**Stepwise E-Commerce Marketplace of Furniture ‘Avion’**

**Purpose of the Platform**

To create a comprehensive online marketplace for furniture that connects buyers and sellers, offering a seamless shopping experience with customizable options, diverse product categories, and reliable delivery services.

**Business Goals**

1. **Increase Accessibility:** Provide a user-friendly platform where customers can browse and purchase furniture from the comfort of their homes.
2. **Enhance Vendor Reach:** Empower local and international furniture sellers to reach a wider audience.
3. **Boost Revenue:** Monetize the platform through commission-based sales, premium seller subscriptions, and featured listings.
4. **Promote Sustainability:** Partner with eco-friendly brands to promote sustainable furniture options.
5. **Build Trust:** Ensure secure transactions and offer quality assurance through verified sellers and reviews.

**Aim to Solve**

1. **Fragmented Marketplace:** Create a centralized platform where buyers can explore a wide range of furniture from different vendors.
2. **Lack of Customization:** Offer customizable furniture options for buyers.
3. **Inconvenient Delivery:** Ensure timely and damage-free shipments through reliable logistics partners.
4. **Transparency Issues:** Provide detailed product descriptions, customer reviews, and seller ratings.

**Products or Services Offered**

1. **Products:**
   * Sofas, beds, tables, chairs, wardrobes, desks, shelves, and outdoor furniture.
   * Customizable furniture with material, size, and color options.
   * Eco-friendly furniture made from sustainable materials.
2. **Services:**
   * Assembly and installation.
   * Interior design consultations.
   * Returns and exchanges.
   * Real-time order tracking.

**What Will Set This Platform Apart**

1. **Customization Options:** Users can design furniture by choosing dimensions, colors, and materials.
2. **Augmented Reality (AR):** Visualize furniture in their spaces using AR tools.
3. **Diverse Vendor Network:** Collaborations with artisan and premium furniture brands.
4. **Sustainability Focus:** Highlight eco-friendly and upcycled furniture products.
5. **Seamless User Experience:** Intuitive UI/UX, advanced search filters, and secure checkout.

**Workflow**

1. **User Registration:** Buyers and sellers create accounts.
2. **Product Listing:** Sellers upload furniture details, including images, dimensions, materials, and price.
3. **Product Browsing:** Buyers search for products using categories, filters, or AR visualization.
4. **Order Placement:** Buyers add items to the cart, select customization options, and proceed to checkout.
5. **Payment:** Secure payment gateway with multiple payment options.
6. **Order Processing:** Order confirmation and notification sent to the seller.
7. **Shipping:** Seller packages the product, and logistics partner picks up and delivers.
8. **Feedback:** Buyers leave reviews and ratings post-delivery.

**Data Schema**

**Entities**

1. **User:**
   * Attributes: UserID, Name, Email, Phone, Role (Buyer/Seller), Address.
2. **Product:**
   * Attributes: ProductID, Name, Category, Price, Material, Dimensions, Stock, SellerID.
3. **Order:**
   * Attributes: OrderID, UserID, ProductID, Quantity, OrderStatus, PaymentStatus, OrderDate.
4. **Review:**
   * Attributes: ReviewID, ProductID, UserID, Rating, Comment, ReviewDate.
5. **Shipment:**
   * Attributes: ShipmentID, OrderID, CourierPartner, TrackingNumber, Status.
6. **Vendor:**
   * Attributes: VendorID, Name, BusinessName, ContactDetails, SellerRating.

**Shipments**

1. **Order Fulfillment Process:**
   * Seller confirms the order.
   * Product is packaged and picked up by logistics partner.
   * Shipment details (tracking number, estimated delivery) shared with the buyer.
2. **Delivery Timeline:**
   * Standard delivery (3-7 days) or expedited options.
   * Live tracking for all shipments.
3. **Damage Management:**
   * Protocols for handling damaged goods during transit.
   * Free returns/exchanges for faulty deliveries.

**Relationships Between Entities**

1. **User and Orders:** One-to-many relationship (a user can place multiple orders).
2. **Product and Orders:** Many-to-many relationship (a product can be part of multiple orders, and an order can contain multiple products).
3. **Vendor and Product:** One-to-many relationship (a vendor can list multiple products).
4. **Order and Shipment:** One-to-one relationship (each order is linked to a single shipment).
5. **Product and Review:** One-to-many relationship (a product can have multiple reviews).

By addressing these elements, the platform will provide a robust, scalable, and user-friendly furniture e-commerce solution.