

Notifications

Table Description

- This table includes all notifications generated and sent to users regarding activities and status changes related to their accounts, orders, or products.
- This data is crucial for maintaining transparency, facilitating timely user engagement with the platform, and enhancing the overall user experience.

Field Specifications

sender_id

- **Specification Type:** Replica
- **Source specification:** user_id from Users table
- **Alias:** user_id
- **Parent Table:** Notification
- **Description:** The number that identifies a user from each other. Store the identification of the person who sent the notification
- **Physical Elements:**
 - **Data Type:** Numeric
 - **Length:** 9
 - **Decimal Places:**
 - **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Foreign
 - **Key Structure:**
 - **Uniqueness:** Non-unique
 - **Null Support:** No
 - **Required Value:** No
 - **Range of Values:** All existing user_ids in the system
 - **Values Entered by:** User

receiver_id

- **Specification Type:** Replica
- **Source specification:** user_id from Users table
- **Alias:** user_id
- **Parent Table:** Notification
- **Description:** The number that identifies a user from each other. Store the identification of the person who received the notification
- **Physical Elements:**
 - **Data Type:** Numeric
 - **Length:** 9
 - **Decimal Places:**
 - **Character Support:** Numbers (0-9)

- **Logical Elements:**
 - **Key Type:** Foreign
 - **Key Structure:**
 - **Uniqueness:** Non-unique
 - **Null Support:** No
 - **Required Value:** No
 - **Range of Values:** All existing user_ids in the system
 - **Values Entered by:** User

Time_sent

- **Specification Type:** Unique
- **Parent Table:** Notifications
- **Description:** The precise date and time the notification was dispatched by the system.
- **Physical Elements:**
 - **Data Type:** Date/Time
 - **Length:** N/A
 - **Decimal Places:** N/A
 - **Character Support:** Numbers (0-9), Keyboard (., /)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Key Structure:**
 - **Uniqueness:** Non-Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:**
 - **Values Entered by:** System

Notification_type_id

- **Specification Type:** Replica
- **Source specification:** notification_type_id from notification_types table
- **Parent Table:** Notification_types
- **Description:** The numeric identifier of the notification type
- **Physical Elements:**
 - **Data Type:** Numeric
 - **Length:** 5
 - **Decimal Places:** 0
 - **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Foreign key
 - **Key Structure:**
 - **Uniqueness:** Non-unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:** All notification types available in the system
 - **Values Entered by:** User

Content

- **Specification Type:** Unique
- **Parent Table:** Notifications
- **Description:** The detailed message content that the user will view.
- **Physical Elements:**
 - **Data Type:** Alphanumeric
 - **Length:** 500
 - **Decimal Places:** 0
 - **Character Support:** Letters (A-Z), Numbers (0-9), Keyboard (., / \$ # %)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Key Structure:**
 - **Uniqueness:** Not Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:**
 - **Values Entered by:** User or System

Read_status

- **Specification Type:** Unique
- **Parent Table:** Notifications
- **Description:** Indicates whether the recipient user has viewed the notification or not.
- **Physical Elements:**
 - **Data Type:** Alphanumeric
 - **Length:** 10
 - **Decimal Places:** 0
 - **Character Support:** Letters (A-Z)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Key Structure:** N/A
 - **Uniqueness:** Not Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:** 'Read', 'Unread'
 - **Values Entered by:** System default 'Unread'

Notification_types

Table description:

- This table stores all available categories of notification in the system.
- This is to ensure consistent formatting and ease of expansion when new type of notifications are added

Field specifications:

Notification_type_id:

- **Specification Type:** Unique
- **Parent Table:** Notification_types
- **Description:** The numeric identifier of the notification type, to ensure a way to distinct them in the system
- **Physical Elements:**
 - **Data Type:** Numeric
 - **Length:** 5
 - **Decimal Places:**
 - **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Primary key
 - **Key Structure:** Simple
 - **Uniqueness:** Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:**
 - **Values Entered by:** System

Name:

- **Specification Type:** Unique
- **Parent Table:** Notification_types
- **Description:** The string identifier of the notification type, help user interpret and tell them a part
- **Physical Elements:**
 - **Data Type:** Alphanumeric
 - **Length:** 100
 - **Decimal Places:**
 - **Character Support:** Letters (A-Z) ,Numbers (0-9), Keyboard (., / \$ # %), Special (© ® ™ Σ π)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Key Structure:**
 - **Uniqueness:** Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:**
 - **Values Entered by:** User

Reports

Table Description:

- This table stores all formal reports and complaints submitted by users (Customers and Vendors) regarding violations, products, or service issues on the platform.
- This data is vital for platform governance, ensuring compliance with guidelines, tracking and resolving user conflicts, and maintaining a high standard of trust and operational integrity.

Field Specifications:

Report_id

- **Specification Type:** Unique
- **Parent Table:** Reports
- **Description:** The numeric identification of each report. Entered by the system when a report is filed
- **Physical Elements:**
 - **Data Type:** Numeric
 - **Length:** 9
 - **Decimal Places:** 0
 - **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Primary key
 - **Key Structure:** Simple
 - **Uniqueness:** Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:**
 - **Values Entered by:** System

Report_category_id

- **Specification Type:** Replica
- **Source specification:** report_category_id from report_categories table
- **Parent Table:** report_categories
- **Description:** The unique numeric identification of a report category
- **Physical Elements:**
 - **Data Type:** Numeric
 - **Length:** 9
 - **Decimal Places:** 0
 - **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Foreign key

- **Key Structure:**
- **Uniqueness:** No
- **Null Support:** No
- **Required Value:** Yes
- **Range of Values:** All available report categories id in the system
- **Values entered by:** User

Create_date

- **Specification Type:** Unique
- **Parent Table:** Reports
- **Description:** The date and time the report was submitted by the user.
- **Physical Elements:**
 - **Data Type:** Date/Time
 - **Length:** N/A
 - **Decimal Places:** N/A
 - **Character Support:** Numbers (0-9), Keyboard (., /)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Key Structure:**
 - **Uniqueness:** Not Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:** N/A
 - **Values Entered by:** System

Resolved_status

- **Specification Type:** Unique
- **Parent Table:** Reports
- **Description:** Indicates the current processing status of the report within the Admin system.
- **Physical Elements:**
 - **Data Type:** Alphanumeric
 - **Length:** 20
 - **Decimal Places:** 0
 - **Character Support:** Letters (A-Z)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Key Structure:** N/A
 - **Uniqueness:** Not Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:** 'Unresolved', 'Pending Review', 'Resolved', 'Closed'
 - **Values Entered by:** System default 'Unresolved'

Comment

- **Specification Type:** Unique
- **Parent Table:** Reports
- **Description:** The detailed narrative or description of the issue provided by the user submitting the report.
- **Physical Elements:**
 - **Data Type:** Alphanumeric
 - **Length:** 1000
 - **Decimal Places:** 0
 - **Character Support:** Letters (A-Z), Numbers (0-9), Keyboard (., / \$ # %)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Key Structure:** N/A
 - **Uniqueness:** Not Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:** N/A
 - **Values Entered by:** User

Admin_note

- **Specification Type:** unique
- **Parent Table:** Reports
- **Description:** Internal notes recorded by the Admin user regarding the investigation, action taken, and final resolution.
- **Physical Elements:**
 - **Data Type:** Alphanumeric
 - **Length:** 1000
 - **Decimal Places:** 0
 - **Character Support:** Letters (A-Z), Numbers (0-9), Keyboard (., / \$ # %)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Key Structure:** N/A
 - **Uniqueness:** Not Unique
 - **Null Support:** Yes
 - **Required Value:** No
 - **Range of Values:** N/A
 - **Values Entered by:** User

User_id:

- **Specification Type:** Replica
- **Source specification:** user_id from Users table
- **Parent Table:** Report
- **Description:** The number that identifies a user from each other. Belongs to the customer who submitted the report
- **Physical Elements:**

- **Data Type:** Numeric
- **Length:** 9
- **Decimal Places:**
- **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Foreign key
 - **Key Structure:**
 - **Uniqueness:** No
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:** Id of all users in the system
 - **Values Entered by:** User

Admin_id:

- **Specification Type:** Replica
- **Source specification:** user_id from Users table
- **Alias:** user_id
- **Parent Table:** Report
- **Description:** The number that identifies a user from each other. Belongs to the admin who reviewed the report
- **Physical Elements:**
 - **Data Type:** Numeric
 - **Length:** 9
 - **Decimal Places:**
 - **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Foreign key
 - **Key Structure:**
 - **Uniqueness:** No
 - **Null Support:** Yes
 - **Required Value:** No
 - **Range of Values:** Id of all users who have admin privilege in the system
 - **Values Entered by:** User

Store_id:

- **Specification Type:** Replica
- **Source specification:** store_id from stores table
- **Parent Table:** Reports
- **Description:** The number that identifies a store in the system. Use to identify the store that the report is submitted against
- **Physical Elements:**
 - **Data Type:** Numeric ▾
 - **Length:** 9
 - **Decimal Places:**
 - **Character Support:** Numbers (0-9)

- **Logical Elements:**
 - **Key Type:** Foreign key
 - **Key Structure:**
 - **Uniqueness:** Non-unique ▾
 - **Null Support:** No ▾
 - **Required Value:** Yes ▾
 - **Range of Values:**
 - **Values Entered by:** User ▾

Report_categories

Table Description:

- This table stores all categories of reports of the system
- We use this table to validate the data entered by user and for ease of expansion if a new categories were to arise

Field specification:

Report_category_id:

- **Specification Type:** unique
- **Parent Table:** report_categories
- **Description:** The unique numeric identification of a report category
- **Physical Elements:**
 - **Data Type:** Numeric
 - **Length:** 9
 - **Decimal Places:** 0
 - **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Primary key
 - **Key Structure:** Simple
 - **Uniqueness:** Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:** N/A
 - **Values entered by:** System

Name:

- **Specification Type:** unique
- **Parent Table:** report_categories
- **Description:** The unique name that the user uses to identify the report category
- **Physical Elements:**
 - **Data Type:** Alphanumeric

- **Length:** 100
- **Decimal Places:** 0
- **Character Support:** Letters (A-Z) ,Numbers (0-9), Keyboard (., / \$ # %), Special (© ® ™ Σ π)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Key Structure:**
 - **Uniqueness:** Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:**
 - **Values entered by:** User

Products

Table Description:

- This table stores core information about all products listed for sale by Vendors on the Shopi platform.
- This data is fundamental to the platform's commercial activity, enabling customers to browse and search, and allowing vendors to manage their inventory and sales offerings effectively.

Field Specifications:

Product_id:

- **Specification Type:** unique
- **Parent Table:** Products
- **Description:** The unique numeric identification of the product in the system. Entered when a new product is created
- **Physical Elements:**
 - **Data Type:** Numeric
 - **Length:** 10
 - **Decimal Places:** 0
 - **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Primary key
 - **Key Structure:** Simple
 - **Uniqueness:** Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:** N/A
 - **Values entered by:** System

Store_id

- **Specification Type:** Replica
- **Source specification:** store_id from stores table
- **Parent Table:** Products
- **Description:** The number that identifies a store in the system. Use to identify the store that the product belongs to
- **Physical Elements:**
 - **Data Type:** Numeric ▾
 - **Length:** 9
 - **Decimal Places:**
 - **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Foreign key
 - **Key Structure:**
 - **Uniqueness:** Non-unique ▾
 - **Null Support:** Yes ▾
 - **Required Value:** Yes ▾
 - **Range of Values:**
 - **Values Entered by:** User ▾

Product_name

- **Specification Type:** unique
- **Parent Table:** Products
- **Description:** The full, descriptive name of the product as displayed to customers.
- **Physical Elements:**
 - **Data Type:** Alphanumeric
 - **Length:** 200
 - **Decimal Places:** 0
 - **Character Support:** Letters (A-Z), Numbers (0-9), Keyboard (., / \$ # %)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Key Structure:**
 - **Uniqueness:** Not Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:** Must be unique within a single Vendor's listings
 - **Values entered by:** User

Product_category_id:

- **Specification Type:** Replica
- **Source specification:** product_category_id from product_categories table
- **Parent Table:** Product_categories
- **Description:** The unique numeric identification of a product category. Used to assign a category to a product
- **Physical Elements:**

- **Data Type:** Numeric
- **Length:** 10
- **Decimal Places:** 0
- **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Foreign key
 - **Key Structure:**
 - **Uniqueness:** Non-unique ▾
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:** All available product categories ids in the system
 - **Values entered by:** User

Description

- **Specification Type:** unique
- **Parent Table:** Products
- **Description:** Detailed information, features, specifications, and usage instructions for the product.
- **Physical Elements:**
 - **Data Type:** Alphanumeric
 - **Length:** 2000
 - **Decimal Places:** 0
 - **Character Support:** Letters (A-Z), Numbers (0-9), Keyboard (., / \$ # %), Special (© ® ™ Σ π)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Key Structure:** N/A
 - **Uniqueness:** Not Unique
 - **Null Support:** Yes
 - **Required Value:** No
 - **Range of Values:** N/A
 - **Values Entered by:** User

Status

- **Specification Type:** unique
- **Parent Table:** Products
- **Description:** Indicates the current visibility and operational status of the product on the platform, managed by the Vendor and Admin.
- **Physical Elements:**
 - **Data Type:** Alphanumeric
 - **Length:** 20
 - **Decimal Places:** 0
 - **Character Support:** Letters (A-Z)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Key Structure:** N/A

- **Uniqueness:** Not Unique
- **Null Support:** No
- **Required Value:** Yes
- **Range of Values:** 'active', 'pending approval', 'removed'
- **Values Entered by:** System default 'pending approval'

Create_date:

- **Specification Type:** Unique ▾
- **Parent Table:** Products
- **Description:** The exact time the product was posted to the system
- **Physical Elements:**
 - **Data Type:** Datetime ▾
 - **Length:**
 - **Decimal Places:**
 - **Character Support:**
- **Logical Elements:**
 - **Key Type:** non-key
 - **Key Structure:** ▾
 - **Uniqueness:** Non-unique ▾
 - **Null Support:** No ▾
 - **Required Value:** Yes ▾
 - **Range of Values:**
 - **Values Entered by:** System ▾

Product_Variants

Table Description:

- This table stores specific variations for a main product listing. Each variant has its own price, stock level, and image.
- This data is essential for enabling Vendors to offer multiple product options under a single listing and for accurate inventory management and order fulfillment based on the exact variant chosen by the Customer.

Field Specifications:

Variant_id:

- **Specification Type:** Unique
- **Parent Table:** product_variants
- **Description:** The number that uniquely identifies a variant of a product in the system. Assigned when a new variant is created for a product
- **Physical Elements:**
 - **Data Type:** Numeric ▾
 - **Length:** 10
 - **Decimal Places:**

- **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Primary key
 - **Key Structure:**
 - **Uniqueness:** Unique ▾
 - **Null Support:** No ▾
 - **Required Value:** Yes ▾
 - **Range of Values:**
 - **Values Entered by:** System ▾

Product_id:

- **Specification Type:** Replica
- **Source specification:** product_id from products table
- **Parent Table:** product_variants
- **Description:** The number that identifies a product in the system. Used to link a variant to a product
- **Physical Elements:**
 - **Data Type:** Numeric ▾
 - **Length:** 10
 - **Decimal Places:**
 - **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Foreign key
 - **Key Structure:**
 - **Uniqueness:** Non-unique ▾
 - **Null Support:** No ▾
 - **Required Value:** Yes ▾
 - **Range of Values:**
 - **Values Entered by:** User ▾

Variant_name

- **Specification Type:** unique
- **Parent Table:** Product_Variants
- **Description:** A descriptive name for the variation of a product.
- **Physical Elements:**
 - **Data Type:** Alphanumeric
 - **Length:** 100
 - **Decimal Places:** 0
 - **Character Support:** Letters (A-Z), Numbers (0-9), Keyboard (., / \$ # %)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Key Structure:** N/A
 - **Uniqueness:** Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:** N/A

- **Values Entered by:** User

Price

- **Specification Type:** unique
- **Parent Table:** Product_Variants
- **Description:** The specific selling price for this product variant, which may differ from other variants of the same product.
- **Physical Elements:**
 - **Data Type:** Numeric
 - **Length:** 10
 - **Decimal Places:** 2
 - **Character Support:** Numbers (0-9), Keyboard (., / \$ # %)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Key Structure:** N/A
 - **Uniqueness:** Not Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:** \$ > 0\$
 - **Values Entered by:** User

Stock

- **Specification Type:** unique
- **Parent Table:** Product_Variants
- **Description:** The current quantity of this specific variant available for sale in the inventory.
- **Physical Elements:**
 - **Data Type:** Numeric
 - **Length:** 8
 - **Decimal Places:** 0
 - **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Key Structure:** N/A
 - **Uniqueness:** Not Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:**
 - **Values Entered by:** User

Variant_image

- **Specification Type:** unique
- **Parent Table:** Product_Variants
- **Description:** The file path or URL to the visual image representing this specific variant.
- **Physical Elements:**
 - **Data Type:** Alphanumeric

- **Length:** 255
- **Decimal Places:** 0
- **Character Support:** Letters (A-Z), Numbers (0-9), Keyboard (., / \$ # %)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Key Structure:** N/A
 - **Uniqueness:** Not Unique
 - **Null Support:** Yes
 - **Required Value:** No
 - **Range of Values:** N/A
 - **Values Entered by:** User

Product_categories

Table Description:

- This table stores all categories of product in the system
- We use this table to validate the data entered by user and for ease of expansion if a new product categories were to appear

Field specification:

Product_category_id:

- **Specification Type:** unique
- **Parent Table:** Product_categories
- **Description:** The unique numeric identification of a product category. Entered by the system when a new category is added by the system admin
- **Physical Elements:**
 - **Data Type:** Numeric
 - **Length:** 10
 - **Decimal Places:** 0
 - **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Primary key
 - **Key Structure:** Simple
 - **Uniqueness:** Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:** N/A
 - **Values entered by:** System

Name:

- **Specification Type:** unique
- **Parent Table:** product_categories
- **Description:** The unique name that the user uses to identify the product category

- **Physical Elements:**
 - **Data Type:** Alphanumeric
 - **Length:** 100
 - **Decimal Places:** 0
 - **Character Support:** Letters (A-Z) ,Numbers (0-9), Keyboard (., / \$ # %), Special (© ® ™ Σ π)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Key Structure:**
 - **Uniqueness:** Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:**
 - **Values entered by:** User

Promotions

Table Description:

- This is the master table for all promotional campaigns created by Vendors on the Shopi platform. It holds general information common to all types of promotions.
- This data is essential for controlling the active status and duration of sales events, enabling Vendors to drive sales, and ensuring the accurate application of discounts during customer checkout.

Field Specifications:

Promotion_id

- **Specification Type:** Unique ▾
- **Shared by:** percent_discount_promotions and fixed_price_promotions table
- **Parent Table:** Promotions
- **Description:** The number that identifies a promotion in the system. Created when a new promotion is added into the system
- **Physical Elements:**
 - **Data Type:** Numeric ▾
 - **Length:** 6
 - **Decimal Places:** 0
 - **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Primary key
 - **Key Structure:** Simple
 - **Uniqueness:** Unique ▾
 - **Null Support:** No ▾
 - **Required Value:** Yes ▾

- **Range of Values:**
- **Values Entered by:** System ▾

Discount_type

- **Specification Type:** unique
- **Parent Table:** Promotions
- **Description:** Specifies the type of discount offered (e.g., fixed price, percentage off). This field determines which child table the promotion data resides in.
- **Physical Elements:**
 - **Data Type:** Alphanumeric
 - **Length:** 30
 - **Decimal Places:** 0
 - **Character Support:** Letters (A-Z)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Key Structure:** N/A
 - **Uniqueness:** Not Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:** 'FixedPrice', 'PercentageDiscount'
 - **Values Entered by:** User

Start_period

- **Specification Type:** unique
- **Parent Table:** Promotions
- **Description:** The date and time when the promotion officially begins.
- **Physical Elements:**
 - **Data Type:** Date/Time
 - **Length:** N/A
 - **Decimal Places:** N/A
 - **Character Support:** Numbers (0-9), Keyboard (., /)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Key Structure:** N/A
 - **Uniqueness:** Not Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:** N/A
 - **Values Entered by:** User

End_period

- **Specification Type:** unique
- **Parent Table:** Promotions
- **Description:** The date and time when the promotion officially ends.
- **Physical Elements:**
 - **Data Type:** Date/Time
 - **Length:** N/A

- **Decimal Places:** N/A
 - **Character Support:** Numbers (0-9), Keyboard (., /)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Key Structure:** N/A
 - **Uniqueness:** Not Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:** Must be \geq the value in StartPeriod.
 - **Values Entered by:** User

Fixed_Price_Promotions

Table Description:

- This table stores specific details for promotions where the product is sold at a fixed, discounted price, regardless of the original price. It is a subtype of the Promotions table.
- This data is necessary for accurately calculating the final price when the discount mechanism is a fixed price.

Field Specifications:

Promotion_id

- **Specification Type:** Replica ▾
- **Source specification:** promotion_id from promotions table
- **Parent Table:** Promotions
- **Description:** The number that identifies a promotion in the system. Created when a new promotion is added into the system
- **Physical Elements:**
 - **Data Type:** Numeric ▾
 - **Length:** 6
 - **Decimal Places:** 0
 - **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Primary key/ Foreign key
 - **Key Structure:** Simple
 - **Uniqueness:** Unique ▾
 - **Null Support:** No ▾
 - **Required Value:** Yes ▾
 - **Range of Values:**
 - **Values Entered by:** System ▾

Price

- **Specification Type:** unique

- **Parent Table:** Fixed_Price_Promotions
- **Description:** The final fixed price at which the product is sold during the promotional period.
- **Physical Elements:**
 - **Data Type:** Numeric
 - **Length:** 10
 - **Decimal Places:** 2
 - **Character Support:** Numbers (0-9), Keyboard (., / \$ # %)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Key Structure:** N/A
 - **Uniqueness:** Not Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:** Must be \$> 0\$ and typically \$<\$ the original product price.
 - **Values Entered by:** User

Percent_Discount_Promotions

Table Description:

- This table stores specific details for promotions offering a percentage discount off the original product price. It is a subtype of the Promotions table.
- This data is necessary for accurately calculating the final discounted price using a percentage reduction formula.

Field Specifications:

Promotion_id

Promotion_id

- **Specification Type:** Replica ▾
- **Source specification:** promotion_id from promotions table
- **Parent Table:** Promotions
- **Description:** The number that identifies a promotion in the system. Created when a new promotion is added into the system
- **Physical Elements:**
 - **Data Type:** Numeric ▾
 - **Length:** 6
 - **Decimal Places:** 0
 - **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Primary key/ Foreign key
 - **Key Structure:** Simple
 - **Uniqueness:** Unique ▾
 - **Null Support:** No ▾

- **Required Value:** Yes ▾
- **Range of Values:**
- **Values Entered by:** System ▾

Discount_percent

- **Specification Type:** unique
- **Parent Table:** Percent_Discount_Promotions
- **Description:** The percentage value (e.g., 10, 25, 50) to be subtracted from the original product price.
- **Physical Elements:**
 - **Data Type:** Numeric
 - **Length:** 5
 - **Decimal Places:** 2
 - **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Key Structure:** N/A
 - **Uniqueness:** Not Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:** Must be $> 0\$$ and $\leq 100\$$.
 - **Values Entered by:** User

Promotion_products

Table Description:

- This table is used to model the relationship between promotions and products
- A product can have many promotions applied to it over time and a promotions can have be applied to many products

Field specification:

Product_id:

- **Specification Type:** Replica ▾
- **Source specification:** product_id from products table
- **Parent Table:** Promotion_products
- **Description:** The number that identifies a product in the system. Used to identify the product that a promotion is being applied on
- **Physical Elements:**
 - **Data Type:** Numeric ▾
 - **Length:** 10
 - **Decimal Places:** 0
 - **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Primary key/ Foreign key

- **Key Structure:** Composite ▾
- **Uniqueness:** Non-unique ▾
- **Null Support:** No ▾
- **Required Value:** Yes ▾
- **Range of Values:** All available product_id from the products table
- **Values Entered by:** User ▾

Promotion_id:

- **Specification Type:** Replica ▾
- **Source specification:** promotion_id from promotions table
- **Parent Table:** Promotion_products
- **Description:** The number that identifies a promotion in the system. Used to identify the promotion that is applying to the products
- **Physical Elements:**
 - **Data Type:** Numeric ▾
 - **Length:** 6
 - **Decimal Places:** 0
 - **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Primary key / Foreign key
 - **Key Structure:** Composite
 - **Uniqueness:** Non-unique ▾
 - **Null Support:** No ▾
 - **Required Value:** Yes ▾
 - **Range of Values:**
 - **Values Entered by:** User ▾

User

Table Description:

- This table includes all users who interact with the platform, including both customers and sellers.
- We need to keep track of user information to manage authentication, permissions, and provide a personalized experience to everyone who uses the platform.

Field Specifications:

user_id

- **Specification Type:** Unique
- **Parent Table:** User
- **Description:** The number that identifies a user from each other. It is assigned when the user create an account
- **Physical Elements:**
 - **Data Type:** Numeric

- **Length:** 9
- **Decimal Places:**
- **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Primary key
 - **Key Structure:** Simple
 - **Uniqueness:** Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:**
 - **Values entered by:** System

user_name

- **Specification Type:** Unique
- **Parent Table:** users
- **Description:**
 - The unique username chosen by the user for identification on the platform.
 - This data is necessary for the login process and to provide a distinct public identifier for users.
- **Physical Elements:**
 - **Data Type:** Alphanumeric
 - **Length:** 30
 - **Character Support:** Letters (A-Z), Numbers (0-9), Keyboard (., / \$ # %)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Key Structure:**
 - **Uniqueness:** Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Values Entered by:** User

password

- **Specification Type:** unique
- **Parent Table:** users
- **Description:**
 - A secure, hashed representation of the user's secret password.
 - This field is essential for authenticating the user's identity during the login process.
- **Physical Elements:**
 - **Data Type:** Alphanumeric (Đã được hash)
 - **Length:** 255 (Để lưu trữ chuỗi hash)
 - **Character Support:** Letters (A-Z), Numbers (0-9), Keyboard (., / \$ # %)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** No

- **Required Value:** Yes
- **Values Entered by:** User

last_name

- **Specification Type:** unique
- **Parent Table:** users
- **Description:**
 - The user's family name or surname.
 - We need to store this information to personalize communications and for official documentation, such as invoices or shipping labels.
- **Physical Elements:**
 - **Data Type:** Alphanumeric
 - **Length:** 100
 - **Character Support:** Letters (A-Z)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** Yes
 - **Required Value:** No
 - **Values Entered by:** User

first_name

- **Specification Type:** unique
- **Parent Table:** users
- **Description:**
 - The user's given name.
 - We need to store this information to greet the user by name, enhancing personalization across the platform.
- **Physical Elements:**
 - **Data Type:** Alphanumeric
 - **Length:** 100
 - **Character Support:** Letters (A-Z)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** Yes
 - **Required Value:** No
 - **Values Entered by:** User

personal_phone

- **Specification Type:** Unique
- **Parent Table:** users
- **Description:**
 - The user's primary contact phone number.
 - This data is important for account verification (2FA), customer support, and for delivery personnel to contact the user regarding an order.

- **Physical Elements:**
 - **Data Type:** Alphanumeric
 - **Length:** 20
 - **Character Support:** Numbers (0-9), Keyboard (+)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Key Structure:**
 - **Uniqueness:** Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Values Entered by:** User

email

- **Specification Type:** Unique
- **Parent Table:** users
- **Description:**
 - The user's email address, which is used for login and communication.
 - We need to store this to verify the user's identity, send important notifications, and support account recovery.
- **Physical Elements:**
 - **Data Type:** Alphanumeric
 - **Length:** 255
 - **Character Support:** Letters (A-Z), Numbers (0-9), Keyboard (., @, _, -)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Key Structure:**
 - **Uniqueness:** Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Values Entered by:** User

home_address

- **Specification Type:** unique
- **Parent Table:** users
- **Description:**
 - This field includes the house number and street name of the user's home address.
 - We need to store this to make the ordering process more convenient, as customers won't need to re-enter their address.
- **Physical Elements:**
 - **Data Type:** Alphanumeric
 - **Length:** 255
 - **Character Support:** Letters (A-Z), Numbers (0-9), Keyboard (., / \$ # %)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique

- **Null Support:** Yes
- **Required Value:** No
- **Values Entered by:** User

home_address_ward

- **Specification Type:** unique
- **Parent Table:** users
- **Description:**
 - The ward component of the user's home address.
 - This data is necessary for precise address validation and to ensure accurate routing for delivery services.
- **Physical Elements:**
 - **Data Type:** Alphanumeric
 - **Length:** 100
 - **Character Support:** Letters (A-Z), Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** Yes
 - **Required Value:** No
 - **Values Entered by:** User

home_address_city

- **Specification Type:** unique
- **Parent Table:** users
- **Description:**
 - The city or province component of the user's home address.
 - This data is required for calculating shipping costs, estimating delivery times, and filtering regional information.
- **Physical Elements:**
 - **Data Type:** Alphanumeric
 - **Length:** 100
 - **Character Support:** Letters (A-Z), Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** Yes
 - **Required Value:** No
 - **Values Entered by:** User

home_postal_code

- **Specification Type:** unique
- **Parent Table:** users
- **Description:**
 - The postal code associated with the user's home address.

- This information is important for optimizing the last-mile delivery process and ensuring packages are sorted correctly by shipping carriers.
- **Physical Elements:**
 - **Data Type:** Alphanumeric
 - **Length:** 20
 - **Character Support:** Numbers (0-9), Keyboard (-)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** Yes
 - **Required Value:** No
 - **Values Entered by:** User

privilege

- **Specification Type:** unique
- **Parent Table:** users
- **Description:**
 - Defines the user's role and permission level within the system
 - This field is critical for security and governance, controlling what actions a user is authorized to perform on the platform.
- **Physical Elements:**
 - **Data Type:** Alphanumeric
 - **Length:** 20
 - **Character Support:** Letters (A-Z)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:** 'Customer', 'Admin'
 - **Values Entered by:** System default 'Customer'

account_status

- **Specification Type:** unique
- **Parent Table:** users
- **Description:**
 - Indicates the current operational status of the user's account
 - This data is essential for administrative control, allowing the platform to manage access for users who may be under review or have violated terms.
- **Physical Elements:**
 - **Data Type:** Alphanumeric
 - **Length:** 20
 - **Character Support:** Letters (A-Z)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique

- **Null Support:** No
- **Required Value:** Yes
- **Range of Values:** 'Active', 'Suspended', 'Banned', 'NotVerified'
- **Values Entered by:** System default 'NotVerified'

registration_date

- **Specification Type:** unique
- **Parent Table:** users
- **Description:**
 - The date and time when the user first registered their account.
 - This information is crucial for business analytics, such as tracking user growth, calculating user retention, and identifying long-term customers.
- **Physical Elements:**
 - **Data Type:** Date/Time
 - **Length:** N/A
 - **Character Support:** Numbers (0-9), Keyboard (., /)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Values Entered by:** System

Stores

Table Description:

- This table stores detailed information for all storefronts operated by Sellers on the platform.
- This data is vital for displaying the store's branding and information (name, logo), providing business contact details, and managing seller-related operations.

Field Specifications:

store_id

- **Specification Type:** Unique
- **Parent Table:** Stores
- **Description:** The number that identifies a store in the system. Entered by the system when a new store is created
- **Physical Elements:**
 - Data Type: Numeric
 - Length: 9
 - Decimal Places:
 - Character Support: Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Primary key

- **Key Structure:** Simple
- **Uniqueness:** Unique ▾
- **Null Support:** No
- **Required Value:** Yes
- **Range of Values:**
- **Values Entered by:** System

user_id

- **Specification Type:** Replica ▾
- **Source specification:** user_id from users table
- **Parent Table:** Stores
- **Description:** The number that identifies a user in the system. Used to assign ownership of the store to a user
- **Physical Elements:**
 - Data Type: Numeric ▾
 - Length: 10
 - Decimal Places: 0
 - Character Support: Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Foreign key
 - **Key Structure:** ▾
 - **Uniqueness:** Non-unique ▾
 - **Null Support:** No ▾
 - **Required Value:** Yes ▾
 - **Range of Values:** All available user_id from the users table
 - **Values Entered by:** User ▾

store_name

- **Specification Type:** unique
- **Parent Table:** stores
- **Description:**
 - The official name of the store that is displayed to customers.
 - We need to store this name so that customers can identify and search for the seller's brand on the platform.
- **Physical Elements:**
 - **Data Type:** Alphanumeric
 - **Length:** 200
 - **Character Support:** Letters (A-Z), Numbers (0-9), Keyboard (., / \$ # %)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Key Structure:**
 - **Uniqueness:** Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Values Entered by:** User

logo

- **Specification Type:** unique
- **Parent Table:** stores
- **Description:**
 - A file path or URL to the image file used as the store's logo.
 - This data is important for branding, helping customers to visually recognize the store and build brand trust.
- **Physical Elements:**
 - **Data Type:** Alphanumeric
 - **Length:** 255
 - **Character Support:** Letters (A-Z), Numbers (0-9), Keyboard (., / \$ # % : _)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** Yes
 - **Required Value:** No
 - **Values Entered by:** User

business_phone

- **Specification Type:** unique
- **Parent Table:** stores
- **Description:**
 - The official contact phone number for the store's business operations.
 - This information is necessary for customers or platform administrators to contact the seller regarding store-specific inquiries.
- **Physical Elements:**
 - **Data Type:** Alphanumeric
 - **Length:** 20
 - **Character Support:** Numbers (0-9), Keyboard (+)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** Yes
 - **RequiredValue:** No
 - **Values Entered by:** User

business_email

- **Specification Type:** Unique
- **Parent Table:** stores
- **Description:**
 - The official contact email address for the store.
 - We need to store this email for formal business communications, such as sending sales reports, policy updates, or customer complaints.
- **Physical Elements:**
 - **Data Type:** Alphanumeric

- **Length:** 255
- **Character Support:** Letters (A-Z), Numbers (0-9), Keyboard (., @, _, -)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** Yes
 - **Required Value:** No
 - **Values Entered by:** User

pickup_address

- **Specification Type:** unique
- **Parent Table:** stores
- **Description:**
 - This field includes the house number and street name of the pickup address.
 - We need to store this information so the shipping carrier can accurately locate the pickup destination.
- **Physical Elements:**
 - **Data Type:** Alphanumeric
 - **Length:** 255
 - **Character Support:** Letters (A-Z), Numbers (0-9), Keyboard (., / \$ # %)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Values Entered by:** User

pickup_address_ward

- **Specification Type:** unique
- **Parent Table:** stores
- **Description:**
 - The ward component of the pickup address.
 - This data is necessary for address validation and ensuring correct routing for shipping services.
- **Physical Elements:**
 - **Data Type:** Alphanumeric
 - **Length:** 100
 - **Character Support:** Letters (A-Z), Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Values Entered by:** User

pickup_address_city

- **Specification Type:** unique
- **Parent Table:** stores
- **Description:**
 - The city/province component of the pickup address.
 - This data is mandatory for the system to calculate shipping costs and estimate delivery times.
- **Physical Elements:**
 - **Data Type:** Alphanumeric
 - **Length:** 100
 - **Character Support:** Letters (A-Z), Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Values Entered by:** User

postal_code

- **Specification Type:** unique
- **Parent Table:** stores
- **Description:**
 - The postal code associated with the store's pickup address.
 - This information is required by shipping carriers to determine service range, validate the address, and route parcels efficiently.
- **Physical Elements:**
 - **Data Type:** Numeric
 - **Length:** 20
 - **Character Support:** Numbers (0-9), Keyboard (-)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** Yes
 - **Required Value:** Yes
 - **Values Entered by:** User

tax_code

- **Specification Type:** unique
- **Parent Table:** stores
- **Description:**
 - The store's official business tax identification number.
 - This data is vital for legal and financial compliance, allowing the platform to generate correct tax invoices and report earnings to authorities.
- **Physical Elements:**
 - **Data Type:** Alphanumeric
 - **Length:** 50
 - **Character Support:** Numbers (0-9), Keyboard (-)

- **Logical Elements:**
 - **Key Type:** Non-key
 - **Key Structure:** Indexing
 - **Uniqueness:** Not Unique
 - **Null Support:** Yes
 - **Required Value:** No
 - **Values Entered by:** User

description

- **Specification Type:** unique
- **Parent Table:** stores
- **Description:**
 - A public description of the store, its mission, or the types of products it sells.
 - We need this field to allow sellers to build their brand identity and provide customers with more context about their business.
- **Physical Elements:**
 - **Data Type:** Alphanumeric
 - **Length:** 2000
 - **Character Support:** Letters (A-Z), Numbers (0-9), Keyboard (., / \$ # %)
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** Yes
 - **Required Value:** No
 - **Values Entered by:** User

Create_date

- **Specification Type:** Unique ▾
- **Parent Table:** Stores
- **Description:** The date that the store is created. Helps auditing purposes and to create reports
- **Physical Elements:**
 - **Data Type:** Datetime ▾
 - **Length:**
 - **Decimal Places:**
 - **Character Support:**
- **Logical Elements:**
 - **Key Type:** Non-key
 - **Key Structure:** ▾
 - **Uniqueness:** Non-unique ▾
 - **Null Support:** No ▾
 - **Required Value:** Yes ▾
 - **Range of Values:**
 - **Values Entered by:** System ▾

Orders

Table Description

- This table stores all orders placed by customers on the platform, including buyer information, seller store, shipping details, payment method, and the current status of the order.
- This data is essential for processing purchases, tracking fulfillment and delivery, and supporting customer service and business reporting.

Field Specifications

order_id

- **Specification Type:** Unique
- **Parent Table:** orders

Description:

This field uniquely identifies each order in the system.

It is required to distinguish orders from one another and to link related records such as order items and shipping updates.

- **Physical Elements**
 - **Data Type:** Numeric
 - **Length:** 20
 - **Decimal Places:**
 - **Character Support:** Numbers (0–9)
- **Logical Elements**
 - **Key Type:** Primary key
 - **Key Structure:** Simple
 - **Uniqueness:** Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:** N/A
 - **Values entered by:** System

user_id

- **Specification Type:** Replica ▾
- **Source specification:** user_id from users table
- **Parent Table:** Orders
- **Description:** The number that identifies a user in the system. Used to help store know who placed the order
- **Physical Elements:**

- **Data Type:** Numeric ▾
- **Length:** 10
- **Decimal Places:** 0
- **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Foreign key
 - **Key Structure:** ▾
 - **Uniqueness:** Non-unique ▾
 - **Null Support:** No ▾
 - **Required Value:** Yes ▾
 - **Range of Values:** All available user_id from the users table
 - **Values Entered by:** User ▾

store_id

- **Specification Type:** Replica ▾
- **Source specification:** store_id from stores table
- **Parent Table:** Orders
- **Description:** The number that identifies a store in the system. Used to assign the order to a store
- **Physical Elements:**
 - **Data Type:** Numeric ▾
 - **Length:** 9
 - **Decimal Places:** 0
 - **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Foreign key
 - **Key Structure:** ▾
 - **Uniqueness:** Non-unique ▾
 - **Null Support:** No ▾
 - **Required Value:** Yes ▾
 - **Range of Values:** All available store_id from the stores table
- **Values Entered by:** User ▾

shipping_address

- **Specification Type:** unique
- **Parent Table:** orders

Description:

This field stores the house number and street name of the delivery address. It is essential to ensure that orders are shipped to the correct physical location.

- **Physical Elements**

- **Data Type:** Alphanumeric
- **Length:** 255
- **Logical Elements**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Values Entered by:** User

shipping_ward

- **Specification Type:** unique
- **Parent Table:** orders

Description:

This field stores the ward component of the shipping address.
It is required for detailed address identification and accurate routing.

- **Physical Elements**
 - **Data Type:** Alphanumeric
 - **Length:** 100
- **Logical Elements**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Values Entered by:** User

shipping_city

- **Specification Type:** unique
- **Parent Table:** orders

Description:

This field stores the city or province of the shipping address.
It is required for calculating delivery times, shipping fees, and assigning carriers.

- **Physical Elements**
 - **Data Type:** Alphanumeric
 - **Length:** 100
- **Logical Elements**
 - **Key Type:** Non-key

- **Uniqueness:** Not Unique
- **Null Support:** No
- **Required Value:** Yes
- **Values Entered by:** User

shipping_postal_code

- **Specification Type:** unique
- **Parent Table:** orders

Description:

This field stores the postal code of the delivery address.

The data helps ensure accurate sorting and routing by shipping partners.

- **Physical Elements**
 - **Data Type:** Alphanumeric
 - **Length:** 20
- **Logical Elements**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** Yes
 - **Required Value:** No
 - **Values Entered by:** User

payment_method

- **Specification Type:** unique
- **Parent Table:** orders

Description:

This field stores the payment method chosen by the customer when placing the order.

It is required for processing transaction records and supporting payment analytics.

- **Physical Elements**
 - **Data Type:** Alphanumeric
 - **Length:** 30
- **Logical Elements**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of values:** 'Cash', 'Online transaction'
 - **Values Entered by:** User

order_status

- **Specification Type:** unique
- **Parent Table:** orders

Description:

This field represents the current status of the order.

It is needed for tracking progress, enabling order management actions, and informing customers.

- **Physical Elements**
 - **Data Type:** Alphanumeric
 - **Length:** 30
- **Logical Elements**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of values:** "Rejected by vendor", "Approved by vendor", "Unresolved", "Complaint filed", "Complaint resolved"
 - **Values Entered by:** System default to 'Unresolved'

create_date

- **Specification Type:** unique
- **Parent Table:** orders

Description:

This field stores the date and time the order was created.

It is important for chronological tracking, reporting, and analyzing order volume.

- **Physical Elements**
 - **Data Type:** Date/Time
- **Logical Elements**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Values Entered by:** System

order_items

Table Description

- This table stores the individual items included in each order, with one record for each product variant purchased.
- This data is essential for calculating order totals, tracking which product variants were sold, and updating inventory accurately.

Field Specifications

order_id

- **Specification Type:** Replica ▾
- **Source specification:** order_id from orders table
- **Parent Table:** Order_items
- **Description:** The number that identifies an order in the system. Used to assign all product that belongs to the order
- **Physical Elements:**
 - **Data Type:** Numeric ▾
 - **Length:** 20
 - **Decimal Places:** 0
 - **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Foreign key
 - **Key Structure:** ▾
 - **Uniqueness:** Non-unique ▾
 - **Null Support:** No ▾
 - **Required Value:** Yes ▾
 - **Range of Values:** All available order_id from the orders table
 - **Values Entered by:** User ▾

variant_id

- **Specification Type:** Replica ▾
- **Source specification:** variant_id from product_variants table
- **Parent Table:** order_items
- **Description:** The number that identifies a product variant in the system. Used to assign ordered product variant to an order
- **Physical Elements:**
 - **Data Type:** Numeric ▾
 - **Length:** 10
 - **Decimal Places:** 0
 - **Character Support:** Numbers (0-9)
- **Logical Elements:**

- **Key Type:** Foreign key
- **Key Structure:**
- **Uniqueness:**
- **Null Support:**
- **Required Value:**
- **Range of Values:** All available variant_id from the product_variants table
- **Values Entered by:**

item_quantity

- **Specification Type:** unique
- **Parent Table:** order_items

Description:

This field records the number of units of the product variant in the line item.
It is used to calculate the line total and to determine how much inventory to reduce.

- **Physical Elements**
 - **Data Type:** Numeric
 - **Length:** 8
 - **Decimal Places:** 0
 - **Character Support:** Numbers (0–9)
- **Logical Elements**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:** ≥ 1
 - **Values Entered by:** User

price_at_purchase

- **Specification Type:** unique
- **Parent Table:** order_items

Description:

This field stores the unit price of the product variant at the time the order was placed.
It is essential for preserving historical pricing for financial accuracy and for audit purposes.

- **Physical Elements**
 - **Data Type:** Numeric

- **Length:** 10
- **Decimal Places:** 2
- **Character Support:** Numbers (0–9), Keyboard (.)
- **Logical Elements**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:** > 0
 - **Values Entered by:** System

shipping_statuses

Table Description

- This table stores individual shipping status updates for each order, with one record representing a specific update time and status.
- This data is essential for tracking delivery progress, informing customers, and supporting logistics and customer service operations.

Field Specifications

shipping_status_id

- **Specification Type:** Unique
- **Parent Table:** shipping_statuses

Description:

This field uniquely identifies each shipping status update. It is required to distinguish individual status records and to maintain a complete delivery timeline.

- **Physical Elements**
 - **Data Type:** Numeric
 - **Length:** 20
 - **Decimal Places:** 0
 - **Character Support:** Numbers (0–9)
- **Logical Elements**
 - **Key Type:** Primary key
 - **Key Structure:** Simple
 - **Uniqueness:** Unique

- **Null Support:** No
- **Required Value:** Yes
- **Values Entered by:** System ▾

order_id

- **Specification Type:** Replica ▾
- **Source specification:** order_id from orders table
- **Parent Table:** Shipping_statuses
- **Description:** The number that identifies an order in the system. Used to assign the shipping status to an order
- **Physical Elements:**
 - **Data Type:** Numeric ▾
 - **Length:** 20
 - **Decimal Places:** 0
 - **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Foreign key
 - **Key Structure:** ▾
 - **Uniqueness:** Non-unique ▾
 - **Null Support:** No ▾
 - **Required Value:** Yes ▾
 - **Range of Values:** All available order_id from the orders table
 - **Values Entered by:** User ▾

update_time

- **Specification Type:** unique
- **Parent Table:** shipping_statuses

Description:

This field stores the date and time when the shipping status was recorded.

The data is essential for building the delivery timeline and monitoring logistics performance.

- **Physical Elements**
 - **Data Type:** Date/Time
- **Logical Elements**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Values Entered by:** System

status

- **Specification Type:** unique
- **Parent Table:** shipping_statuses

Description:

This field stores the textual description of the shipping stage at this update point. It is required to communicate the current delivery status to customers and internal teams.

- **Physical Elements**
 - **Data Type:** Alphanumeric
 - **Length:** 50
- **Logical Elements**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of value:** Not shipped, shipped, received
 - **Values Entered by:** System Default 'Not shipped'

complaints

Table Description

- This table stores complaints submitted by customers regarding specific orders, including the user who submitted the complaint, the related order, and the description of the issue.
- This data is essential for handling customer service issues, resolving disputes, and monitoring service quality across the platform.

Field Specifications

complaint_id

- **Specification Type:** Unique
- **Parent Table:** complaints

Description:

This field uniquely identifies each complaint submitted on the platform. It is required to track individual cases and maintain a complete history of customer issues.

Physical Elements

- **Data Type:** Numeric
- **Length:** 20
- **Decimal Places:** 0
- **Character Support:** Numbers (0–9)

Logical Elements

- **Key Type:** Primary key
- **Key Structure:** Simple
- **Uniqueness:** Unique
- **Null Support:** No
- **Required Value:** Yes
- **Values Entered by:** System

user_id

- **Specification Type:** Replica ▾
- **Source specification:** user_id from users table
- **Parent Table:** Complaints
- **Description:** The number that identifies a user in the system. Used to store the user who filed the complaint
- **Physical Elements:**
 - **Data Type:** Numeric ▾
 - **Length:** 9
 - **Decimal Places:** 0
 - **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Foreign key
 - **Key Structure:** ▾
 - **Uniqueness:** Non-unique ▾
 - **Null Support:** No ▾
 - **Required Value:** Yes ▾
 - **Range of Values:** All available user_id from the users table
 - **Values Entered by:** User ▾

order_id

- **Specification Type:** Replica ▾
- **Source specification:** order_id from orders table

- **Parent Table:** Complaints
- **Description:** The number that identifies an order in the system. Used to assign the complaint to an order
- **Physical Elements:**
 - **Data Type:** Numeric ▾
 - **Length:** 20
 - **Decimal Places:** 0
 - **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Foreign key
 - **Key Structure:** ▾
 - **Uniqueness:** Non-unique ▾
 - **Null Support:** No ▾
 - **Required Value:** Yes ▾
 - **Range of Values:** All available order_id from the orders table
 - **Values Entered by:** User ▾

comment

- **Specification Type:** unique
- **Parent Table:** complaints

Description:

This field contains the detailed complaint message submitted by the user.

It is essential for understanding the issue and determining the appropriate resolution steps.

- **Physical Elements**
 - **Data Type:** Alphanumeric
 - **Length:** 1000
- **Logical Elements**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Values Entered by:** User

create_date

- **Specification Type:** unique
- **Parent Table:** complaints

Description:

This field stores the date and time when the complaint was created. It is necessary for tracking case timelines, prioritizing older complaints, and analyzing complaint frequency over time.

- **Physical Elements**
 - **Data Type:** Date/Time
- **Logical Elements**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Values entered by:** System

reviews

Table Description

- This table stores product reviews written by customers, including the user who submitted the review, the product being reviewed, the review content, rating score, and the submission date.
- This data is essential for providing feedback to sellers, helping customers make informed decisions, and supporting product quality evaluation.

Field Specifications**review_id**

- **Specification Type:** Unique
- **Parent Table:** reviews

Description:

- This field uniquely identifies each review submitted on the platform.
- It is required to distinguish individual reviews and to maintain a complete review history for each product.
- **Physical Elements**
 - **Data Type:** Numeric
 - **Length:** 20
Decimal Places: 0
 - **Character Support:** Numbers (0–9)
- **Logical Elements**
 - **Key Type:** Primary key

- **Key Structure:** Simple
- **Uniqueness:** Unique
- **Null Support:** No
- **Required Value:** Yes
- **Values entered by:** System

user_id

- **Specification Type:** Replica ▾
- **Source specification:** user_id from users table
- **Parent Table:** Reviews
- **Description:** The number that identifies a user in the system. Used to assign the review to the original poster
- **Physical Elements:**
 - **Data Type:** Numeric ▾
 - **Length:** 9
 - **Decimal Places:** 0
 - **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Foreign key
 - **Key Structure:** ▾
 - **Uniqueness:** Non-unique ▾
 - **Null Support:** No ▾
 - **Required Value:** Yes ▾
 - **Range of Values:** All available user_id from the users table
 - **Values Entered by:** User ▾

product_id

- **Specification Type:** Replica ▾
- **Source specification:** product_id from products table
- **Parent Table:** reviews
- **Description:** The number that identifies a product in the system. Used to assign the review to a product
- **Physical Elements:**
 - **Data Type:** Numeric ▾
 - **Length:** 10
 - **Decimal Places:** 0
 - **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Foreign key
 - **Key Structure:** ▾
 - **Uniqueness:** Non-unique ▾
 - **Null Support:** No ▾
 - **Required Value:** Yes ▾
 - **Range of Values:** All available product_id from the products table

- **Values Entered by:** User ▾

comment

- **Specification Type:** unique
- **Parent Table:** reviews

Description:

This field contains the written feedback submitted by the user about the product. It is important for providing detailed qualitative insights into customer experience and satisfaction.

- **Physical Elements**
 - **Data Type:** Alphanumeric
 - **Length:** 1000
- **Logical Elements**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** Yes
 - **Required Value:** No
 - **Values Entered by:** User

rating

- **Specification Type:** unique
- **Parent Table:** reviews

Description:

This field stores the numerical rating score given by the user for the product. It is required to calculate average product ratings and support ranking and search relevance.

- **Physical Elements**
 - **Data Type:** Numeric
 - **Length:** 2
 - **Decimal Places:** 0
- **Logical Elements**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Range of Values:** Typically 1–5
 - **Values Entered by:** User

create_date

- **Specification Type:** unique
- **Parent Table:** reviews

Description:

This field stores the date and time when the review was created.

It is essential for sorting reviews chronologically and for analyzing product feedback trends.

- **Physical Elements**
 - **Data Type:** Date/Time
- **Logical Elements**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** No
 - **Required Value:** Yes
 - **Values Entered by:** System

Replies

Table description:

- This table stores the all the responses of each review
- We use this to allow discussions among users without needing write another review

Field specification:

Reply_id

- **Specification Type:** Unique ▾
- **Parent Table:** Replies
- **Description:** The number that identifies a reply in the system. Assigned when a reply is created
- **Physical Elements:**
 - **Data Type:** Numeric ▾
 - **Length:** 20
 - **Decimal Places:** 0
 - **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Primary key

- **Key Structure:** Simple ▾
- **Uniqueness:** Unique ▾
- **Null Support:** No ▾
- **Required Value:** Yes ▾
- **Range of Values:**
- **Values Entered by:** System ▾

User_id

- **Specification Type:** Replica ▾
- **Source specification:** user_id from users table
- **Parent Table:** Replies
- **Description:** The number that identifies an user in the system. Used to store the data on who wrote the reply
- **Physical Elements:**
 - **Data Type:** Numeric ▾
 - **Length:** 9
 - **Decimal Places:** 0
 - **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Foreign key
 - **Key Structure:** ▾
 - **Uniqueness:** Non-unique ▾
 - **Null Support:** No ▾
 - **Required Value:** Yes ▾
 - **Range of Values:** All available user_id from the users table
 - **Values Entered by:** User ▾

Review_id

- **Specification Type:** Replica ▾
- **Source specification:** review_id from reviews table
- **Parent Table:** Replies
- **Description:** The number that identifies an review in the system. Used to assign the reply to a review
- **Physical Elements:**
 - **Data Type:** Numeric ▾
 - **Length:** 20
 - **Decimal Places:** 0
 - **Character Support:** Numbers (0-9)
- **Logical Elements:**
 - **Key Type:** Foreign key
 - **Key Structure:** ▾
 - **Uniqueness:** Non-unique ▾
 - **Null Support:** No ▾
 - **Required Value:** Yes ▾
 - **Range of Values:** All available review_id in the reviews table

- **Values Entered by:** User ▾

Comment

- **Specification Type:** unique
- **Parent Table:** replies

Description:

This field contains the written feedback submitted reply of a user to a review. We store this text to allow conversation between users of the system

- **Physical Elements**
 - **Data Type:** Alphanumeric
 - **Length:** 1000
- **Logical Elements**
 - **Key Type:** Non-key
 - **Uniqueness:** Not Unique
 - **Null Support:** Yes
 - **Required Value:** Yes
 - **Values Entered by:** User

Create_date:

- **Specification Type:** Unique ▾
- **Parent Table:** Replies
- **Description:** The exact time the reply was written and posted to the system
- **Physical Elements:**
 - **Data Type:** Datetime ▾
 - **Length:**
 - **Decimal Places:**
 - **Character Support:**
- **Logical Elements:**
 - **Key Type:** non-key
 - **Key Structure:** ▾
 - **Uniqueness:** Non-unique ▾
 - **Null Support:** No ▾
 - **Required Value:** Yes ▾
 - **Range of Values:**
 - **Values Entered by:** System ▾