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ABSTRACT

The Vruksha Gajanan is an innovative software application designed to facilitate the buying and selling of Ganapati idols in a user-friendly and efficient manner. This is a Project developed for Vruksha Gajanan,a company known for crafting and selling eco-friendly Ganapati idols.The website showcase and sell these unique creations, providing a seamless online shopping experience. Users can explore a diverse range of Ganapati idols on the Home Page with a user-friendly pagination system. After that User can log in and add the products to the Cart, and he can add multiple products to Cart with his required quantity, User can also delete the product from the Cart at any time. After this, the User can Order the products which are present in his Cart.The navbar provides quick access to essential functionalities, such as signup and login pages.Routing mechanisms facilitate smooth transitions between pages. User-friendly registration and login process with authentication and authorization .Offer users to place and cancel order with ease ,contributing to connecting their beautiful creations with a broader audience.

ACKNOWLEDGEMENT

I take this occasion to thank God, almighty for blessing us with his grace and taking our endeavor to a successful culmination. I extend my sincere and heartfelt thanks to our esteemed guide, Mrs. Sonali Mogal for providing me with the right guidance and advice at the crucial juncture and for showing me the right way. I extend my sincere thanks to our respected Centre Co-Ordinator Mr. Rohit Puranik, for allowing us to use the facilities available. I would like to thank the other faculty members also, at this occasion. Last but not the least, I would like to thank my friends and family for the support and encouragement they have given me during the course of our work.

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1. INTRODUCTION

Embarking on a digital odyssey, we proudly present the E-Commerce Platform designed exclusively for Vruksha Gajanana. This visionary project unfolds a captivating online realm where the artistry of eco-friendly Ganapati idols converges with modern convenience. Steeped in vibrancy and sustainability, this platform transcends traditional shopping experiences, offering users a kaleidoscope of choices in terms of colors, sizes, and materials.

At its heart, this project is a celebration – a celebration of craftsmanship, spirituality, and responsible living. Imagine navigating through a virtual marketplace where each click unveils a new world of miniatures, jumbo-sized wonders, crystal-clear beauties, and idols sculpted from the earthy embrace of natural red soil. The platform isn't just a digital storefront; it's a testament to the synergy between ancient traditions and contemporary eco-conscious practices.

But this isn't merely an online shopping destination; it's a curated sanctuary where users can explore, choose, and bring home a piece of joy and positivity. From a sophisticated cart system that effortlessly adapts to your choices to the security measures ensuring the safety of your data, every aspect is designed with user comfort in mind.

As we introduce this project, we invite you to embark on a journey through the virtual aisles of Vruksha Gajanana's offerings, where every click echoes a commitment to sustainability, spirituality, and the joy of conscious living. Welcome to a digital experience where tradition meets technology, and each interaction is an invitation to explore the beauty of eco-friendly Ganapati idols.

1.1 Purpose

The purpose of this document is to provide a detailed specification of the features and functionalities of the "Vruksha Gajanan". It outlines the requirements, system architecture, and user interactions.

1.2 Scope

The scope of the project encompasses the development of a user-friendly website with a diverse range of eco-friendly Ganapati idols. This includes features such as secure login procedures with encryption, efficient routing for seamless navigation, and a presentation of idols crafted from natural red soil. The platform will cater to a global audience, allowing users to explore, select, and purchase Ganapati idols in various colors, sizes, and materials.

1.3 Objective of Project on Vruksha Gajanan:

The primary objective of this project is to create a user-friendly E-Commerce Platform exclusively for Vruksha Gajana, showcasing and promoting their unique eco-friendly Ganapati idols. With a focus on sustainability, the platform aims to offer an intuitive and seamless shopping experience, enabling users to explore, select, and purchase idols effortlessly. By emphasizing the eco-friendly aspect, particularly through idols crafted from natural red soil, the project seeks to foster a deeper connection between users and conscious living. Additionally, the objective includes expanding Vuskah Gajana's market reach by creating a global online presence, all while ensuring robust security measures to safeguard user data during the login process. The project aspires to marry traditional craftsmanship with modern convenience, creating a digital sanctuary for spiritual exploration and sustainable choices.

1.4 Functionalities provided by Vruksha Gajanan are as follows:

The "Vruksha Gajanan" project provides a range of functionalities aimed at simplifying and enhancing the vehicle buying and selling process for users. Some of the key functionalities offered by the project include:

1. Product Catalog:

Display a diverse range of Ganapati idols, categorized by color, size, and materials.

2. User Authentication:

Securely manage user login and registration processes with encryption for data protection

3. Cart System:

Enable users to add, modify quantities, and remove items from their cart seamlessly.

4. Order Placement and Cancellation:

Allow users to place orders and provide the flexibility to cancel orders when needed.

5. Sustainable Focus:

Showcase Ganapati idols crafted from eco-friendly materials, particularly natural red soil.

6. Global Accessibility:

Design the platform to be accessible to a global audience, transcending boundaries.

7. Real-time Efficient Routing:

Implement smooth navigation and efficient routing between pages for a seamless experience.

8. Responsive Design:

Ensure the platform's compatibility with various devices, offering a responsive design.

9. Interactive User Interface:

Create an engaging and appealing interface to enhance user interaction and overall satisfaction.

These objectives and functionalities collectively aim to establish a robust and user-centric E-Commerce Platform that aligns with Vruksha Gajanana's values of craftsmanship, spirituality, and environmental responsibility.

2. REQUIREMENTS

Functional Requirements

FR 1. User Registration and Authentication:

- Users can register by providing necessary details.
- User authentication is required to access the system.
- Forgot password functionality allows users to reset their passwords.

FR 2. Ganapati idols Inventory Management:

- Administrators can add, update, or delete Ganapati idols and details.
- Ganapati idols images can be uploaded and associated with each model.

FR 3. Booking and Reservation:

- Customers can view idol details and make reservations.

FR 4. User Profiles:

- Users can view and update their profiles.
- User profiles store personal information, contact details, and past orders.

FR 8. Error Handling and Reporting:

- The system handles errors gracefully and provides appropriate error messages.

Non Functional Requirements:

NFR 1. Security:

- User passwords are securely stored using encryption techniques.
- Access controls ensure that users can only access authorized features.

NFR 2. Performance:

- The system should handle a large number of simultaneous users without significant slowdowns.
- Image loading and retrieval should be efficient for a smooth user experience.

NFR 3. Scalability:

- The system should be designed to accommodate future growth and increased user activity.

NFR 4. Usability:

- The user interface should be intuitive and user-friendly for both customers
- Clear and concise error messages should guide users through any issues.

NFR 5. Reliability:

- The system should be available and operational 24/7 with minimal downtime.

NFR 6. Data Integrity:

- Data integrity and consistency are maintained through proper validation and database design.

NFR 7. Data Privacy:

- User data, especially personal and sensitive information, should be stored securely.

Other Requirements:**Hardware**

Back-end Server Configuration:

- Intel Pentium-IV Processor
- 128 MB RAM
- 1 Raid Controller Card
- 32-bit Ethernet Controller (100 Base-T)
- 8 x 2.0 GB Fast SCSI/2 with Raid Support
- 2.88 MB FDD
- 48x CD ROM Drive

Software

IDE - STS

SpringBoot 3.1.4

Java JDK 17

MySql 8.0

Hibernate 6.2.9.final

ReactJS

BootStrap

3. DATABASE DESIGN

Database Design

The following table structures depict the database design.

Table 1: product:

```
mysql> desc product;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| id    | bigint | NO | PRI | NULL | auto_increment |
| p_description | varchar(255) | YES |   | NULL | |
| p_image | varchar(255) | YES |   | NULL | |
| p_name | varchar(30) | YES |   | NULL | |
| p_price | double | NO |   | NULL | |
| p_quantity | int | NO |   | NULL | |
| p_stock | bit(1) | NO |   | NULL | |
+-----+-----+-----+-----+-----+-----+
7 rows in set (0.01 sec)
```

Table 2: roles:

```
mysql> desc roles;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| id    | bigint | NO | PRI | NULL | auto_increment |
| role_name | varchar(255) | NO |   | NULL | |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

Table 3 user_role:

```
mysql> desc user_role;
+-----+-----+-----+-----+-----+-----+
| Field | Type  | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| user_id | bigint | NO   | PRI  | NULL    |       |
| role_id | bigint | NO   | PRI  | NULL    |       |
+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

Table 4: user:

```
mysql> desc user;
+-----+-----+-----+-----+-----+-----+
| Field      | Type       | Null | Key | Default | Extra          |
+-----+-----+-----+-----+-----+-----+
| id         | bigint     | NO   | PRI  | NULL    | auto_increment |
| address    | varchar(255) | YES  |      | NULL    |                |
| email      | varchar(30)  | YES  | UNI  | NULL    |                |
| name       | varchar(30)  | NO   |      | NULL    |                |
| password   | varchar(255) | NO   |      | NULL    |                |
| phone      | varchar(10)  | YES  |      | NULL    |                |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)
```

Table 5: cart_item:

```
mysql> desc cart_item;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| id    | bigint | NO   | PRI  | NULL    | auto_increment |
| quantity | int | NO   |      | NULL    |                |
| total_price | double | NO   |      | NULL    |                |
| cart_id | bigint | YES  | MUL  | NULL    |                |
| product_id | bigint | YES  | MUL  | NULL    |                |
+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

Table 6: carts:

```
mysql> desc carts;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| id    | bigint | NO   | PRI  | NULL    | auto_increment |
| user_id | bigint | YES  | MUL  | NULL    |                |
+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

Table 7: order_item:

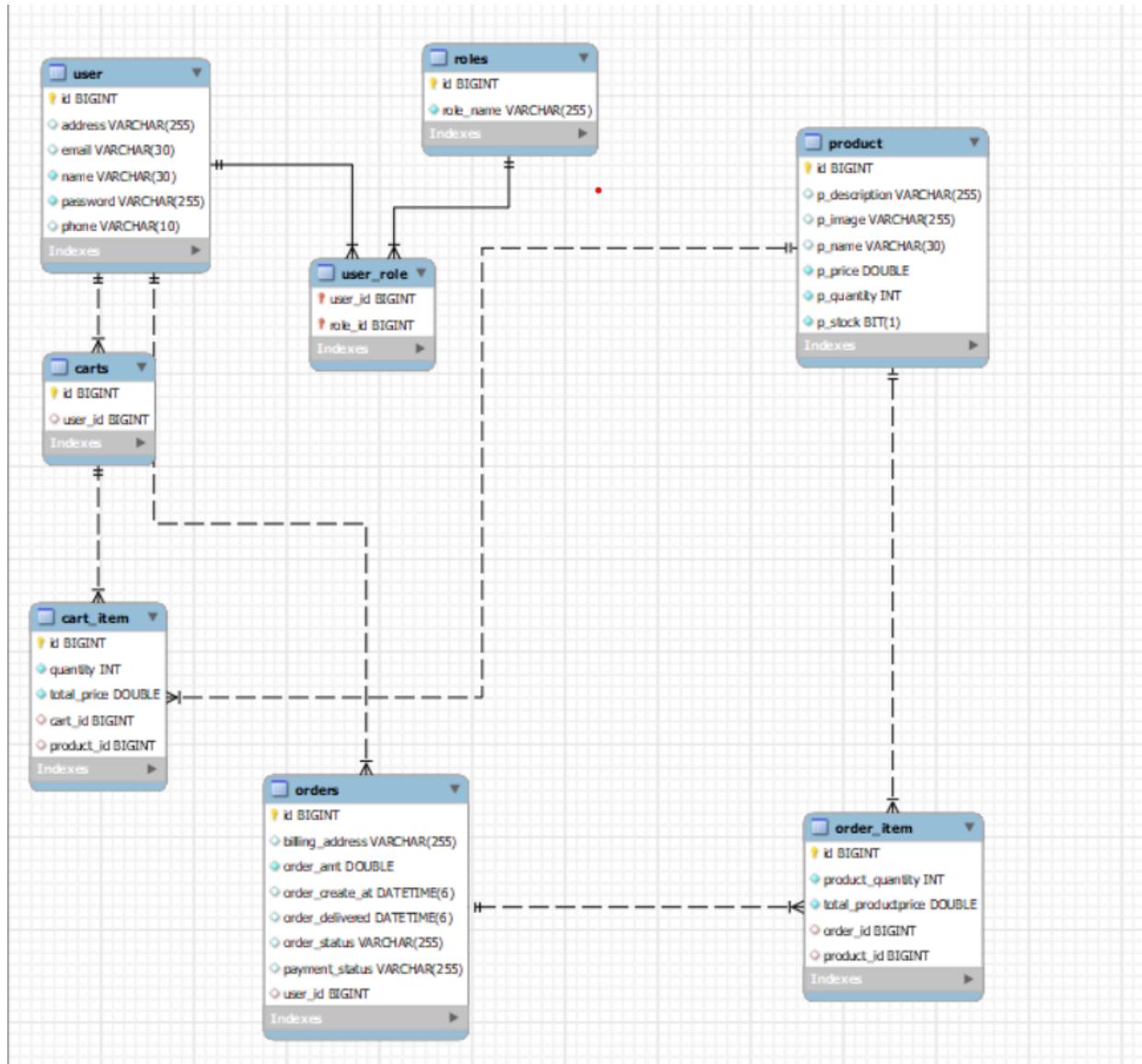
```
mysql> desc order_item;
+-----+-----+-----+-----+-----+-----+
| Field           | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| id              | bigint | NO   | PRI  | NULL    | auto_increment |
| product_quantity | int | NO   |      | NULL    |                |
| total_productprice | double | NO   |      | NULL    |                |
| order_id        | bigint | YES  | MUL  | NULL    |                |
| product_id       | bigint | YES  | MUL  | NULL    |                |
+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

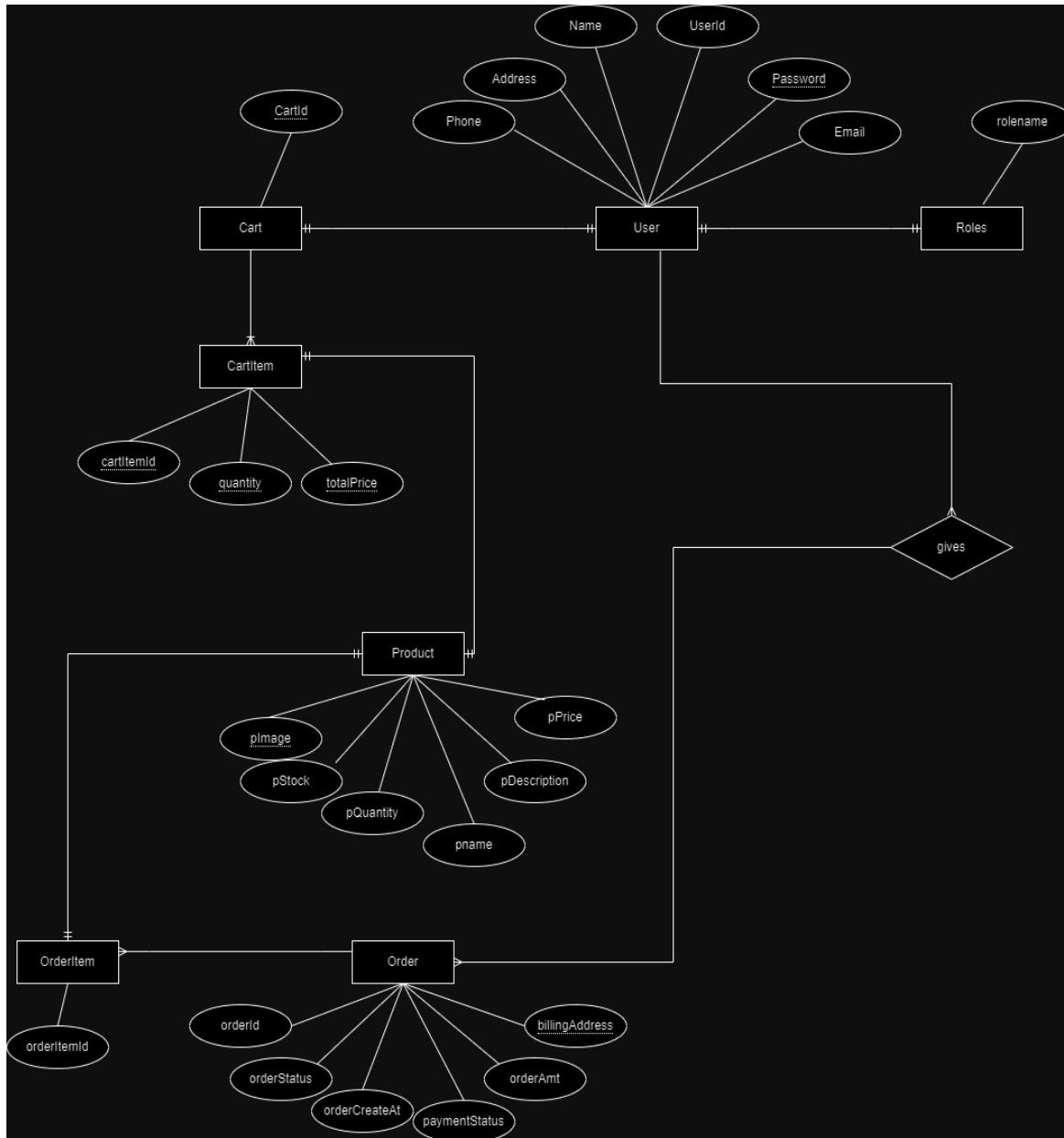
Table 8: orders:

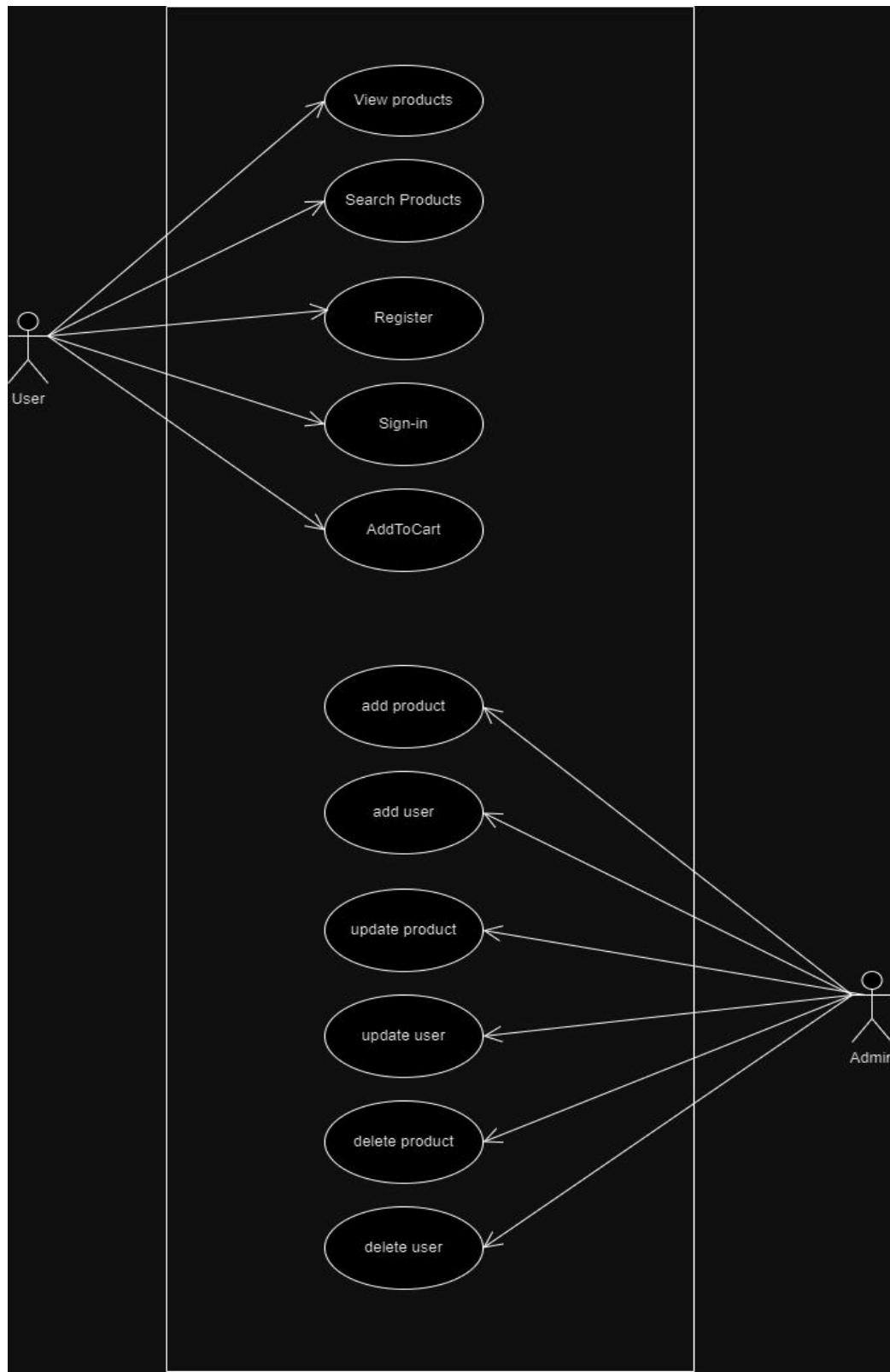
```
mysql> desc orders;
+-----+-----+-----+-----+-----+-----+
| Field      | Type       | Null | Key  | Default | Extra       |
+-----+-----+-----+-----+-----+-----+
| id          | bigint     | NO   | PRI   | NULL    | auto_increment |
| billing_address | varchar(255) | YES  |        | NULL    |              |
| order_amt    | double     | NO   |        | NULL    |              |
| order_create_at | datetime(6) | YES  |        | NULL    |              |
| order_delivered | datetime(6) | YES  |        | NULL    |              |
| order_status   | varchar(255) | YES  |        | NULL    |              |
| payment_status | varchar(255) | YES  |        | NULL    |              |
| user_id      | bigint     | YES  | MUL   | NULL    |              |
+-----+-----+-----+-----+-----+-----+
8 rows in set (0.00 sec)
```

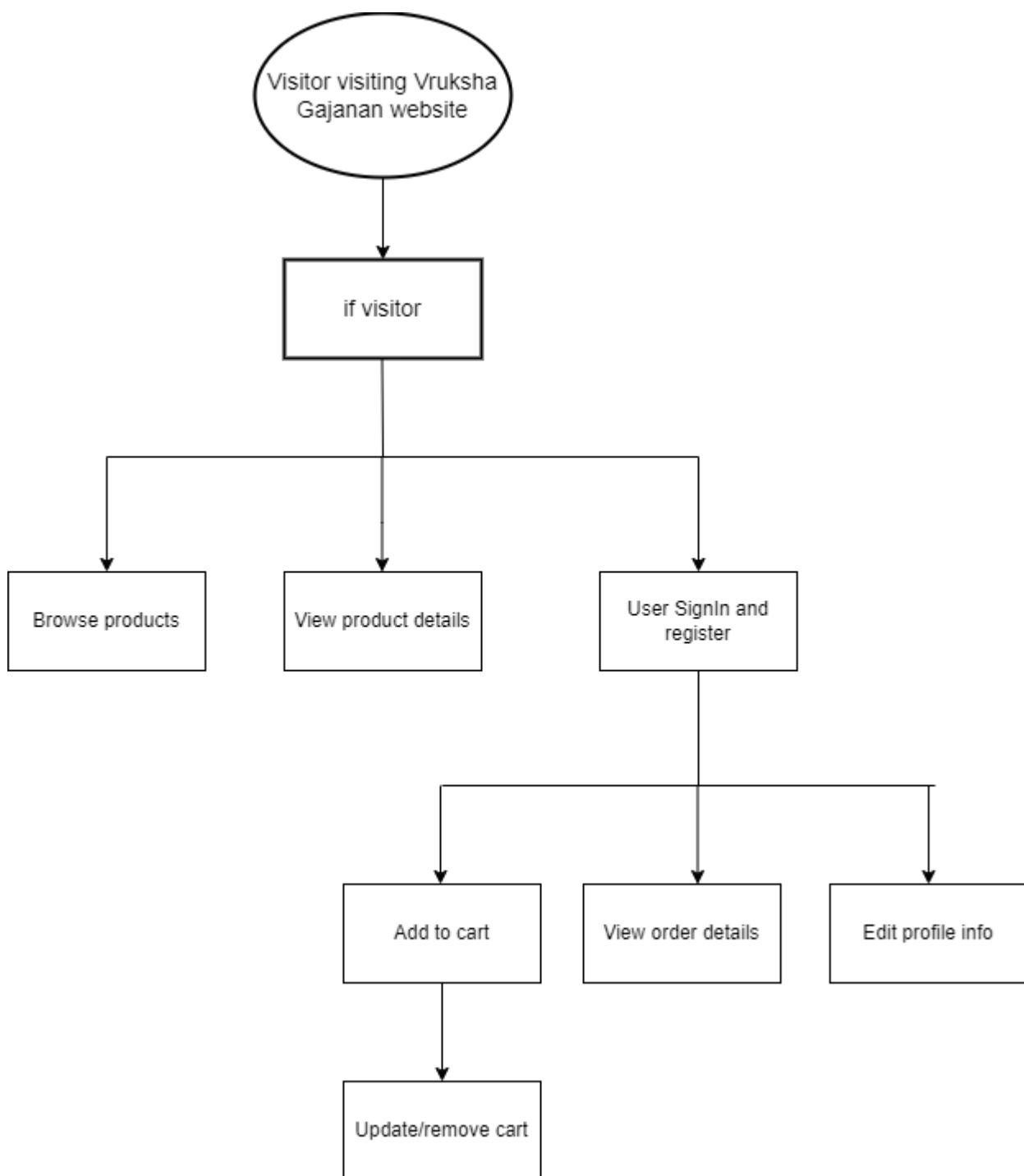
4. APPENDIX A

Entity Relationship Diagram:

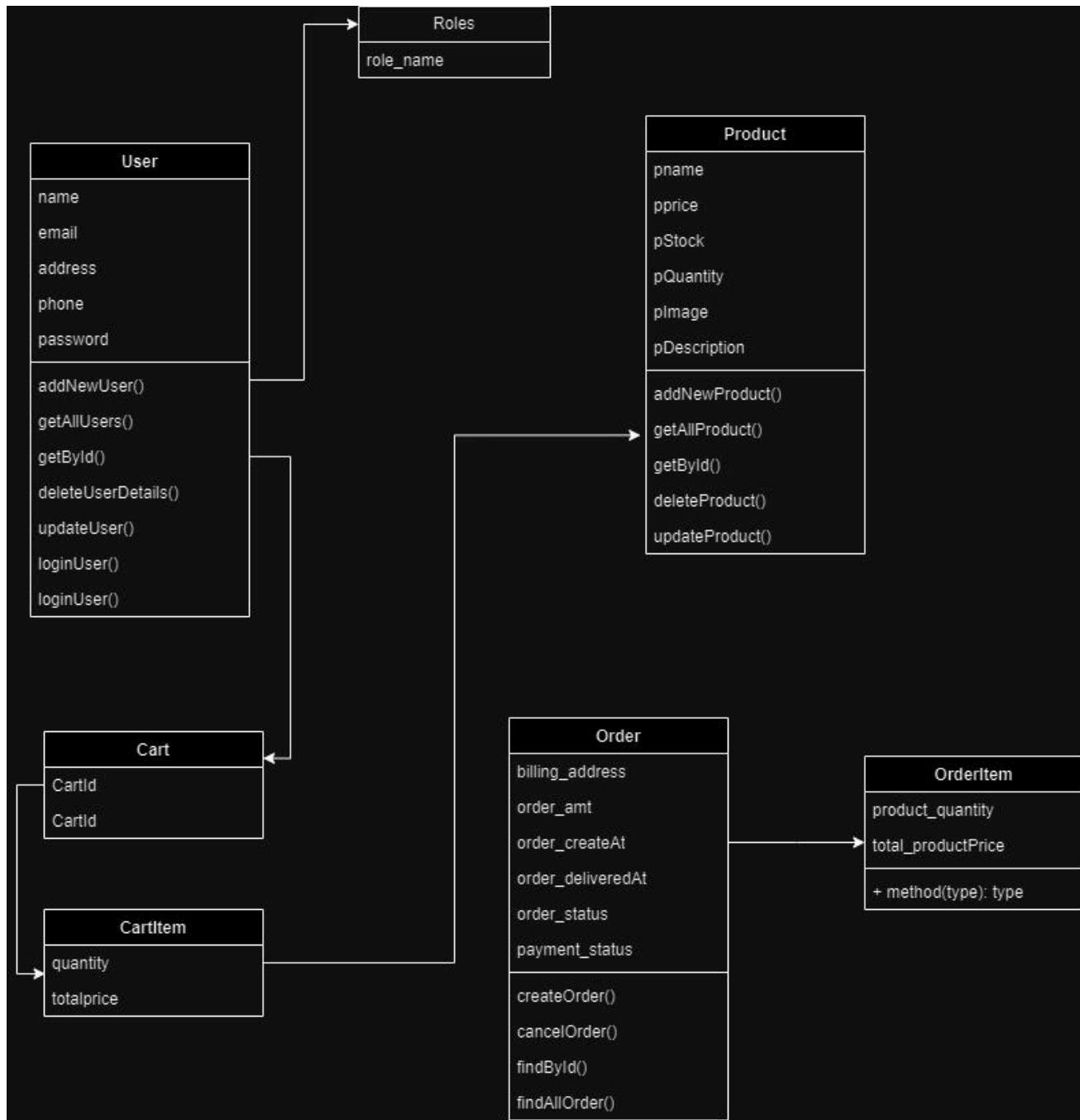


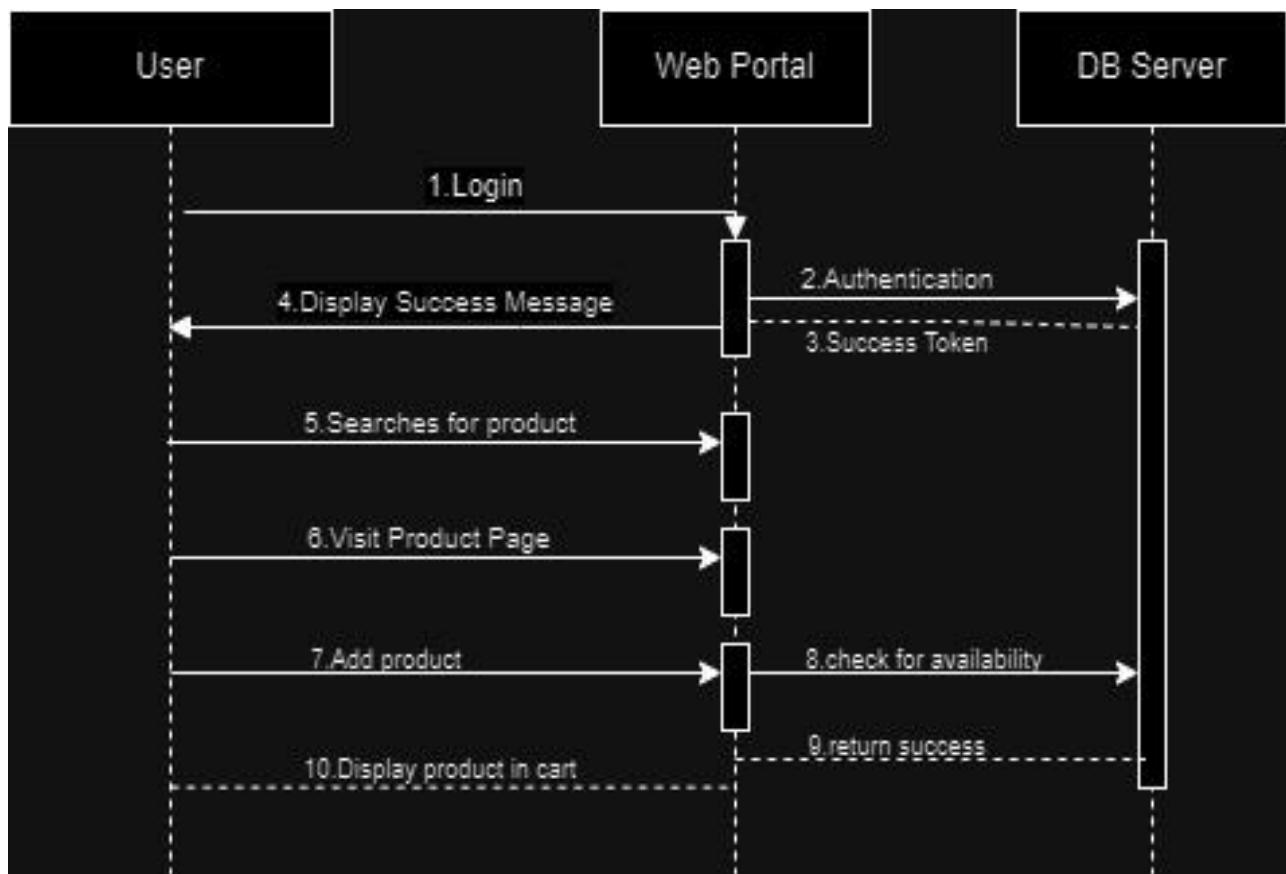


Use Case Diagram:

Data Flow Diagram:

Class Diagram:

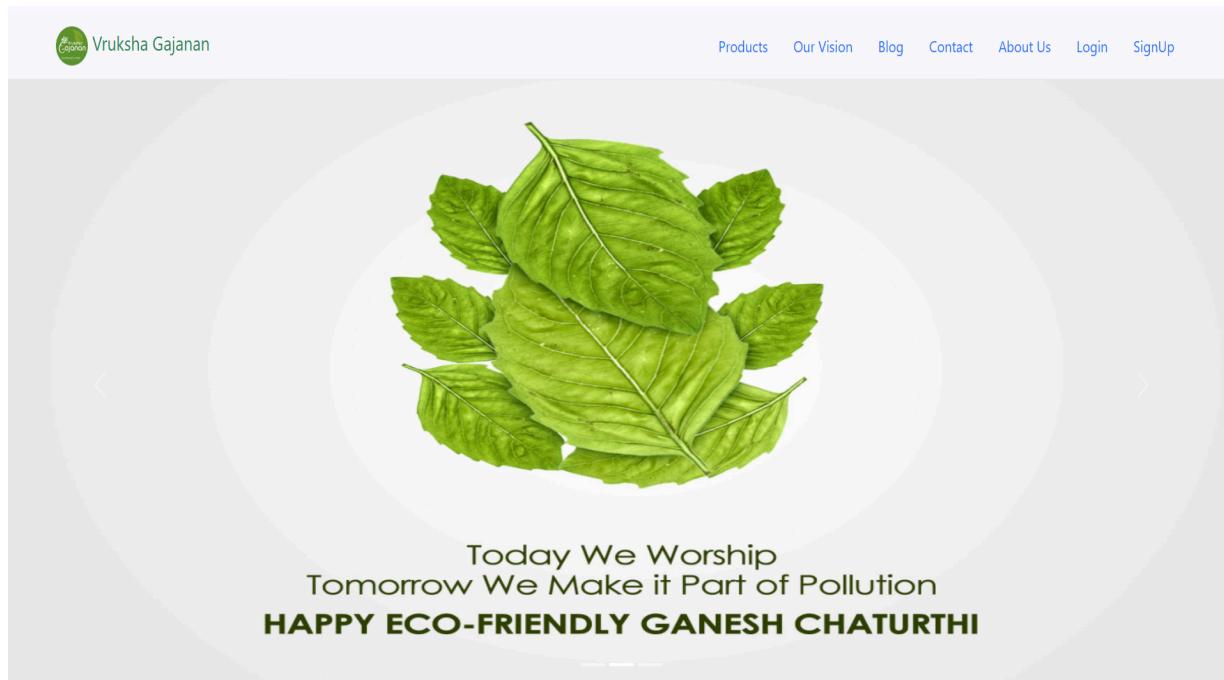


Sequence Diagram :

5.APPENDIX B

Homepage:

2.



Carousel :

Login:

LOGIN

Email

Enter Your email

Password

Enter Your Password

Login

SignUp:

SIGN UP

Name

Name is required

Email address

Email is required

Address

Address is required

Phone Number

Phone is required

Password

Password is required

Confirm Password

Password must be same

Submit

Product Page:**Ganpati4**

₹6098

Description: eco-friendly Ganapati idols crafted from natural red soil**Quantity:** 5**Stock:** Available[View](#)[Buy](#)**Ganpati1**

₹9800

Description: vibrant ganapati murti with white and purple clothing**Quantity:** 22**Stock:** Available[View](#)[Buy](#)**Ganpati2**

₹2800

Description: miniature Ganapati idol**Quantity:** 2**Stock:** Available[View](#)[Buy](#)**Ganpati3**

₹6500

Description: marble finish**Ganapati idol****Quantity:** 8**Stock:** Available[View](#)[Buy](#)**Ganpati5**

₹4538

Description: glow-in-the-dark**Ganapati idol****Quantity:** 7**Stock:** Available[View](#)[Buy](#)**Ganpati6**

₹3945

Description: Crafted with luminescent materials**Quantity:** 2**Stock:** Available[View](#)[Buy](#)

7. REFERENCES

<http://www.javatpoint.com/java-tutorial>

<http://www.w3.org> <http://www.wikipedia.org>

<https://www.tutorialspoint.com/java>