MERAKI STORES

WEBSITE DATABASE DESIGN

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1 DOCUMENT CONTROL

1.1 Change Record

Date	Author	Version	Change Reference
04-July-2017	Vamsi Krishna	1.0	Initial version.

Contents

2 INTRODUCTION

2.1 Purpose

The purpose of the website is to take orders online and ease the job of an organiser while conducting events and other corporate gatherings.We provide products belonging to different categories such as Apparels, Accessories, Stationary,Company Internal Branding such as Document designs, Interior designs and other features.

This includes the following:

- Apparels: Tees, Hoodies, Jackets, Sports Jersey etc.
- Accessories: Travel Bags, Key chains, Photo frames, Badges, Umbrellas etc.
- Stationary: Office files, Pens, Bags, Calendars, Business cards etc.
- Interior Designs: Photo frames, Wall papers, Advertising posters etc.

2.2 Scope

The main scope of the website is to ease the task of organisers while conducting an event, managing people, taking orders online for over a large group of people etc. This will be common situations across engineering colleges and corporate offices where events will be held regularly and there is a lot of orders like T-Shirts for the events, Hoodies for hackathon clubs, Office related files and project related accessories etc.

2.3 Assumptions

The following assumptions have been made for this design:

1. The Database design has been made with the understanding of requirements documents shared. This should be skeleton and initial rough design to be good enough to start with the implementation.
2. Actual design may change later when the website is under implementation phase.
3. Currently, all the different types of transactions and their related events are captured as part of the design.
4. This design needs to be integrated later with the design tool and payments details.

3 WEBSITE REQUIREMENTS

Website UI/UX design

Reference web site: Custom ink, Ink monk, Alma matter, Dream store.

Home page (Step wise pattern)

Header
About US
Product
Design tool
Blog
Contact us
Sign In/up
Search
Country
Display Slides
Range of products
Advertising for branding, to display the trending products etc.
Tabs
Products Icon
Design Icon
Blog
Client reviews scrolling or notification area
Footer
About US
Mission
Vision
Address
Team
Carrier
Client base
Contact Us
Parent company details
Copy right mark

Product page

List of product (Drop down or left portion)
Product picture or name or title
Product details
Different range of product
Available Colour
Size
Printing options
Utility description
Technical details
Availability status
Design option

User dashboard page

Account details
User details
Design tool access
Order details (Expired and live)
Live Order bash board
Process to live the order with specified options (Enable or disable)
Details of the live order with summary
Order Tracker
Payment history
Feed back or review
Quotations

Product List page

Apparels

- Round neck Tees
- V and Turtle neck tees
- Polo tees
- Hoodie
- Jackets
- Track suits
- Sports jersey

Accessories

- Back pack (Laptop bag)
- Travel bags
- Jute bags
- Executive bag (Poly and Leather)
- Key chain
- Wrist band
- Cups
- Water bottles
    - Sipper
    - Water boat (brand)
- Photo frames
- Mobile case
- Shot glasses
- Caps
- Flags
- Stickers
- Badges
- Laptop skin
- Pen drives
- Power bank
- Umbrella

Stationary

- Office files
- Not pad
- Pens
- Bags
- Calendars
- Pen stands
- Dairy
- Back pack
- Badges and Tag
- Name plates
- Business cards
- Card holders

Interior design

- Photo frames (Quote, Drawings etc.)
- Wall paper
    - Main office
    - Display gallery
    - Wall paper
    - Advertising posters

Online market place

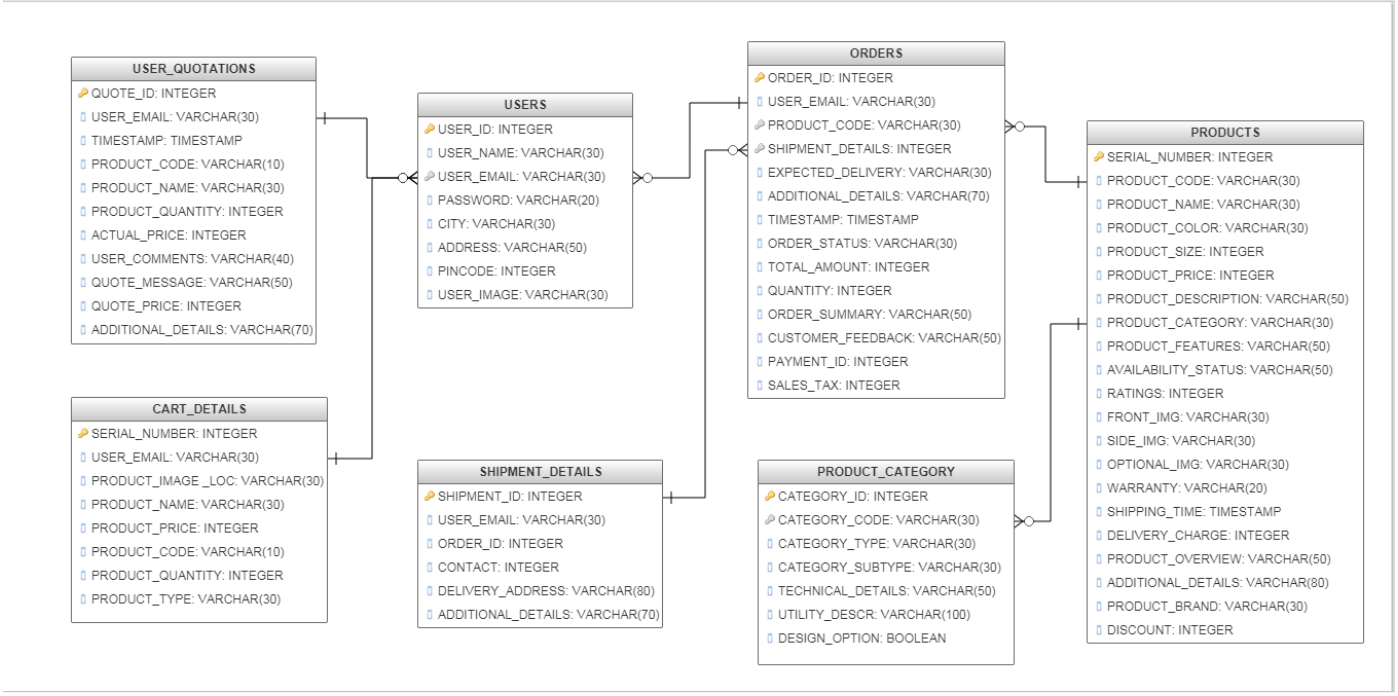
- Face book posts
- Instagram
- Just dial (Details can be taken from web site)
    - Poster
    - Client base
    - Product and description
- India mart

4 DATA MODEL (ER DIAGRAM)

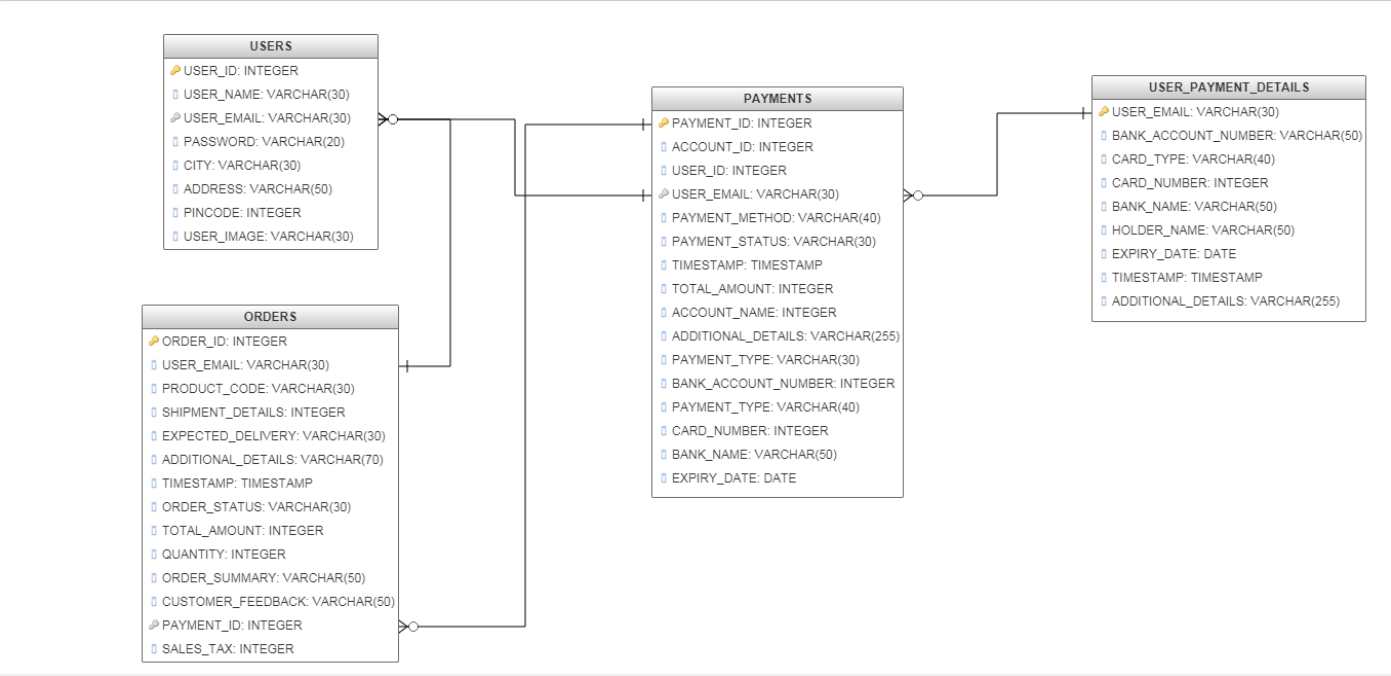
This will be the high-level database design and data model for the website "***Meraki Stores.***"

The major transactions will be involved in the following tables.

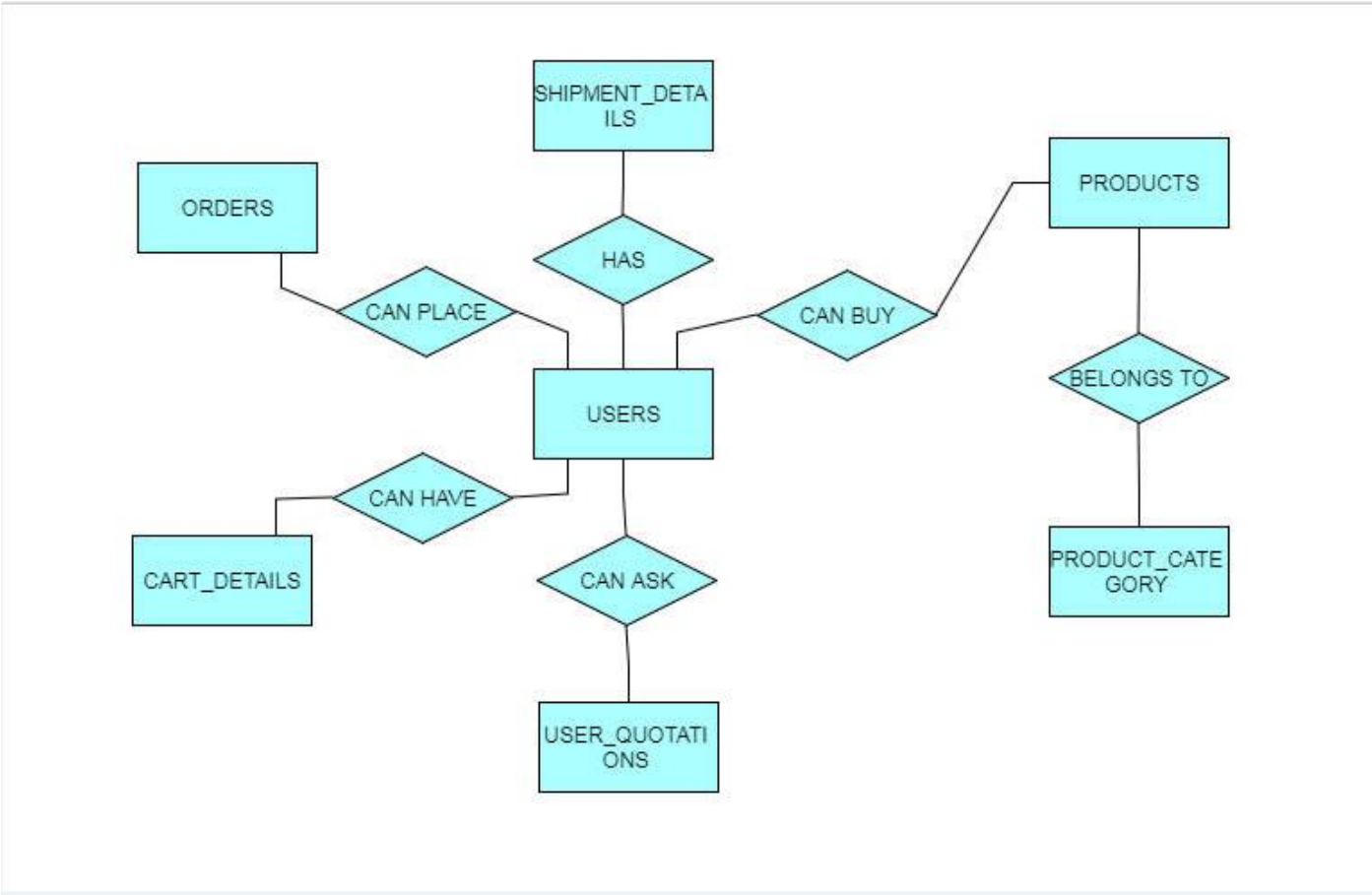
a. *USERS*
b. *USER_QUOTATIONS*
c. *CART_DETAILS*
d. *ORDERS*
e. *PRODUCTS*
f. *PRODUCT_CATEGORY*
g. *SHIPMENT_DETAILS*
h. *PAYMENTS*
i. *USER_PAYMENT_DETAILS*



This data model represents the payments related information required to confirm the orders after the payment has been initiated. Users can also save their bank account details and card details on the website so that they need not give the bank account related details every time they make an order. The details will be received from third party payment gateway API which confirms whether payment has been made successfully or not.



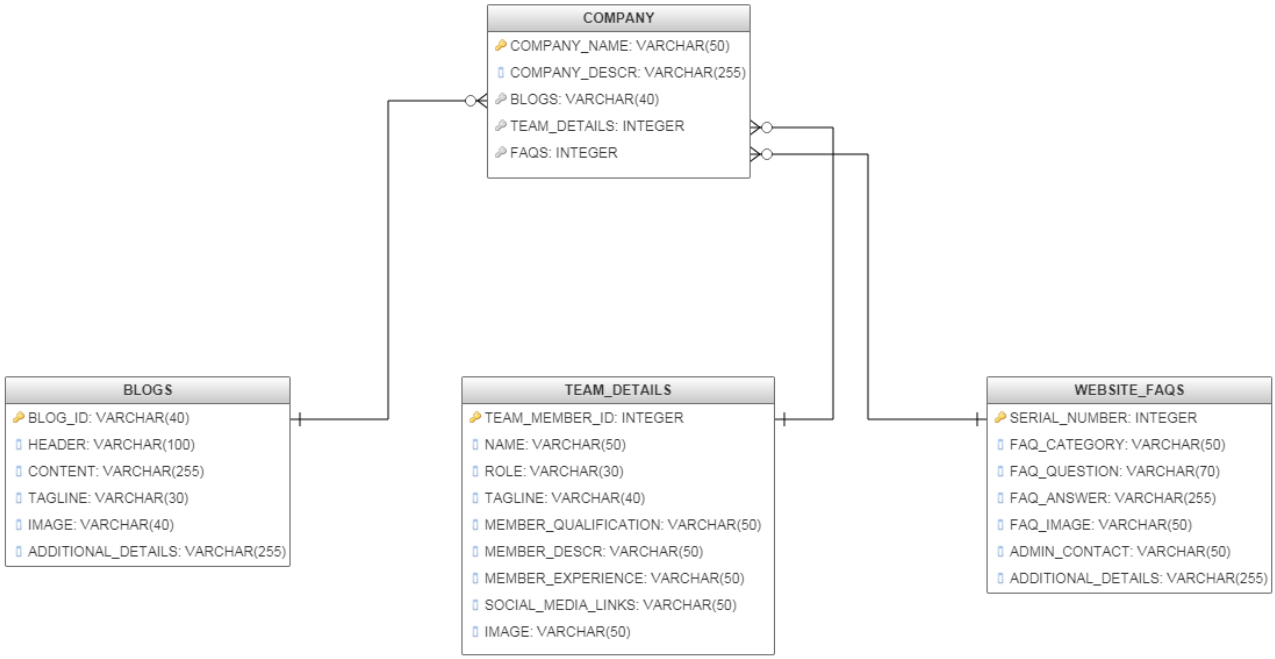
The relationship between the different transactions of the business processes is designed as follows:



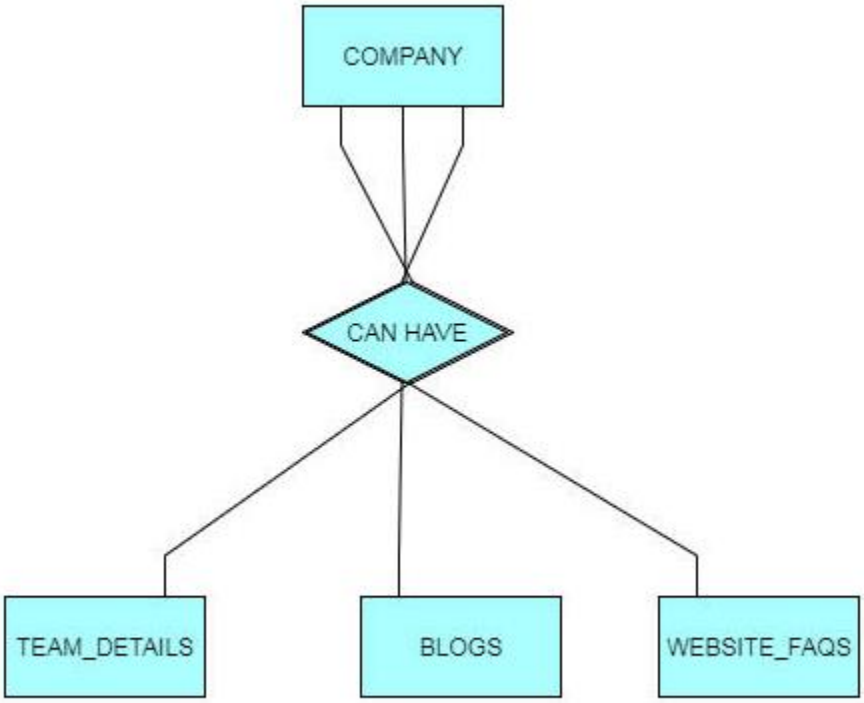
1) Users can place Orders
2) Users can have their product stored in their cart and later come and review them before purchasing.
3) Users can have multiple shipment details. This includes the different addresses they want to deliver a order.
4) Users can ask for quotations on a given product.
5) Users can buy the products from the website and provide their feedback and experience.
6) Every product references a product category.

5 ADDITIONAL DATA MODEL (COMPANY SIDE)

This will be the database design corresponding to company specific information and has nothing related to end user data. This can be currently implemented as part of static web pages and can be changed in future as dynamic web pages.



The relationship between the different details of the business is designed as follows:



a. Company can have all the team details stored in their database.

b. Company can have blogs.

c. Company can have some frequently asked questions displayed on their website which helps the end user in his experience with using the website.

6 PHYSICAL DATABASE DESIGN

This covers all the SQL queries, tables to be created for this design, showing a view of how transactional data will be stored and retrieved to achieve a logical functioning of the website.

USERS Table:

```
IF EXISTS (SELECT 1 FROM sys.tables WHERE object_id = OBJECT_ID('USERS'))
BEGIN;
    DROP TABLE [USERS];
END;


CREATE TABLE [USERS] (

    [USER_ID] INTEGER NOT NULL,
    [USER_NAME] VARCHAR (50) NULL,
    [USER_EMAIL] VARCHAR (50) NULL,
    [PASSWORD] VARCHAR(50) NULL,
    [CITY] VARCHAR (50) NULL,
    [ADDRESS] VARCHAR (255) NULL,
    [PINCODE] VARCHAR (10) NULL,
    [USER_IMAGE] VARCHAR(50) NULL,
    PRIMARY KEY ([USER_ID, USER_EMAIL])
);
```

CART_DETAILS Table:

```
IF EXISTS (SELECT 1 FROM sys.tables WHERE object_id = OBJECT_ID('CART_DETAILS'))
BEGIN;
    DROP TABLE [CART_DETAILS];
END;


CREATE TABLE [CART_DETAILS] (

    [SERIAL_NUMBER] INTEGER NOT NULL,
    [USER_EMAIL] VARCHAR (50) NULL,
    [PRODUCT_IMAGE_LOC] VARCHAR(50) NULL,
    [PRODUCT_NAME] INTEGER NULL,
    [PRODUCT_PRICE] INTEGER NULL,
    [PRODUCT_CODE] VARCHAR (20) NULL,
    [PRODUCT_QUANTITY] INTEGER NULL,
    [PRODUCT_TYPE] INTEGER NULL,
    PRIMARY KEY ([SERIAL_NUMBER, USER_EMAIL])
);
```

USER_QUOTATIONS Table:

```
IF EXISTS(SELECT 1 FROM sys.tables WHERE object_id = OBJECT_ID('USER_QUOTATIONS'))
BEGIN;
    DROP TABLE [USER_QUOTATIONS];
END;

CREATE TABLE [USER_QUOTATIONS] (

    [QUOTATION_ID] INTEGER NOT NULL,
    [USER_EMAIL] VARCHAR(50) NULL,
    [TIMESTAMP] VARCHAR(50),
    [PRODUCT_CODE] VARCHAR(10) NULL,
    [PRODUCT_NAME] VARCHAR(50) NULL,
    [PRODUCT_QUANTITY] INTEGER NULL,
    [ACTUAL_PRICE] INTEGER NULL,
    [USER_COMMENTS] VARCHAR(255) NULL,
    [QUOTE_MESSAGE] VARCHAR(255) NULL,
    [QUOTE_PRICE] INTEGER NULL,
    [ADDITIONAL_DETAILS] VARCHAR(255) NULL,
    PRIMARY KEY ([QUOTATION_ID, USER_EMAIL])
);
```

ORDERS Table:

```
IF EXISTS(SELECT 1 FROM sys.tables WHERE object_id = OBJECT_ID('ORDERS'))
BEGIN;
    DROP TABLE [ORDERS];
END;

CREATE TABLE [ORDERS] (

    [ORDER_ID] INTEGER NOT NULL,
    [USER_EMAIL] VARCHAR(50) NULL,
    [PRODUCT_CODE] VARCHAR(50) NULL,
    [SHIPMENT_DETAILS] VARCHAR(50) NULL,
    [EXPECTED_DELIVERY] VARCHAR(80) NULL,
    [TIMESTAMP] VARCHAR(50),
    [ORDER_STATUS] VARCHAR(20) NULL,
    [TOTAL_AMOUNT] INTEGER NULL,
    [QUANTITY] INTEGER NULL,
    [ORDER_SUMMARY] VARCHAR(255) NULL,
    [CUSTOMER_FEEDBACK] VARCHAR(255) NULL,
    [PAYMENT_ID] INTEGER NULL,
    [SALES_TAX] INTEGER NULL,
    [ADDITIONAL_DETAILS] VARCHAR(255) NULL,
    PRIMARY KEY ([ORDER_ID, USER_EMAIL])
);
```

SHIPMENT_DETAILS Table:

```
IF EXISTS (SELECT 1 FROM sys.tables WHERE object_id = OBJECT_ID('SHIPMENT_DETAILS'))
BEGIN;
    DROP TABLE [SHIPMENT_DETAILS];
END;


CREATE TABLE [SHIPMENT_DETAILS] (

    [SHIPMENT_ID] INTEGER NOT NULL,
    [ORDER_ID] INTEGER NULL,
    [USER_EMAIL] VARCHAR(50) NULL,
    [CONTACT] VARCHAR(20) NULL,
    [DELIVERY_ADDRESS] VARCHAR(255) NULL,
    [ADDITIONAL_DETAILS] VARCHAR(255) NULL,
    PRIMARY KEY ([SHIPMENT_ID, ORDER_ID])
);
```

PRODUCT_CATEGORY Table:

```
IF EXISTS(SELECT 1 FROM sys.tables WHERE object_id = OBJECT_ID('PRODUCT_CATEGORY'))
BEGIN;
    DROP TABLE [PRODUCT_CATEGORY];
END;

CREATE TABLE [PRODUCT_CATEGORY] (

    [CATEGORY_ID] INTEGER NOT NULL,
    [CATEGORY_CODE] VARCHAR(50) NULL,
    [CATEGORY_TYPE] VARCHAR(50) NULL,
    [CATEGORY_SUBTYPE] VARCHAR(50) NULL,
    [TECHNICAL_DETAILS] VARCHAR(255) NULL,
    [UTILITY_DESCR] VARCHAR(255) NULL,
    [DESIGN_OPTION] VARCHAR(10) NULL,
    PRIMARY KEY ([CATEGORY_ID, CATEGORY_CODE])
);
```

PRODUCTS Table:

```
IF EXISTS(SELECT 1 FROM sys.tables WHERE object_id = OBJECT_ID('PRODUCTS'))
BEGIN;
    DROP TABLE [PRODUCTS];
END;

CREATE TABLE [PRODUCTS] (

    [SERIAL_NUMBER] INTEGER NOT NULL,
    [PRODUCT_CODE] VARCHAR(50) NULL,
    [PRODUCT_NAME] VARCHAR(50) NULL,
    [PRODUCT_COLOR] VARCHAR(50) NULL,
    [PRODUCT_SIZE] INTEGER NULL,
    [PRODUCT_PRICE] INTEGER NULL,
    [PRODUCT_DESCRIPTION] VARCHAR(255) NULL,
    [PRODUCT_CATEGORY] VARCHAR(50) NULL,
    [PRODUCT_FEATURES] VARCHAR(255) NULL,
    [AVAILABILITY_STATUS] VARCHAR(30) NULL,
    [RATINGS] INTEGER NULL,
    [PRODUCT_FRONT_IMG] VARCHAR(30) NULL,
    [PRODUCT_SIDE_IMG] VARCHAR(30) NULL,
    [PRODUCT_OPTIONAL_IMG] VARCHAR(30) NULL,
    [WARRANTY] VARCHAR(30) NULL,
    [SHIPPING_TIME] VARCHAR(30) NULL,
    [DELIVERY_CHARGE] INTEGER NULL,
    [PRODUCT_OVERVIEW] VARCHAR(255) NULL,
    [PRODUCT_BRAND] VARCHAR(30) NULL,
    [DISCOUNT] VARCHAR(30) NULL,
    [ADDITIONAL_DETAILS] VARCHAR(255) NULL,
    PRIMARY KEY ([SERIAL_NUMBER, PRODUCT_CATEGORY, PRODUCT_CODE])
);
```

BLOGS Table:

```
IF EXISTS(SELECT 1 FROM sys.tables WHERE object_id = OBJECT_ID('BLOGS'))
BEGIN;
    DROP TABLE [BLOGS];
END;

CREATE TABLE [BLOGS] (

    [BLOG_ID] INTEGER NOT NULL,
    [HEADER] VARCHAR(50) NULL,
    [CONTENT] VARCHAR(255) NULL,
    [TAGLINE] VARCHAR(50) NULL,
    [IMAGE] VARCHAR(30) NULL,
    [ADDITIONAL_DETAILS] VARCHAR(255) NULL,
    PRIMARY KEY ([BLOG_ID])
);
```

TEAM_DETAILS Table:

```
IF EXISTS(SELECT 1 FROM sys.tables WHERE object_id = OBJECT_ID('TEAM_DETAILS'))
BEGIN;
    DROP TABLE [TEAM_DETAILS];
END;


CREATE TABLE [TEAM_DETAILS] (

    [TEAM_MEMBER_ID] INTEGER NOT NULL,
    [NAME] VARCHAR(40) NULL,
    [ROLE] VARCHAR(40) NULL,
    [TAGLINE] VARCHAR(40) NULL,
    [MEMBER_QUALIFICATION] VARCHAR(50) NULL,
    [MEMBER_DESCR] VARCHAR(50) NULL,
    [MEMBER_EXPERIENCE] VARCHAR(50) NULL,
    [SOCIAL_MEDIA_LINKS] VARCHAR(255) NULL,
    [IMAGE] VARCHAR(30) NULL,
    PRIMARY KEY ([TEAM_MEMBER_ID])
);
```

WEBSITE_FAQS Table:

```
IF EXISTS(SELECT 1 FROM sys.tables WHERE object_id = OBJECT_ID('WEBSITE_FAQS'))
BEGIN;
    DROP TABLE [WEBSITE_FAQS];
END;

CREATE TABLE [WEBSITE_FAQS] (

    [SERIAL_NUMBER] INTEGER NOT NULL,
    [FAQ_CATEGORY] VARCHAR(50) NULL,
    [FAQ_QUESTION] VARCHAR(50) NULL,
    [FAQ_ANSWER] VARCHAR(255) NULL,
    [FAQ_IMAGE] VARCHAR(50) NULL,
    [ADMIN_CONTACT] VARCHAR(80) NULL,
    [ADDITIONAL_DETAILS] VARCHAR(255) NULL,
    PRIMARY KEY ([SERIAL_NUMBER])
);
```

PAYMENTS Table:

```
IF EXISTS(SELECT 1 FROM sys.tables WHERE object_id = OBJECT_ID('PAYMENTS'))
BEGIN;
    DROP TABLE [PAYMENTS];
END;

CREATE TABLE [PAYMENTS] (

    [PAYMENT_ID] INTEGER NOT NULL,
    [ACCOUNT_ID] INTEGER NOT NULL,
    [USER_EMAIL] VARCHAR(30) NULL,
    [PAYMENT_METHOD] VARCHAR(30) NULL,
    [PAYMENT_STATUS] VARCHAR(30) NULL,
    [TIMESTAMP] VARCHAR(30) NULL,
    [TOTAL_AMOUNT] INTEGER NULL,
    [ACCOUNT_NAME] VARCHAR(30) NULL,
    [PAYMENT_TYPE] VARCHAR(30) NULL,
    [BANK_ACCOUNT_NUMBER] VARCHAR(50) NULL,
    [CARD_NUMBER] INTEGER NULL,
    [CARD_TYPE] VARCHAR(50) NULL,
    [CARD_NUMBER] INTEGER NULL,
    [BANK_NAME] VARCHAR(50) NULL,
    [EXPIRY_DATE] DATE NULL,
    [ADDITIONAL_DETAILS] VARCHAR(255) NULL,
    PRIMARY KEY ([PAYMENT_ID, USER_EMAIL, BANK_ACCOUNT_NUMBER])
);
```

USER_PAYMENT_DETAILS Table:

```
IF EXISTS(SELECT 1 FROM sys.tables WHERE object_id =
OBJECT_ID('USER_PAYMENT_DETAILS'))
BEGIN;
    DROP TABLE [USER_PAYMENT_DETAILS];
END;

CREATE TABLE [USER_PAYMENT_DETAILS] (

    [USER_EMAIL] VARCHAR(50) NOT NULL,
    [BANK_ACCOUNT_NUMBER] VARCHAR(50) NULL,
    [CARD_TYPE] VARCHAR(50) NULL,
    [CARD_NUMBER] INTEGER NULL,
    [BANK_NAME] VARCHAR(50) NULL,
    [CARD_HOLDER_NAME] VARCHAR(50) NULL,
    [EXPIRY_DATE] DATE NULL,
    [TIMESTAMP] VARCHAR(30) NULL,
    [ADDITIONAL_DETAILS] VARCHAR(255) NULL,
    PRIMARY KEY ([USER_EMAIL, BANK_ACCOUNT_NUMBER])
);
```

7 TABLES AND FIELDS DESCRIPTION

USERS Table:

USER_ID	System generated User ID
USER_NAME	User Name
USER_EMAIL	User email address
PASSWORD	User chosen password
CITY	City name
ADDRESS	User address
PINCODE	Pincode of address
USER_IMAGE	User image location path in server. (E.g., /merakiStores/images/users/displayPic.jpg)

CART_DETAILS Table:

SERIAL_NUMBER	Serial number
USER_EMAIL	User email address
PRODUCT_IMAGE_LOC	Product image location path in server. (E.g., /merakiStores/images/products/displayPic.jpg)
PRODUCT_NAME	Product name
PRODUCT_PRICE	Price
PRODUCT_CODE	Product Code
PRODUCT_QUANTITY	Number of items count
PRODUCT_TYPE	Type (E.g., Shirts, Bags, Accessories etc.)

USER_QUOTATIONS Table:

QUOTATION_ID	System generated Quotation ID
USER_EMAIL	User email address
TIMESTAMP	Date and Time
PRODUCT_CODE	Product Code
PRODUCT_NAME	Product name
PRODUCT_QUANTITY	Number of items count
ACTUAL_PRICE	Actual price
USER_COMMENTS	End user comments & request messages to admin
QUOTE_MESSAGE	Quote message by Admin
QUOTE_PRICE	Quote price estimated by admin
ADDITIONAL_DETAILS	Any other additional details.

ORDERS Table:

ORDER_ID	System generated Order ID
USER_EMAIL	User email address
PRODUCT_CODE	Product code
SHIPMENT_DETAILS	Foreign Key to Shipment Details Table
EXPECTED_DELIVERY	Expected Delivery time (E.g., within two weeks etc.)

TIMESTAMP	Date & Time
ORDER_STATUS	Status of Order (E.g., pending, confirmed, delivered, completed, cancelled etc.)
TOTAL_AMOUNT	Total amount of the order
QUANTITY	Number of items count
ORDER_SUMMARY	Summary description of the entire order placed.
CUSTOMER_FEEDBACK	Feedback, review or any ratings given by customer
PAYMENT_ID	Foreign key to payments table
SALES_TAX	Tax on the total order amount
ADDITIONAL_DETAILS	Any other additional information

SHIPMENT_DETAILS Table:

SHIPMENT_ID	System generated Shipment ID
ORDER_ID	Foreign key to Orders Table
USER_EMAIL	User email address
CONTACT	User contact
DELIVERY_ADDRESS	User delivery address
ADDITIONAL_DETAILS	Any other additional information

PRODUCT_CATEGORY Table:

CATEGORY_ID	System generated Category ID
CATEGORY_CODE	Unique category code
CATEGORY_TYPE	Category Type (E.g., Shirts, bags, electronic goods etc.)
CATEGORY_SUBTYPE	Sub category for category type (E.g., Hoodies, Tees, Neck shirts under the category Shirts etc.)
TECHNICAL_DETAILS	Details involving manufacturing the product, components used, type of product used in making etc.
UTILITY_DESCR	Description about the product, how it is useful to end-user etc.
DESIGN_OPTION	This tells whether design option is available for this category or not.

PRODUCTS Table:

SERIAL_NUMBER	System generated product ID
PRODUCT_CODE	Product code
PRODUCT_NAME	Product name
PRODUCT_COLOR	Product color
PRODUCT_SIZE	Product size
PRODUCT_PRICE	Product price
PRODUCT_DESCRIPTION	Product description
PRODUCT_CATEGORY	Category to which the product belongs to (E.g., T-Shirts, Apparels, Accessories, document designs etc.)
PRODUCT_FEATURES	Features of the product
AVAILABILITY_STATUS	This tells whether the product is available and can be delivered or not.
RATINGS	Ratings of the product given by other users
PRODUCT_FRONT_IMG	Product image location path in server. (E.g., /merakiStores/images/users/displayPic.jpg)
PRODUCT_SIDE_IMG	Product image location path in server. (E.g., /merakiStores/images/users/displayPic.jpg)

PRODUCT_OPTIONAL_IMG	Product image location path in server. (E.g., /merakiStores/images/users/displayPic.jpg)
WARRANTY	Product warranty
SHIPPING_TIME	Estimation time of when the product will be shipped and delivered
DELIVERY_CHARGE	Charges incurred as part of delivering the products.
PRODUCT_OVERVIEW	Overview of product
PRODUCT_BRAND	Product brand
DISCOUNT	Any discount offered on the product.
ADDITIONAL_DETAILS	Any other additional information

BLOGS Table:

BLOG_ID	System generated Blog ID
HEADER	Header line
CONTENT	Actual body
TAGLINE	Any tagline
IMAGE	User image location path in server. (E.g., /merakiStores/images/users/displayPic.jpg)
ADDITIONAL_DETAILS	Any other additional information

WEBSITE_FAQS Table:

SERIAL_NUMBER	Sequence of the frequently asked question
FAQ_CATEGORY	Product category to which this FAQ belongs to.
FAQ_QUESTION	Question
FAQ_ANSWER	Answer to the above question
FAQ_IMAGE	FAQ image location path in server. (E.g., /merakiStores/images/users/displayPic.jpg)
ADMIN_CONTACT	Details regarding whom to contact if the end user has a query related to this context
ADDITIONAL_DETAILS	Any other additional information

PAYMENTS Table:

PAYMENT_ID	System generated payment ID
USER_EMAIL	User email address
PAYMENT_METHOD	Payment method (E.g., online offline etc.)
PAYMENT_STATUS	Payment status (E.g., pending, cancelled, non-sufficient funds, completed etc.)
TIMESTAMP	Date & time on which the payment has been processed.
TOTAL_AMOUNT	Total payment done
ACCOUNT_NAME	Name of the user as described by the bank
PAYMENT_TYPE	Payment type (E.g., credit card, debit card, netbanking etc.)
BANK_ACCOUNT_NUMBER	Bank account number of the user
CARD_NUMBER	Card number
CARD_TYPE	Card type (E.g., credit, debit, mastercard, visa etc.)
BANK_NAME	Name of the bank
EXPIRY_DATE	Expiry date on the card
ADDITIONAL_DETAILS	Any other additional information

USER_PAYMENT_DETAILS Table:

USER_EMAIL	User email address
BANK_ACCOUNT_NUMBER	User bank account number
CARD_TYPE	Card type (E.g., credit, debit, mastercard, visa etc.)
CARD_NUMBER	Card number
BANK_NAME	Name of the bank
CARD_HOLDER_NAME	Name as described on the card
EXPIRY_DATE	Expiry date on the card
TIMESTAMP	Date & time on which these details are saved.
ADDITIONAL_DETAILS	Any other additional information