

Vinyl Vibe DB

This document outlines the structure of the MongoDB database for Vinyl Vibe, including the cluster, databases, and collections.

MongoDB Structure

- **Cluster:** Vinyl-Vibe-Cluster
 - **Database:** vinyl-vibe-main
 - **Collection:** users
 - **Collection:** products
 - **Collection:** orders
 - **Collection:** cart

users Collection Schema

| Field | Type | Description |
|--------------|----------|--------------------------------------|
| _id | ObjectId | Unique identifier for the user |
| name | String | Full name of the user |
| email | String | User's email address |
| passwordHash | String | Hashed password for authentication |
| role | String | Role of the user (customer or admin) |
| address | Object | User's primary address |
| - street | String | Street address |
| - city | String | City name |
| - postcode | String | Postal/ZIP code |
| - state | String | State/Province |
| - country | String | Country name |
| refreshToken | String | Refresh token for JWT authentication |
| createdAt | Date | Account creation timestamp |
| lastLogin | Date | Last login timestamp |
| isActive | Boolean | Whether the account is active |

Example **users** Entry:

```
{
  "_id": "64abc1234def5678ghi90jkl",
  "name": "John Doe",
  "email": "john.doe@example.com",
  "passwordHash": "$2b$10$hashedpassword123",
  "role": "customer",
  "address": {
    "street": "123 Main St",
    "city": "Springfield",
    "postcode": "12345",
    "state": "Illinois",
    "country": "USA"
  },
  "refreshToken": "someRandomJWTTokenHere",
  "createdAt": "2024-01-01T12:00:00Z",
  "lastLogin": "2024-01-01T12:00:00Z",
  "isActive": true
}
```

products Collection Schema

| Field | Type | Description |
|--------------------|----------|---|
| _id | ObjectId | Unique identifier for the product |
| name | String | Name of the product |
| description | String | General description of the product |
| price | Number | Price of the product |
| type | String | Product type (vinyl, turntable, etc.) |
| albumInfo | Object | (Optional) Only used when type is 'vinyl' |
| - artist | String | Name of the artist/band |
| - genre | String | Genre of the album (e.g., Rock, Jazz) |
| - trackList | Array | List of track names |
| - releaseDate | Date | Release date of the album |
| stock | Number | Quantity of the product in stock |
| images | Array | URLs for product images |
| thumbnail | String | URL for the product's thumbnail image |
| createdAt | Date | Timestamp when the product was created |

Example products Entry:

Vinyl product:

```
{
  "_id": "64abc1234def5678ghi90xyz",
  "name": "Abbey Road",
  "description": "The iconic Beatles album remastered.",
  "price": 19.99,
  "type": "vinyl",
  "albumInfo": {
    "artist": "The Beatles",
    "genre": "Rock",
    "trackList": [
      "Come Together",
      "Something",
      "Maxwell's Silver Hammer",
      "Octopus's Garden"
    ],
    "releaseDate": "1969-09-26T00:00:00Z"
  },
  "stock": 50,
  "images": ["https://example.com/images/abbeyroad_large.jpg"],
  "thumbnail": "https://example.com/images/abbeyroad_thumb.jpg",
  "createdAt": "2024-01-01T12:00:00Z"
}
```

Non-vinyl product:

```
{
  "_id": "64abc1234def5678ghi90abc",
  "name": "Vinyl Record Cleaner",
  "description": "A high-quality vinyl record cleaning kit.",
  "price": 29.99,
  "type": "accessories",
  "stock": 100,
  "images": ["https://example.com/images/cleaner_large.jpg"],
  "thumbnail": "https://example.com/images/cleaner_thumb.jpg",
  "createdAt": "2024-01-01T12:00:00Z"
}
```

orders Collection Schema

| Field | Type | Description |
|------------------------|----------|---|
| _id | ObjectId | Unique identifier for the order |
| userId | ObjectId | Reference to the user who placed the order |
| products | Array | Array of objects containing product details |
| - productId | ObjectId | Reference to the product in the order |
| - unitPrice | Number | Price per unit of the product at time of order |
| - quantity | Number | Quantity of the product ordered |
| total | Number | Total cost of the order |
| status | String | Status of the order (pending, shipped, delivered) |
| shippingAddress | Object | Address for order delivery |
| - street | String | Street address |
| - city | String | City name |
| - postcode | String | Postal/ZIP code |
| - state | String | State/Province |
| - country | String | Country name |
| createdAt | Date | Order creation timestamp |

Example **orders** Entry:

```
{
  "_id": "64order1234def5678ghi90abc",
  "userId": "64user1234def5678ghi90jkl",
  "products": [
    {
      "productId": "64prod1234def5678ghi90xyz",
      "unitPrice": 19.99,
      "quantity": 2
    },
    {
      "productId": "64prod5678def1234ghi90abc",
      "unitPrice": 129.99,
      "quantity": 1
    }
  ],
  "total": 169.97,
  "status": "pending",
  "shippingAddress": {
    "street": "123 Main St",
    "city": "Springfield",
    "postcode": "12345",
    "state": "Illinois",
    "country": "USA"
  },
  "createdAt": "2024-01-02T10:00:00Z"
}
```

cart Collection Schema

| Field | Type | Description |
|-------------|----------|--|
| _id | ObjectId | Unique identifier for the cart |
| userId | ObjectId | Reference to the user who owns the cart |
| products | Array | Array of objects representing cart items |
| - productId | ObjectId | Reference to the product in the cart |
| - quantity | Number | Quantity of the product in the cart |
| createdAt | Date | Timestamp when the cart was created |
| updatedAt | Date | Timestamp when the cart was last updated |

Example `cart` Entry:

```
{
  "_id": "64cart1234def5678ghi90abc",
  "userId": "64user1234def5678ghi90jkl",
  "products": [
    {
      "productId": "64prod1234def5678ghi90xyz",
      "quantity": 2
    },
    {
      "productId": "64prod5678def1234ghi90abc",
      "quantity": 1
    }
  ],
  "createdAt": "2024-01-01T12:00:00Z",
  "updatedAt": "2024-01-02T15:30:00Z"
}
```