

Hypermarket Database Management System

Milestone – Logical Model

Group 17

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Percentage of Effort Contributed by Samarth: 50

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Relational Model:

Bill Transactions (bill_id, user_id, bill_discount, bill_date, bill_time, bill_amount, total_quantity, market_id, total_tax, points_earned, payment_type)

- User_ID foreign key refers to User_ID in Customers, NOT NULL

Line Transactions (bill_id, user_id, product_id, description, line_amount, quantity, line_discount, offer_id, market_id, vertical_id, brand_id)

- User_ID foreign key refers to User_ID in Customers, NOT NULL

Points (user_id, user_id, available_points, points_acquired_date, points_expired)

- User_ID foreign key refers to User_ID in Customers, NOT NULL

Customers (user_id, first_name, last_name, mobile, email, date_registered, DoB, address)

Product Inventory (ID, description, supplier_id, color, season size, in_stock, calories, weight, category, cost)

Offers (ID, offer_type, offer_product_id)

- Offer_product_ID foreign key refers to ID in Product Inventory, NOT NULL

Markets (ID, name, city, state, country, working_hours)

Verticals (ID, type)

Brands (ID, name, product_id, V-ID)

- V-ID foreign key refers to ID in Verticals, NOT NULL

Suppliers (ID, supplier_name, address, phone_number)

Has_details_of (bill_id, M-ID)

- Bill_ID foreign key refers to Bill_ID in Bill Transactions and Line Transactions, NOT NULL
- M-ID foreign key refers to ID in Markets, NOT NULL

Consists of (M-ID, V-ID)

- M-ID foreign key refers to ID in Markets, NULL Allowed
- V-ID foreign key refers to ID in Verticals, NOT NULL

Contains particulars of (bill_id, V-ID)

- Bill_ID foreign key refers to Bill_ID in Line Transactions, NOT NULL
- V-ID foreign key refers to ID in Verticals, NOT NULL

Supplies (B-ID, S-ID, PI-ID)

- B-ID foreign key refers to ID in Brands, NOT NULL
- S-ID foreign key refers to ID in Suppliers, NOT NULL
- PI-ID foreign key refers to ID in Product Inventory, NOT NULL

Contains (bill_id, PI-ID)

- Bill_ID foreign key refers to Bill_ID in Line Transactions, NOT NULL
- PI-ID foreign key refers to ID in Product Inventory, NOT NULL

Applied on (bill_id, O-ID)

- Bill_ID foreign key refers to Bill_ID in Line Transactions, NOT NULL
- O-ID foreign key refers to ID in Offers, NULL Allowed

Discount(user_id, discount_amount)

- User_id foreign key refers to user_id in Customers, NOT NULL