**EcomVision – Data Dictionary**

1. **user\_details:- Stores user details**

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Data Type** | **Constraints** | **Description** |
| user\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique user ID |
| email | VARCHAR (100) | UNIQUE, NOT NULL | User's email |
| password | VARCHAR (20) | NOT NULL | Hashed password |
| created\_at | TIMESTAMP | DEFAULT CURRENT\_TIMESTAMP | Account creation time |

1. **websites:- stores e-commerce platforms**

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Data Type** | **Constraints** | **Description** |
| website\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique website ID |
| website\_name | VARCHAR (100) | UNIQUE, NOT NULL | Website name (Flipkart, Amazon, Ebay, AliExpress, etc…) |
| base\_url | Text | NOT NULL | Base URL of the website |

1. **categories:- stores product categories**

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Data Type** | **Constraints** | **Description** |
| category\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique category ID |
| name | VARCHAR (100) | UNIQUE, NOT NULL | Category name (Electronic, Fashion, etc…) |
| parent\_id | INT | FOREIGN KEY REFERENCES categories(category\_id), NULL | Parent category ID (NULL if it's a main category) |

1. **user\_requests:- stores user search requests**

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Data Type** | **Constraints** | **Description** |
| request\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique request ID |
| user\_id | INT | FOREIGN KEY REFERENCES users(user\_id), NOT NULL | User who made the request |
| product\_name | |  | | --- | | VARCHAR(255) |  |  | | --- | |  | | NOT NULL | Product user is searching for |
| category\_id | INT | FOREIGN KEY  REFRENCES category(category\_id), NULL | Category for filtering |
| min\_price | DECIMAL(10, 2) | NULL | Minimum price filter |
| max\_price | DECIMAL(10, 2) | NULL | Maximum price filter |
| created\_at | TIMESTAMP | DEFAULT CURRENT\_TIMESTAMP | Request time |

1. **products:- strores product details**

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Data Type** | **Constraints** | **Description** |
| product\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique product ID |
| website\_id | INT | FOREIGN KEY REFERENCES websites(website\_id), NOT NULL | Website source |
| category\_id | INT | FOREIGN KEY  REFRENCES category(category\_id), NULL | Product Category |
| title | VARCHAR(255) | NOT NULL | Product Title |
| price | DECIMAL(10, 2) | NOT NULL | Product Price |
| currency | VARCHAR(10) | NOT NULL | Currency (e.g., USD, INR) |
| availability | BOOLEAN | NOT NULL | Stock status |
| url | TEXT | NOT NULL | Product URL |
| image\_url | TEXT | NULL | Product Image URL |
| scraped\_at | TIMESTAMP | DEFAULT CURRENT\_TIMESTAMP | Last Scraped At |

1. **scraped\_results:- stores search result for requests**

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Data Type** | **Constraints** | **Description** |
| result\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique result ID |
| request\_id | INT | FOREIGN KEY REFERENCES user\_requests(request\_id), NOT NULL | Search Request reference |
| product\_id | INT | FOREIGN KEY REFERENCES products(product\_id), NOT NULL | Matched Product |
| scraped\_at | TIMESTAMP | DEFAULT CURRENT\_TIMESTAMP | Scrape time |

1. **price\_tracking:- Tracks price changes for products & Categories**

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Data Type** | **Constraints** | **Description** |
| track\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique trackking ID |
| user\_id | INT | FOREIGN KEY REFERENCES users(user\_id), NOT NULL | User tracking price |
| product\_id | INT | FOREIGN KEY REFERENCES products(product\_id), NOT NULL | Specific product being tracked |
| category\_id | INT | FOREIGN KEY REFERENCES categories(category\_id), NULL | Category being tracked (optional) |
| desired\_price | DECIMAL(10,2) | NOT NULL | Target price to trigger alert |
| last\_price | DECIMAL(10,2) | NULL | Last tracked price (updates automatically) |
| status | ENUM('Active', 'Completed', 'Cancelled') | DEFAULT 'Active' | Status of tracking |
| updated\_at | TIMESTAMP | DEFAULT CURRENT\_TIMESTAMP ON UPDATE CURRENT\_TIMESTAMP | Last time price was updated |

1. **price\_history:- stores product price changes over time**

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Data Type** | **Constraints** | **Description** |
| history\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique record ID |
| product\_id | INT | FOREIGN KEY REFERENCES products(product\_id), NOT NULL | Product being tracked |
| price | DECIMAL(10,2) | NOT NULL | Price at the time of scraping |
| scraped\_at | TIMESTAMP | DEFAULT CURRENT\_TIMESTAMP | Time of price change |

1. **scheduled\_tasks:- stores scheduled scraping jobs**

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Data Type** | **Constraints** | **Description** |
| task\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique task ID |
| website\_id | INT | FOREIGN KEY REFERENCES websites(website\_id), NOT NULL | Website being scraped |
| last\_run | TIMESTAMP | DEFAULT CURRENT\_TIMESTAMP | Time of price change |
| status | ENUM('Pending', 'Running', 'Completed', 'Failed') | DEFAULT 'Pending' | Task status |

1. **notifications:- stores email notifications for price drops**

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Data Type** | **Constraints** | **Description** |
| notification\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique notification ID |
| user\_id | INT | FOREIGN KEY REFERENCES users(user\_id), NOT NULL | User to notify |
| product\_id | INT | FOREIGN KEY REFERENCES products(product\_id), NULL | Specific product (if tracked) |
| category\_id | INT | FOREIGN KEY REFERENCES categories(category\_id), NULL | Category (if tracked) |
| message | TEXT | NOT NULL | Email content |
| sent\_at | TIMESTAMP | DEFAULT CURRENT\_TIMESTAMP | When email was sent |

1. **product\_ratings:- stores ratings of product**

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Data Type** | **Constraints** | **Description** |
| ratings\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique review ID |
| product\_id | INT | FOREIGN KEY REFERENCES products(product\_id), NOT NULL | Reviewed product |
| website\_id | INT | FOREIGN KEY REFERENCES websites(website\_id), NOT NULL | Website where the review was found |
| rating | DECIMAL(2,1) | |  | | --- | | NOT NULL CHECK (rating BETWEEN 1 AND 5) |  |  | | --- | |  | | Rating from 1 to 5 |
| scraped\_at | TIMESTAMP | DEFAULT CURRENT\_TIMESTAMP | When the review was scraped |