored.
-

9. Campaigns

- Campaigns are identified by a unique **Campaign ID**.
 - Campaign details include:
 - **Name, Start Date, End Date**, and associated discounts:
 - **Discount Type** (e.g., Percentage, Fixed Amount, Category Discount).
 - **Conditions** (e.g., "20% off for purchases above 200 TL").
 - Campaigns can apply to specific **Products**.
 - Campaigns can be determined by **Admins** and **Sellers**.
-

10. Return Data

- Customers can start the return process for the ordered products.
 - Each return has a unique **Return Code, Date, Amount, Status** and **Reason**
 - Each return process is assigned to a **Shipping** method which again can be either **Home Delivery** or **Pick-up**.
-

11. Favorites and Lists

- Each list is linked to a specific **Buyer**.
 - Buyer can save favorite products in their **Favorites** list.
 - Buyer can also have a created list by themselves.
 - Lists include a **Name**, unique **List ID** and a collection of products.
 - Created lists can be; **Made List, Saved List or Tam Benlik Lists**.
 - Each List have n-number of **Products**.
-

12. Shipping

- Shipping details include:
 - Unique **Tracking ID**, **Company Name**, **Estimated Delivery Date**, and **Delivery Method**.
 - Delivery Method can be either **Home Delivery** or **delivery to a specific drop point location selected by the customer**.
 - The pick-up location's **Address**, **Name**, **Working Hours** and unique **Pick-Up ID** are kept in the database.
-

13. Messages

- **Buyer** can ask questions. Each **Question** has a unique id, text and type.
- Type identifies whether the question is to the seller or customer representative.
- If the question is to a seller, this indicates special type **Seller_Q**. **Seller** can answer questions from **Buyers**.

Data Requirements for Amazon Application

1. User Data

- Users are the primary participants in the system and are identified by a unique **User ID**.
 - Users must provide the following information during registration:
 - **First Name**, **Last Name**, **Email Address**, **Password**, and **Phone Number**.
 - Users can manage multiple addresses:
 - Addresses are stored in a separate dataset and identified by an **Address ID**.
 - Address details include:
 - **Title** (e.g., Home, Work), **Description**, **Resident Name**, **Postal Code**, and **Country**.
 - Users have a personalized **Message Box** to manage communications.
-

2. Customer Profile

- Each customer has a unique **Profile ID** and detailed profile information, including:
 - **Name**, **Age Group**, and detailed **Body Measurements**:
 - **Height**, **Weight**, **Shoulder Width**, **Waist**, **Legs**, **Hips**, and **Shoe Size**.
 - **Chosen Department**: Reflecting shopping preferences, such as Electronics, Fashion, or Groceries.

- Customers can have any number of **Lists** that holds desired products(they hold at least 1 product). **Lists** have unique id and name.
 - Customers have the following functionality:
 - Manage a **Shopping Cart**:
 - The cart is identified by a **Cart ID** and contains:
 - **Product ID, Quantity, and Date Added.**
 - Access their **Order History**:
 - All past orders are stored for tracking purposes.
-

3. Seller Profile

- Sellers are identified by a **Seller ID** and maintain a profile with:
 - **Name, Rating, and Description.**
 - Sellers can list multiple products for sale:
 - Products are identified by a **Product ID** and include:
 - **Name, Description, Price, Stock, Brand, Condition, and Images.**
 - Sellers can communicate with buyers through the **Message Box** for inquiries or announcements.
-

4. Amazon Prime Membership

- Prime Membership offers premium benefits to customers:
 - Membership details include:
 - **Start Date, End Date, and the user's Prime Status.**
 - Benefits are identified by a **Benefit ID** and include:
 - **Name** and advantages's holds in **Description**, such as:
 - **Faster Shipping Options.**
 - **Exclusive Discounts** on products and services.
 - **Access to Prime-Only Products.**
 - Prime members can manage their subscription and receive related notifications.
-

5. Payment Data

- Payments are identified by a **Payment ID** and support multiple methods:
 - **Credit Card**:
 - Details include **Card Holder Name, Card Number, Expiration Date, and CVV.**
 - **Gift Card**:
 - Includes **Balance** and **Expiration Date.**
- Customers can configure:
 - A **Default Payment Method** for streamlined checkout.
 - A **Default Address** for delivery.

6. Order Data

- Orders are identified by an **Order ID** and linked to a customer via their **User ID**.
 - Each order includes:
 - **Order Date, Status** (e.g., Pending, Shipped, Delivered, Returned), and **Total Amount**.
 - Payment information:
 - **Payment Method** and linked **Payment ID**.
 - Orders can include multiple products:
 - Each product is stored with:
 - **Product ID, Quantity, and Unit Price**.
 - Gift orders include:
 - **Sender Details** and **Gift Status** (e.g., Wrapped, Unwrapped).
-

7. Shipping and Delivery

- Shipping information includes:
 - **Shipping Company, Tracking ID, and Estimated Delivery Date**.
 - Delivery options include:
 - **Home Delivery**:
 - Shipping to a user's saved address.
 - **Pick-Up Points**:
 - Identified by a **Pick-Up ID** and include:
 - **Name, Pick-Up Address, and Working Hours**.
-

8. Notifications

- Notifications are identified by a **Notification ID** and include:
 - **Header, Content, Type** (e.g., Order Update, Promotional Message), and **Date Sent**.
-

9. Message Box

- The **Message Box** allows communication and announcements within the platform.
- Messages are identified by a **Message ID** and include:
 1. **Header, Content**, and a reference to the **Message Box ID**.
- Types of messages include:
 1. **Order Updates**: Notifications about shipment status, delays, etc.
 2. **Product Inquiries**: Questions about product specifications, availability, etc.
 3. **Promotional Campaigns**: Messages about ongoing discounts or offers.
 4. **Seller Communication**: Inquiries and updates from or to sellers.

10. Campaigns

- Campaigns are identified by a **Campaign ID** and include:
 - **Name, Start Date, End Date, Conditions, and Discount Type** (e.g., Percentage, Fixed Amount).
- Campaigns are managed by **Admins**.

11. Reviews and Comments

- Users can leave reviews for **products** and **Admin** audits them:
 - Reviews are identified by a **Review ID** and include:
 - **Rating, Status and Date Written.**
- **Comment** is a special type of **review** and may has content and media.

12. Returns

- Returns are identified by a **Return Code** and include:
 - **Reason, Status** (e.g., Pending, Approved, Rejected), **Return Date**, and **Amount**.
- Returns are linked to orders via the **Order ID** and allow tracking of the refund process.

13. Admin Control

- Admins manage platform-wide operations and are identified by an **Admin ID**.
- Admin functionalities include:
 - Defining and managing **Campaigns**.
 - Monitoring system activities via an **Audit System**.