**Database Design for DresSmart Marketplace**

**Tables:**

1. Users

2. Retailers

3. Items

4. Messages

5. Wishlist

6. Reviews

7. Notifications

8. Orders (for future payment integration)

9. Categories (for organizing items)

10. Images (for storing item images)

**1. Users Table**

Stores information about all users, both buyers and retailers.

| **Column Name** | **Data Type** | **Description** |
| --- | --- | --- |
| user\_id | INT | Primary Key, auto incremented |
| full\_name | VARCHAR(255) | User’s full name |
| email | VARCHAR(255) | User’s email |
| password\_hash | VARCHAR(255) | Hashed password |
| dob | DATE | Date of Birth |
| location | VARCHAR(255) | Optional location |
| phone\_number | VARCHAR(15) | Phone number |
| user\_type | ENUM | 'buyer', 'retailer' |
| profile\_picture | VARCHAR(255) | URL to profile picture |
| created\_at | TIMESTAMP | Account creation date |
| updated\_at | TIMESTAMP | Last update date |

**2. Retailers Table**

Stores additional information specific to retailers.

| **Column Name** | **Data Type** | **Description** |
| --- | --- | --- |
| retailer\_id | INT | Foreign Key from Users (user\_id) |
| id\_card\_picture | VARCHAR(255) | URL to ID card picture |
| source\_of\_items | TEXT | Description of item sources |
| inventory\_storage\_area | TEXT | Description of storage area |
| delivery\_modes | TEXT | Modes of delivery for items |
| working\_hours | VARCHAR(255) | Retailer working hours |
| social\_media\_accounts | TEXT | Other social media accounts |
| verified | BOOLEAN | Verification status |

3. Items Table

Stores information about items listed by retailers.

| **Column Name** | **Data Type** | **Description** |
| --- | --- | --- |
| item\_id | INT | Primary Key, auto-incremented |
| retailer\_id | INT | Foreign Key from Retailers (user\_id) |
| category\_id | INT | Foreign Key from Categories (category\_id) |
| title | VARCHAR(255) | Title of the item |
| description | TEXT | Detailed description of the item |
| price | DECIMAL(10, 2) | Price of the item |
| created\_at | TIMESTAMP | Item creation date |
| updated\_at | TIMESTAMP | Last update date |

4. Messages Table

Stores messages between buyers and retailers.

| **Column Name** | **Data Type** | **Description** |
| --- | --- | --- |
| message\_id | INT | Primary Key, auto-incremented |
| sender\_id | INT | Foreign Key from Users (user\_id) |
| receiver\_id | INT | Foreign Key from Users (user\_id) |
| item\_id | INT | Foreign Key from Items (item\_id) |
| message\_text | TEXT | Content of the message |
| created\_at | TIMESTAMP | Message sent date |

5. Wishlist Table

Stores items that buyers have saved for later.

| **Column Name** | **Data Type** | **Description** |
| --- | --- | --- |
| wishlist\_id | INT | Primary Key, auto-incremented |
| user\_id | INT | Foreign Key from Users (user\_id) |
| item\_id | INT | Foreign Key from Items (item\_id) |
| added\_at | TIMESTAMP | Date item was added to Wishlist |

6. Reviews Table

Stores reviews and ratings for items.

| **Column Name** | **Data Type** | **Description** |
| --- | --- | --- |
| review\_id | INT | Primary Key, auto-incremented |
| user\_id | INT | Foreign Key from Users (user\_id) |
| item\_id | INT | Foreign Key from Items (item\_id) |
| rating | INT | Rating (1-5) |
| review\_text | TEXT | Content of the review |
| created\_at | TIMESTAMP | Review date |

7. Notifications Table

Stores notifications for users.

| **Column Name** | **Data Type** | **Description** |
| --- | --- | --- |
| notification\_id | INT | Primary Key, auto-incremented |
| user\_id | INT | Foreign Key from Users (user\_id) |
| message | TEXT | Notification content |
| read\_status | BOOLEAN | Read/unread status |
| created\_at | TIMESTAMP | Notification creation date |

8. Orders Table (Future)

Optional table for integrating payment systems.

| **Column Name** | **Data Type** | **Description** |
| --- | --- | --- |
| order\_id | INT | Primary Key, auto-incremented |
| buyer\_id | INT | Foreign Key from Users (user\_id) |
| item\_id | INT | Foreign Key from Items (item\_id) |
| quantity | INT | Quantity of items purchased |
| total\_price | DECIMAL(10, 2) | Total price of the order |
| order\_status | VARCHAR(50) | Status of the order |
| created\_at | TIMESTAMP | Order date |

9. Categories Table

Organizes items into categories.

| **Column Name** | **Data Type** | **Description** |
| --- | --- | --- |
| category\_id | INT | Primary Key, auto-incremented |
| name | VARCHAR(255) | Name of the category |

10. Images Table

Stores images for items.

| **Column Name** | **Data Type** | **Description** |
| --- | --- | --- |
| image\_id | INT | Primary Key, auto-incremented |
| item\_id | INT | Foreign Key from Items (item\_id) |
| image\_url | VARCHAR(255) | URL of the image |
| created\_at | TIMESTAMP | Image upload date |

**Relationships:**

* Users to Retailers: One-to-One (A user can be a retailer)
* Users to Messages: One-to-Many (A user can send/receive multiple messages)
* Retailers to Items: One-to-Many (A retailer can list multiple items)
* Items to Categories: Many-to-One (An item belongs to one category)
* Items to Images: One-to-Many (An item can have multiple images)
* Items to Reviews: One-to-Many (An item can have multiple reviews)
* Users to Wishlist: One-to-Many (A user can have multiple Wishlist items)
* Users to Notifications: One-to-Many (A user can have multiple notifications)
* Users to Orders: One-to-Many (A user can place multiple orders)

This schema provides a comprehensive structure to support the functionalities of DresSmart, ensuring efficient data management and retrieval.