A Project Report of

E-Commerce Website with Admin Dashboard

Developed By…

Bhavik Sapariya

Submitted To

Geetanjali College of Computer Science & Commerce

Saurashtra University

Rajkot

2021-2024

Guide Name

PROF.
Pranav Trivedi

ACKNOWLEDGEMENTS

While the report for my project work is ready, I feel it is my bound duty to offer my sincere thanks to all those who have helped and guided me in this regard.

Action is very necessary to turn our dreams into reality. My dream was to develop this project. To create a successful and useful project, one needs help, understanding, and coordination from all those who are directly or indirectly involved in it.

Many people have contributed to making this project a reality. I would like to express my gratitude to our **Head of Department**, Prof. Brijesh Shah, for his guidance throughout the project.

When submitting the project report, it is my duty to offer my sincere thanks to those who have assisted me in preparing this project report. I would like to express my gratitude to Prof. Pranav Trivedi for his guidance throughout the project.

He helped me in selecting this topic and guided me to the final completion of my project by reviewing the manuscript of the chapters and providing valuable suggestions.

Before I describe my project in brief, I would like to add a few heartfelt words for those people who have given their time and knowledge to the development of this project.

Last but not least, I am thankful to all my college faculties and friends for their kind cooperation.

A Special thanks from:

Bhavik Sapariya

PREFACE

To prepare a project and a project report as separate subjects in the 6th semester of BCA, a project needs to be prepared on a particular subject after studying it thoroughly.

There is a significant difference between theoretical and practical knowledge, and understanding this difference is crucial for the application of knowledge.

Preparing a project report has been a new and interesting experience for me, although I find it challenging from certain aspects. It has allowed us to grasp theoretical concepts and their practical applications, contributing to greater confidence in our lives.

It was evident that it is essential and instructive not only to learn the principles of software engineering but also to apply them to a software development project. This approach helps in comprehensively understanding all aspects of development within a project.

Through the preparation of this report, I have come to realize the importance of practical training in the field of education. Working with a computerized system is easier than a manual system; it saves time, effort, space, and increases efficiency by generating interest.

My project pertains to the "E-commerce website with admin Dashboard" The project report contains information about to Flow and Module of Project. This project is a part of my six semesters of the BCA course curriculum at Geetanjali College of Computer Science & Commerce in Rajkot.

I decided to create a web application for our college using MERN technology. Our college has a long-standing reputation as one of the best colleges in Saurashtra University.

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ABSTRACT

The e-commerce project aims to develop a comprehensive online platform that facilitates seamless buying and selling of products and services over the internet. With the increasing trend towards online shopping, the project seeks to capitalize on the growing digital marketplace by providing a user-friendly and secure e-commerce platform.

Key Features:

1. User-friendly Interface: The e-commerce platform will feature an intuitive and easy-to-navigate interface for both buyers and sellers, ensuring a seamless shopping experience.

2. Product Catalog: A diverse range of products and services will be showcased on the platform, organized into categories and subcategories for easy browsing
.

3. Secure Payment Gateway: Integration with secure payment gateways will enable smooth and secure transactions, supporting various payment methods to accommodate customer preferences.

4. Order Management: Comprehensive order management functionalities will be implemented to track orders, manage inventory, and facilitate order fulfillment efficiently.

5. Personalized Recommendations: Utilizing advanced algorithms, the platform will offer personalized product recommendations based on user preferences and browsing history.

6. Seller Dashboard: Sellers will have access to a dedicated dashboard to manage their products, track sales, and monitor performance metrics.

7. Customer Support: Robust customer support mechanisms, including live chat, email support, and FAQs, will be provided to address customer queries and concerns promptly.

8. Mobile Responsiveness: The platform will be optimized for mobile devices, ensuring a seamless shopping experience across desktops, tablets, and smartphones
.

9. Marketing and Promotions: Various marketing tools and promotional features will be incorporated to attract customers, drive sales, and enhance brand visibility.

10. Analytics and Insights: Comprehensive analytics and reporting capabilities will provide valuable insights into customer behavior, sales trends, and performance metrics to inform strategic decision-making.

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PROJECT SUMMERY

- I have created this project.
- My project definition is E- Commerce Website
- My project Guide is Prof Pranav Trivedi.

➢ Features: -

- Add your Product Category wise   and you can also update it and remove it.
- User can Filter Product according their need like price wise category wise etc, Also show latest product listing
- User can see their order History

➢ This Project Goal: -

- Increase Sales: One of the primary goals of e-commerce projects is to drive more sales and revenue for the business. This could involve attracting new customers, increasing average order value, or improving conversion rates.
-

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PROJECT PROFILE

Developed At   : Geetanjali College Computer Science & Commerce.

Developed By   : Bhavik Sapariya v

Division   : BCA Semester 6 (A)

Project Name   : E-COMMERCE WEBSITE WITH ADMIN PANEL

Main Pages   : Home Page, Product Page, Login Page

Web Browser   : Google Chrome, Internet Explorer

Operating System   : Windows 10

Editor   : Visual Studio Code

Guided By   : Prof Pranav Trivedi
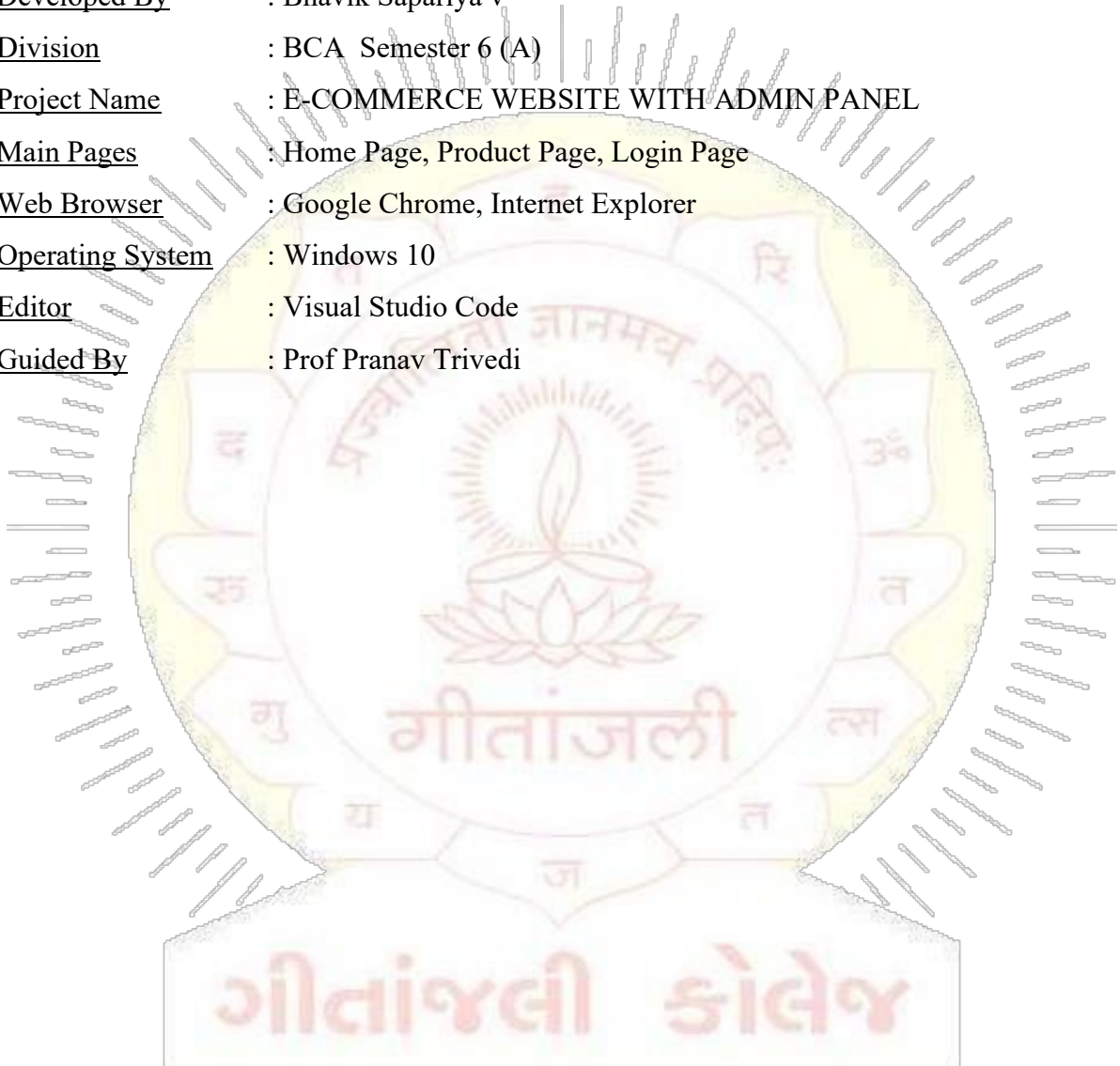
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SYSTEM REQUIREMENTS

➢ **Software**

- Any windows operating system windows 7 to 11
- Web Browser (Google Chrome, Internet Explorer, etc...)
- Front-End -> React JS, Html, Tailwind CSS
- Back-End -> Node JS, Express JS
- Database -> MongoDB
- Editor -> Visual Studio Code

➢ **Hardware**

- Processor -> Intel Core I3 and after all
- RAM 4 GB or Higher
- HDD with 256 Gb or Higher
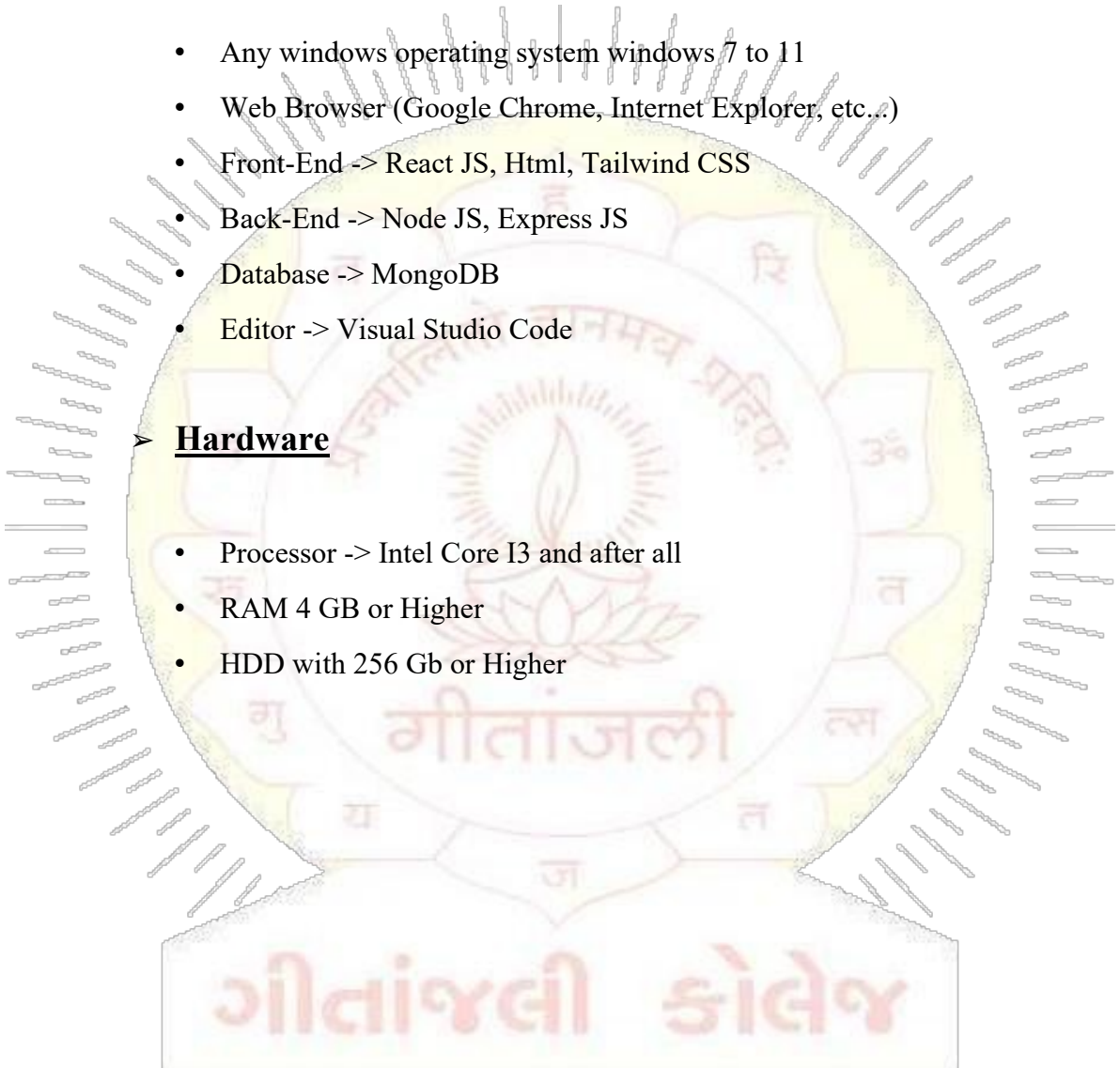
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PLATFORM SPECIFICATION

- ✚ Platform is providing the base of develop project in Expense Tracker & Income Management System I used to below platform.
- ✚ HTML, Tailwind CSS, React JS, Node JS, Express JS, MongoDB.

➢ **HTML: -**

- Hyper Text Mark-up Language (HTML) is a standard language. For creating web pages.
- It provides number of commands that can be used to place and format text, picture and sound on web pages.
- The linked to another document on the internet.
- Hyper Text Mark-up Language (HTML) is the computer coding language used to convert ordinary text into active text for display and used on the web and also to give plain, unstructured text the sort of structure human beings relays on to read it

➢ **Tailwind CSS: -**

- Tailwind CSS is a popular utility-first CSS framework that simplifies the process of building modern and responsive user interfaces.

- It differs from traditional CSS frameworks by providing low-level utility classes

that can be composed to create designs, rather than pre-defined components.

- Tailwind CSS is known for its flexibility and the ability to customize styles without leaving the HTML file.

➢ ReactJS: -

- ReactJS, commonly referred to as React, is an open-source JavaScript library developed and maintained by Facebook.

- It is primarily used for building user interfaces (UI) for single-page applications where the UI needs to be dynamic and responsive to user interactions.

- React was first released in 2013 and has since gained widespread adoption in the web development community.

➢ NodeJS: -

- Node.js is an open-source, cross-platform JavaScript runtime environment that executes JavaScript code outside a web browser.

- It is built on the V8 JavaScript runtime engine, which is developed by Google for the Chrome browser.

- Node.js allows developers to use JavaScript to write server-side code, enabling them to create scalable and high-performance applications.

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➤ **ExpressJS: -**

- Express.js, commonly referred to as Express, is a minimal and flexible web application framework for Node.js.

- It provides a set of features and tools for building web and mobile applications, primarily focusing on creating robust and scalable server-side applications.

- Express is widely used in the development of web applications and APIs due to its simplicity, speed, and versatility.

➤ **MongoDB: -**

- MongoDB is a popular open-source NoSQL database management system that belongs to the document-oriented database category.

- Developed by MongoDB Inc.,

- It is design to store, retrieve, and manage data in a flexible, scalable, and high-performance manner.

- MongoDB is widely used in modern web development and is known for its ease of use, flexibility, and ability to handle large amounts of unstructured or semi-structured data.

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SOFTWARE DEVELOPMENT LIFE CYCLE(SDLC)

Software Development Life Cycle Steps:

Here, this web application project was developed based on SDLC (Software Development Life Cycle).

SDLC has a different step of development of website or any type of application.

The project develops in the MERN technology.

Following the SDLC steps are used in the application Development: -

- System Requirement Analysis
- Feasibility Study
- System Design
- Testing
- Implementation
- Maintenance

System Requirement Analysis:

- In this phase, the development team visits the need for possible software requirements in micro-depth to develop the system.
- The basic clearance of the application they informed by the system requirement
- analysis investigation team. Understanding fully what a project will deliver is critical to its success.

Feasibility Study:

- Feasibility means the analysis team's report first study and that after the decision to

create this application.

- This team internally shows the company's possibility of developing this type of application.

- Tools and Technology, Economically, Government Rules & Regulations are considered.

System Design:

- This phase works on the creations of the first pre-model of the whole system.

- In terms of the end user/server technology, the number of tiers needed for the package architecture, the database design, the data structure design, etc., are all defined in this phase.

Implementation:

- Implementation was the phase where the actual coding and development took place.

- Programmers and developers write the software code based on the design specifications.

- This phase included rigorous testing to identify and fix any coding errors or bugs.

Testing:

- The testing phase involved systematically evaluating the software to ensure it met quality standards.

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- Different testing levels, such as unit testing, integration testing, and user acceptance testing, were conducted to validate the software's functionality, performance, and reliability.

- Defects were identified and addressed during this phase.

Maintenance:

- The maintenance phase represented the ongoing support and enhancement of the software post-deployment.

- It included activities such as bug fixes, updates, security patches and the addition of new features.
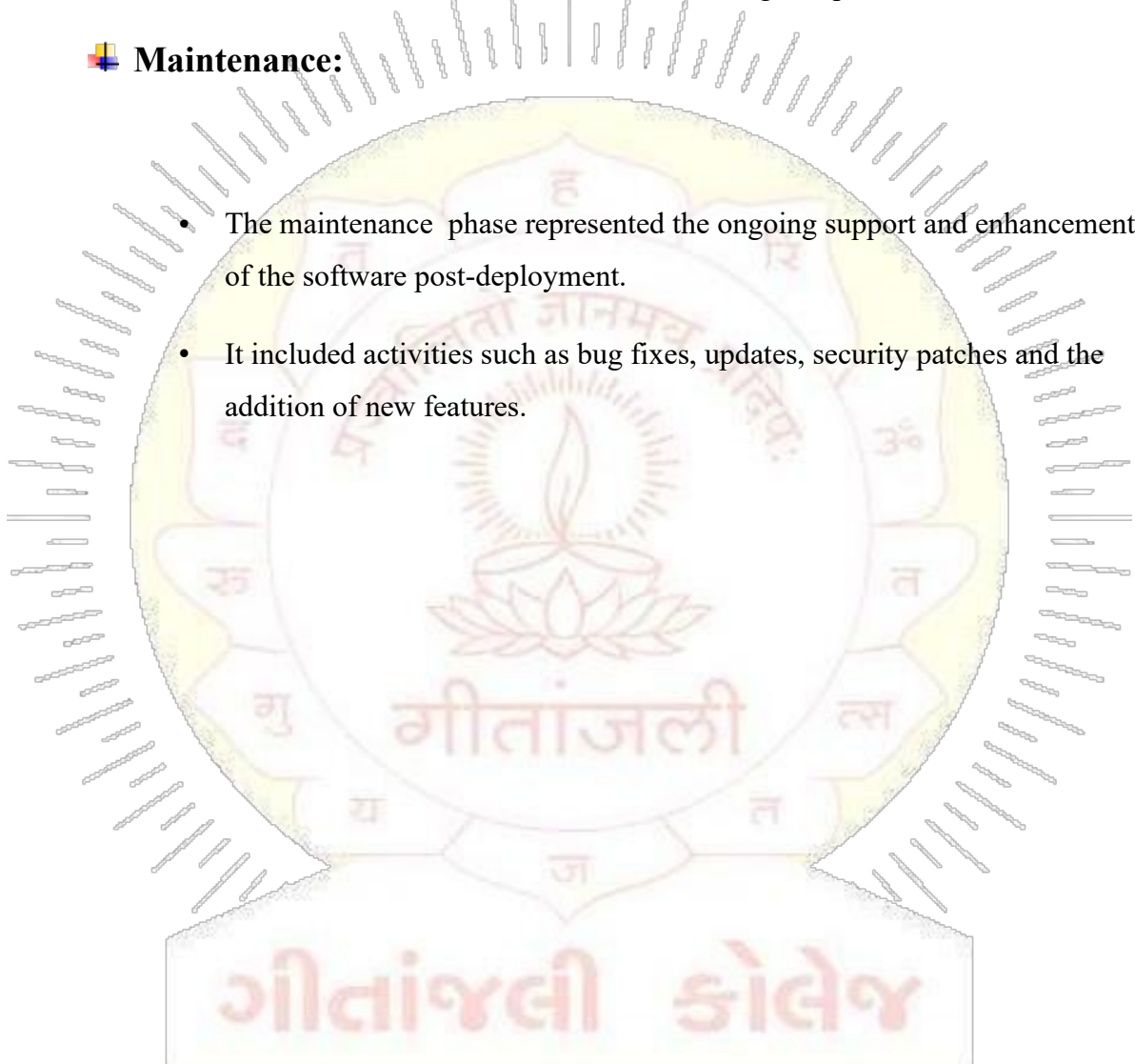
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TEST CASE

Case Name	Case Description	Actual Output	Test Result
Home Page	Display logo or name of the E-commerce Website	Display logo or name of The Website	Pass
Login	Login with your Google account.	Login successfully & go to Home Page.	Pass
Transaction Page	Display your transactions information (Amount, Type, Category, Reference, Description, Date). Add your Transactions, edit it and delete it.	Display your transactions information (Amount, Type, Category, Reference, Description, Date).Show your transaction in chart or tabular format.	Pass
Logout	Click on logout button user can logout your account of this system.	Back to home page.	Pass

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DATA DICTIONARY

➢ Product:

Name	Data Type	Constraints	AI
_Id	Int	Primary Key	True
Price	Number	-	-
Type	String	-	-
Category	String	-	-
Reference	String	-	-
Description	String	-	-
Date	Date	-	-

➢ User:

Name	Data Type	Constraints	AI
_id	Int	Primary Key	True
name	String	-	-
email	String	-	-

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SYSTEM DESIGN TOOLS

DFD (Data Flow Diagram):

DFD 0 Level Diagram

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DFD 1 Level Diagram
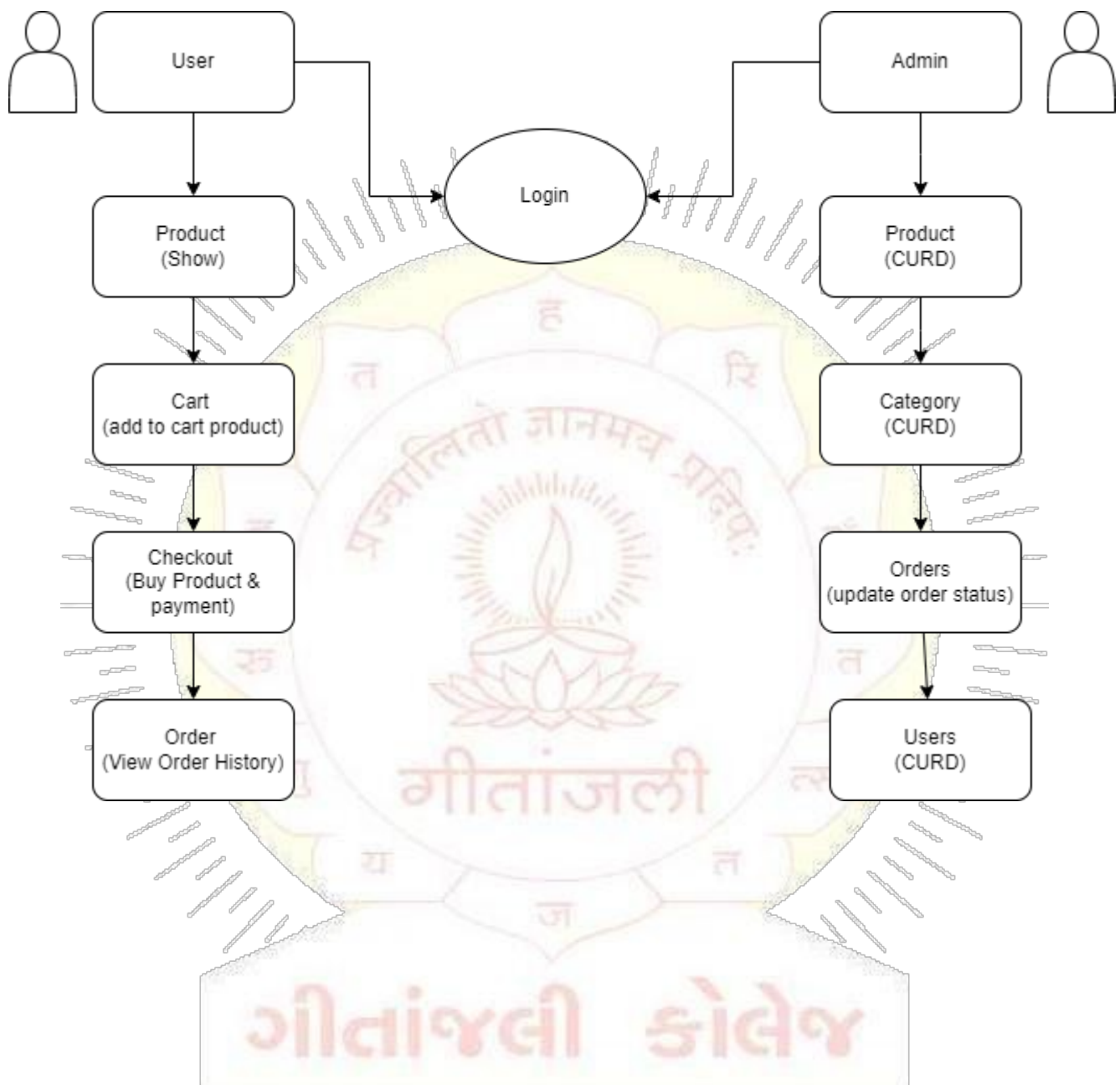
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DFD 2 Level Diagram
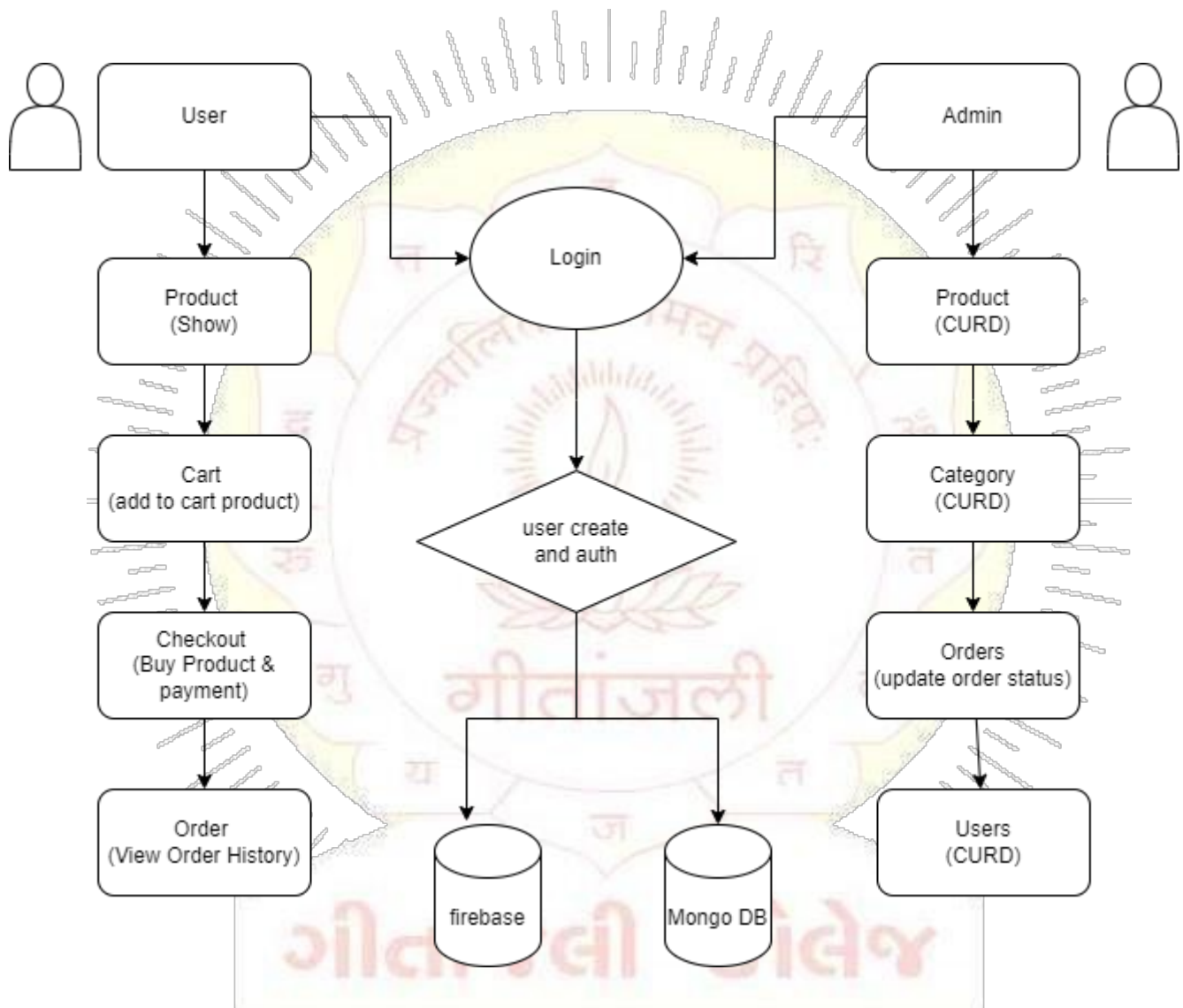
E-Commerce Website

Login DFD
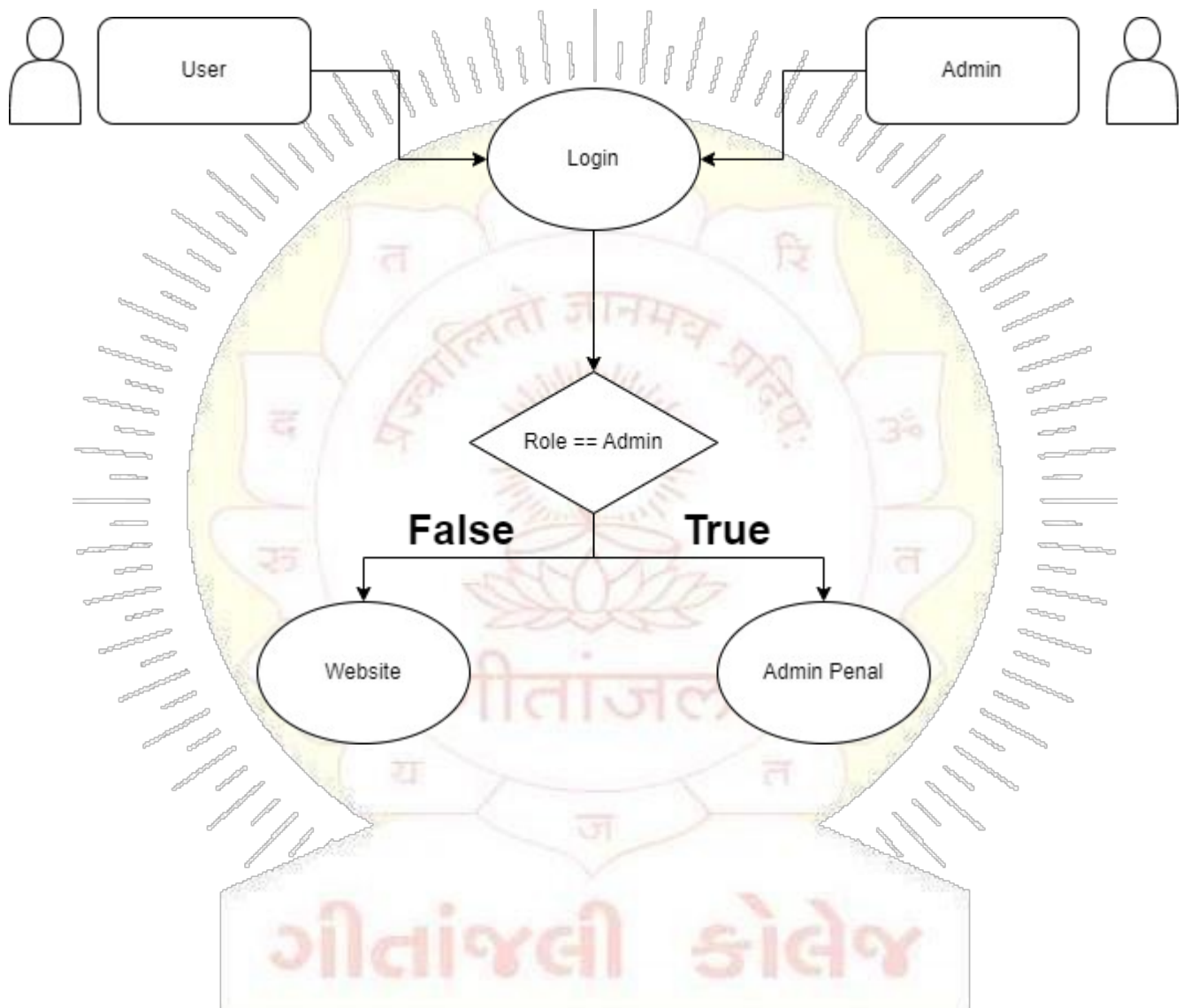
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ERD (Entity Relation Diagram): -
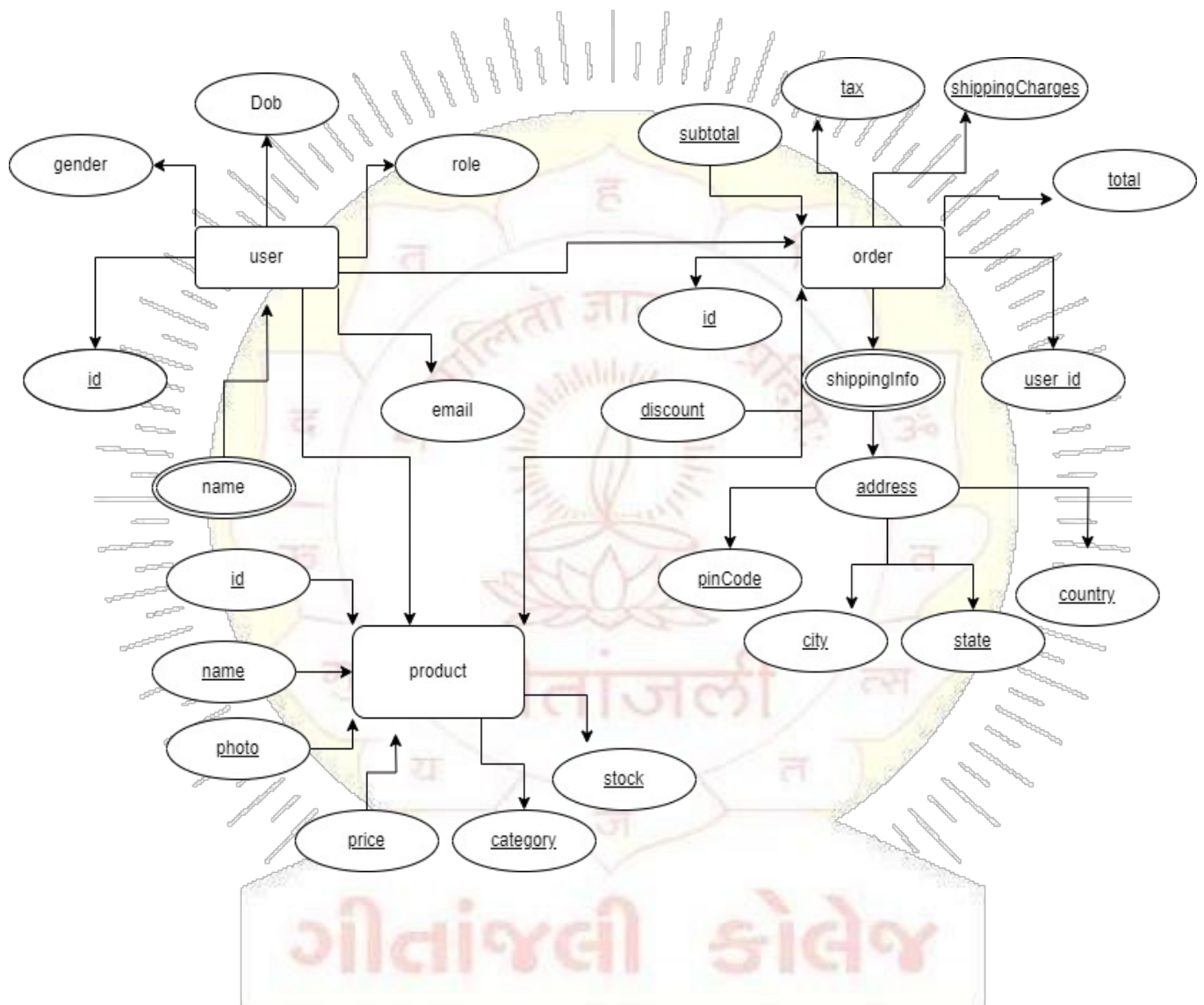
E-Commerce Website

Page Name: - Home Page

Description: - This is the home page of E-commerce website it page has menu like Cart etc. In this page you can show image slider of money.
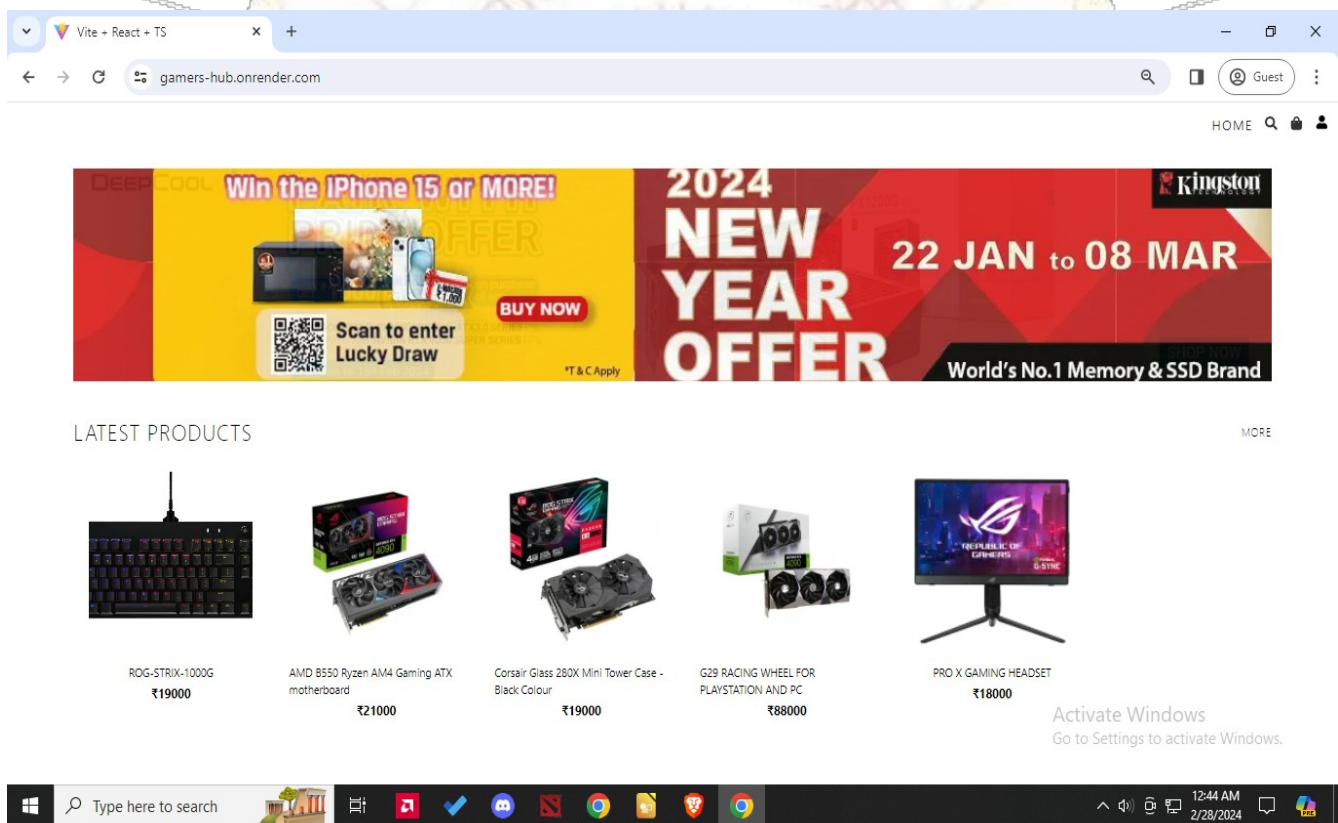
E-Commerce Website

Page Name: - Login Page

Description: - This is a login page of my E-commerce website you can see in this image User can login with their google account in that page

.
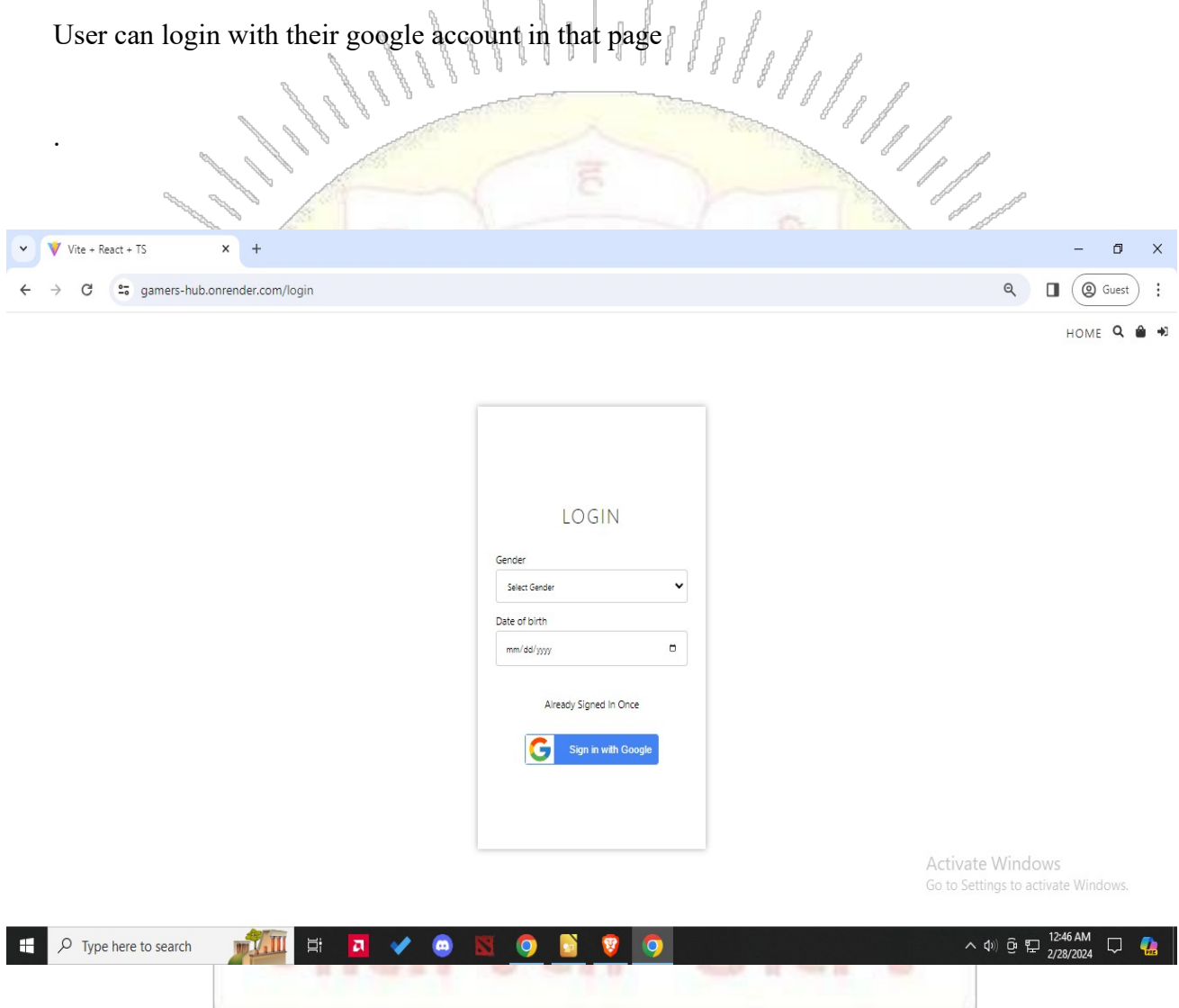
E-Commerce Website

Page Name: - Product

Description: - After login user can see Product list. Also he can filter product according

To their need like sort low to high (or) high to low. Category wise and price wise
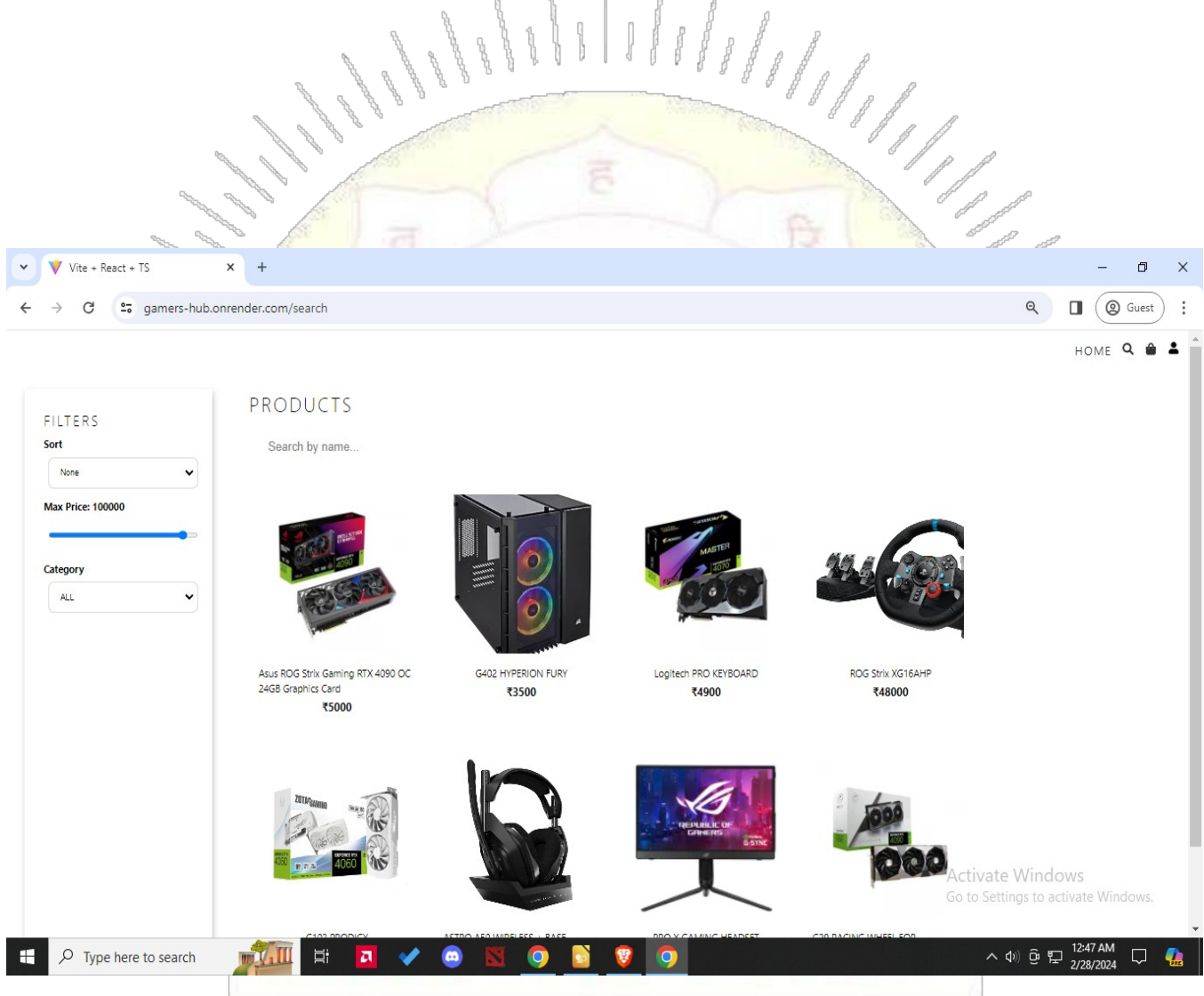
E-Commerce Website

Page Name: - Cart page
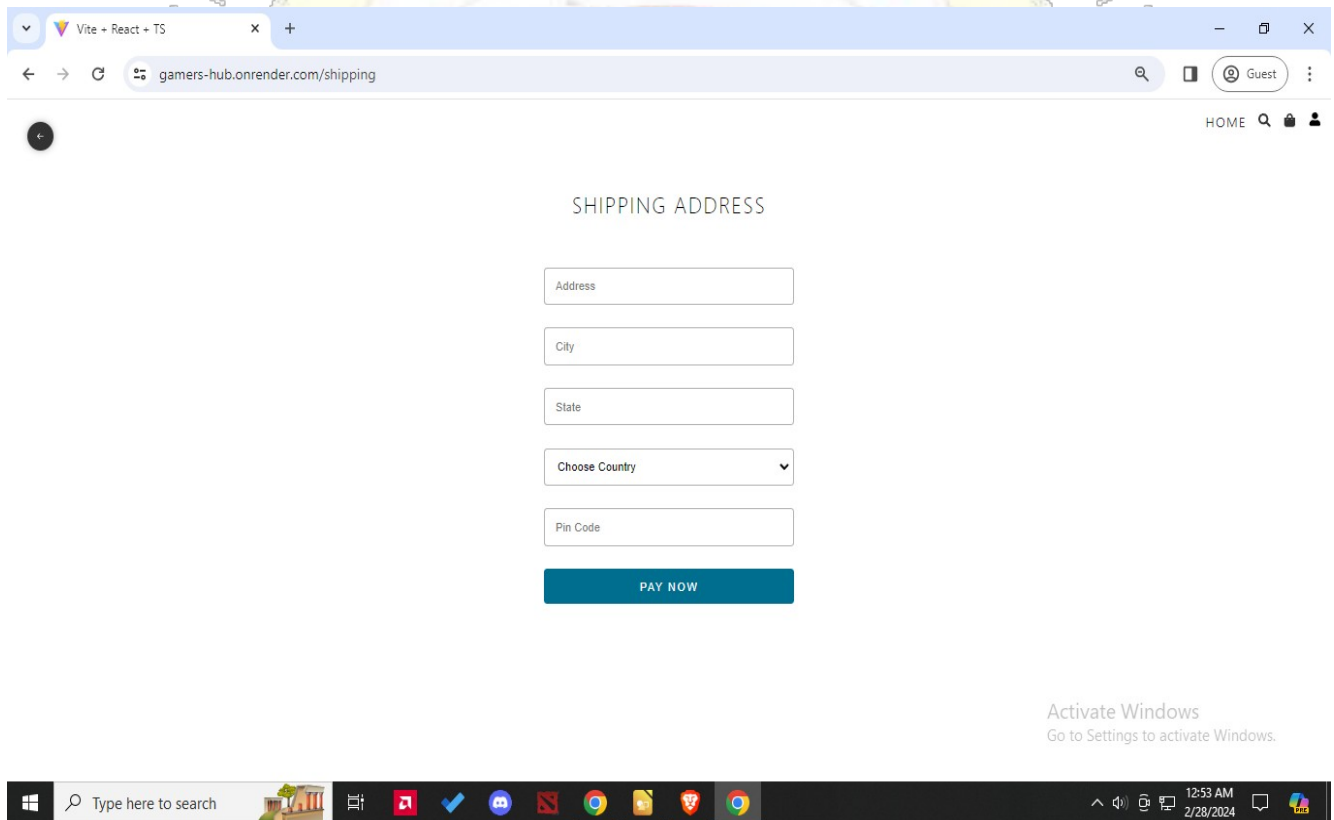
Description: - The Cart Page serves as a virtual shopping cart where users can view and manage the items they have added for purchase. It provides users with an overview of their selected products, allows them to modify quantities, remove items, and proceed to checkout.
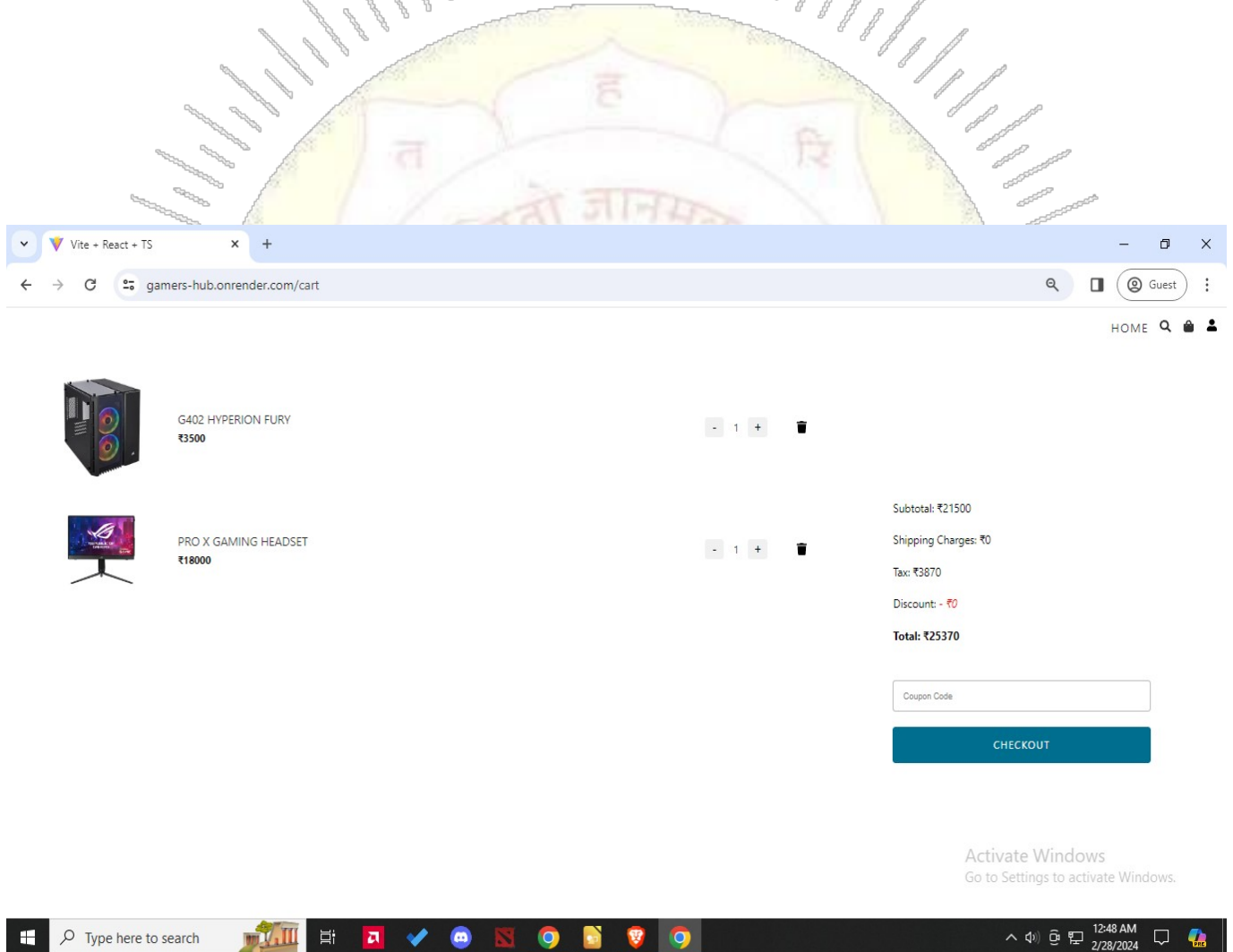
E-Commerce Website

Page Name: - Shipping address

Description: - The Shipping Address Page serves as a crucial step in the checkout process, where users provide the necessary information for the delivery of their purchased items. It allows users to input or select their shipping address details, ensuring accurate and timely delivery of their orders.

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Page Name: - Payment Page

Description: - The Payment Page is a crucial component of the checkout process where users finalize their purchase by providing payment information. It enables secure and convenient transactions, allowing users to complete their orders with confidence.

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Description: - The Orders Page provides users with a comprehensive view of their order history and status. It serves as a central hub where users can track their past orders, view order details, and monitor the progress of ongoing orders.
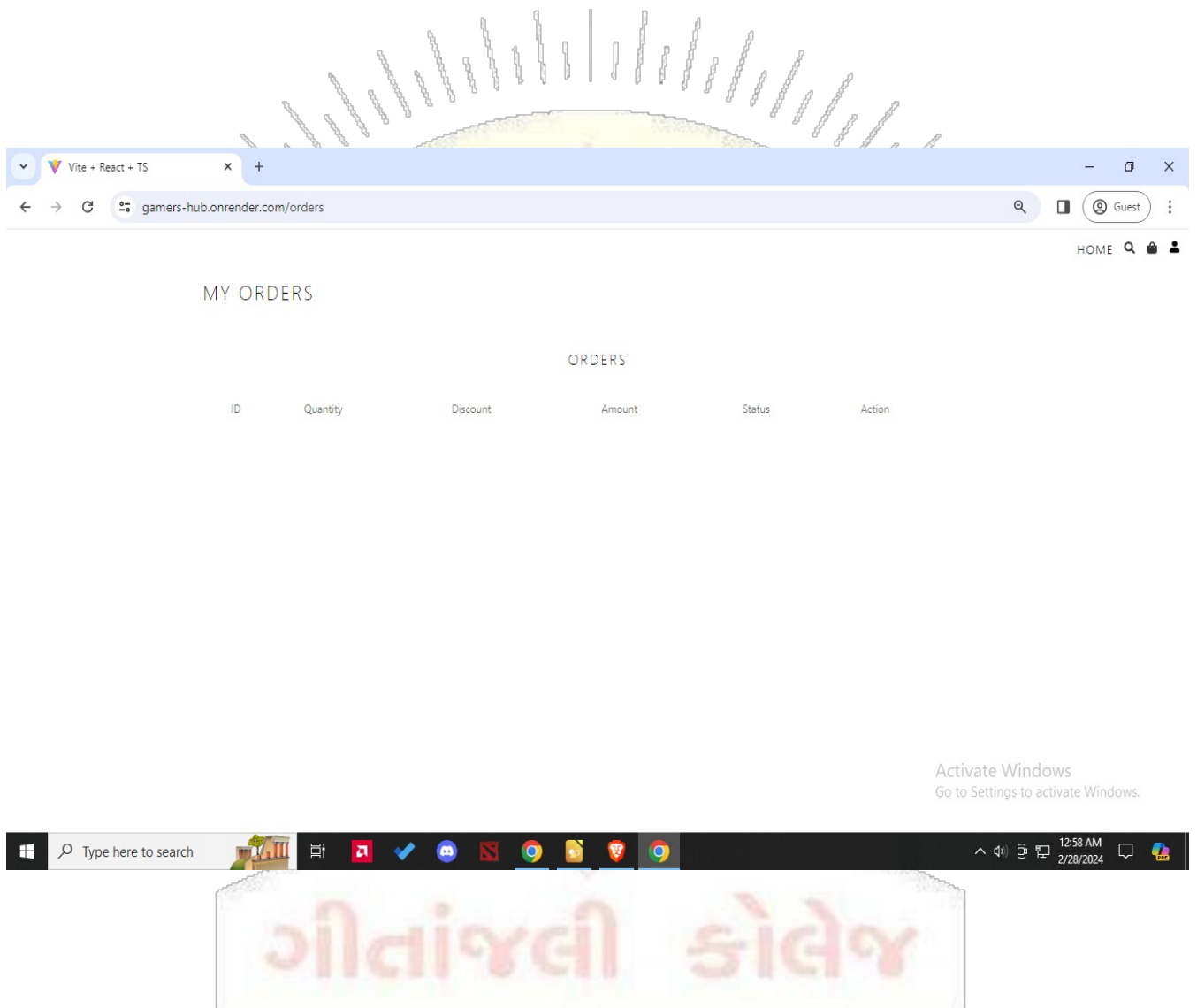
E-Commerce Website

Page Name: - Admin Panel Home Page

Description: - The Admin Panel Home Page serves as the central dashboard for administrators to manage and monitor various aspects of the e-commerce website. It provides an overview of key metrics, recent activities, and access to essential tools and functionalities required for administrative tasks.
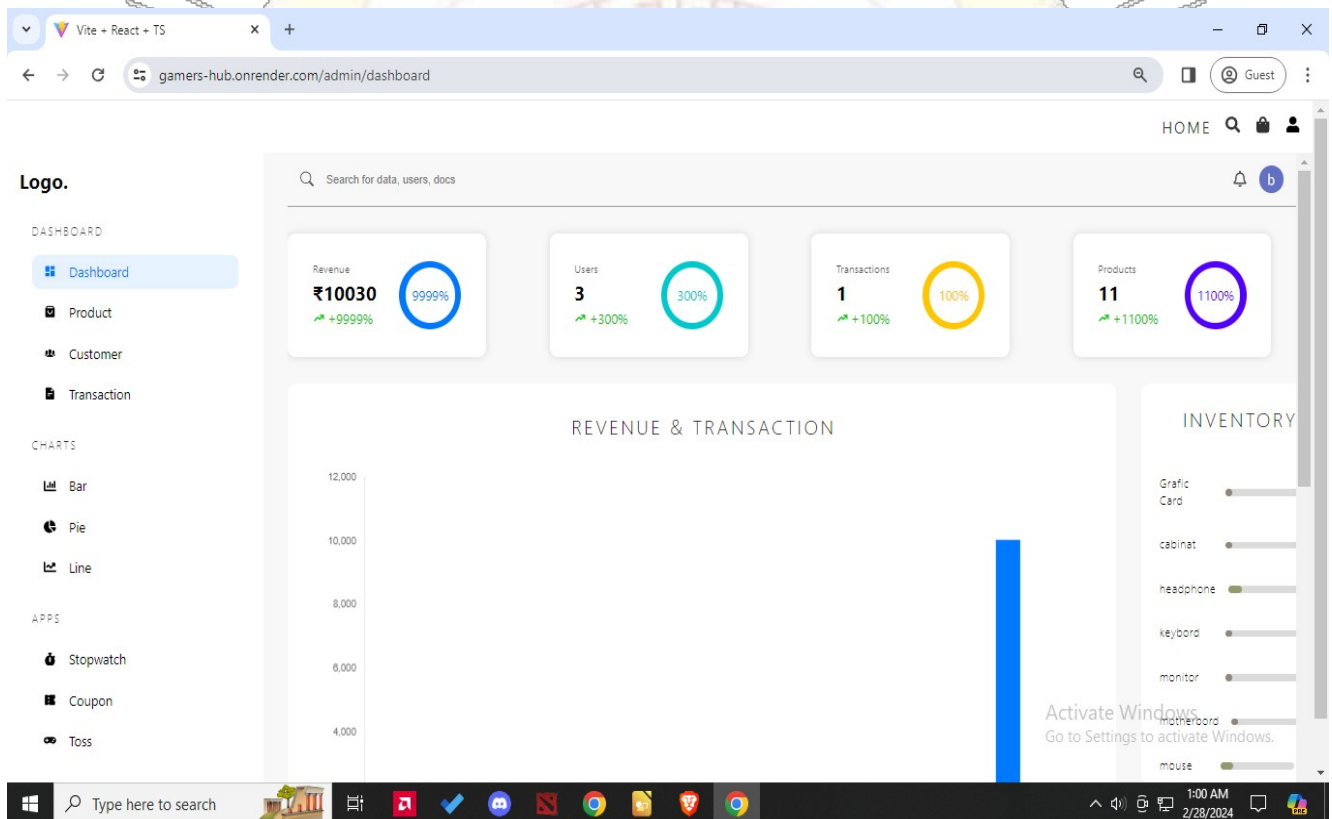
E-Commerce Website

Page Name: - Admin Product List Page

Description: - The Admin Product List Page serves as a centralized dashboard for administrators to manag
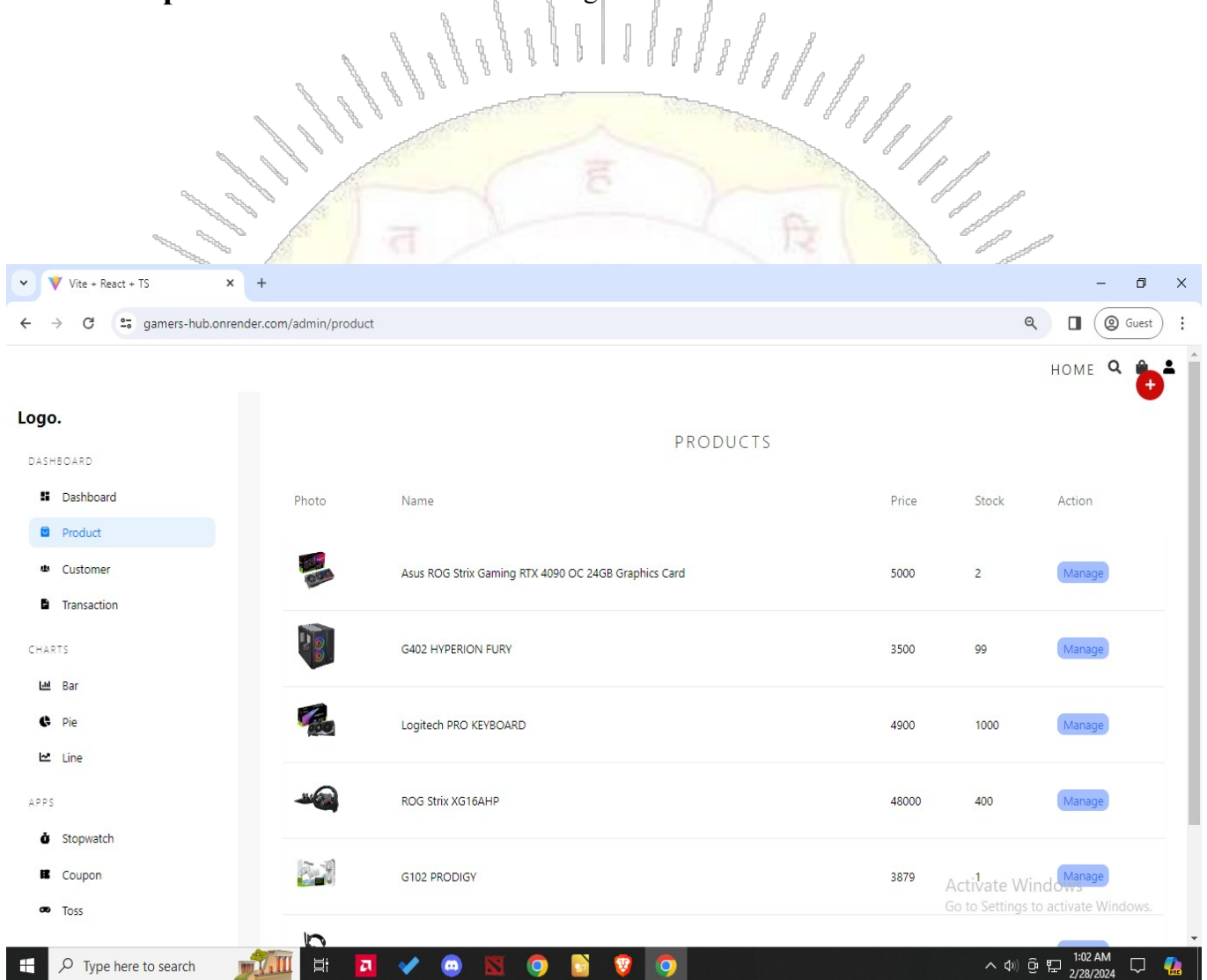
E-Commerce Website

Page Name: - Admin Customer Page

Description: - The Customer List Page provides administrators with a centralized view of all registered cu
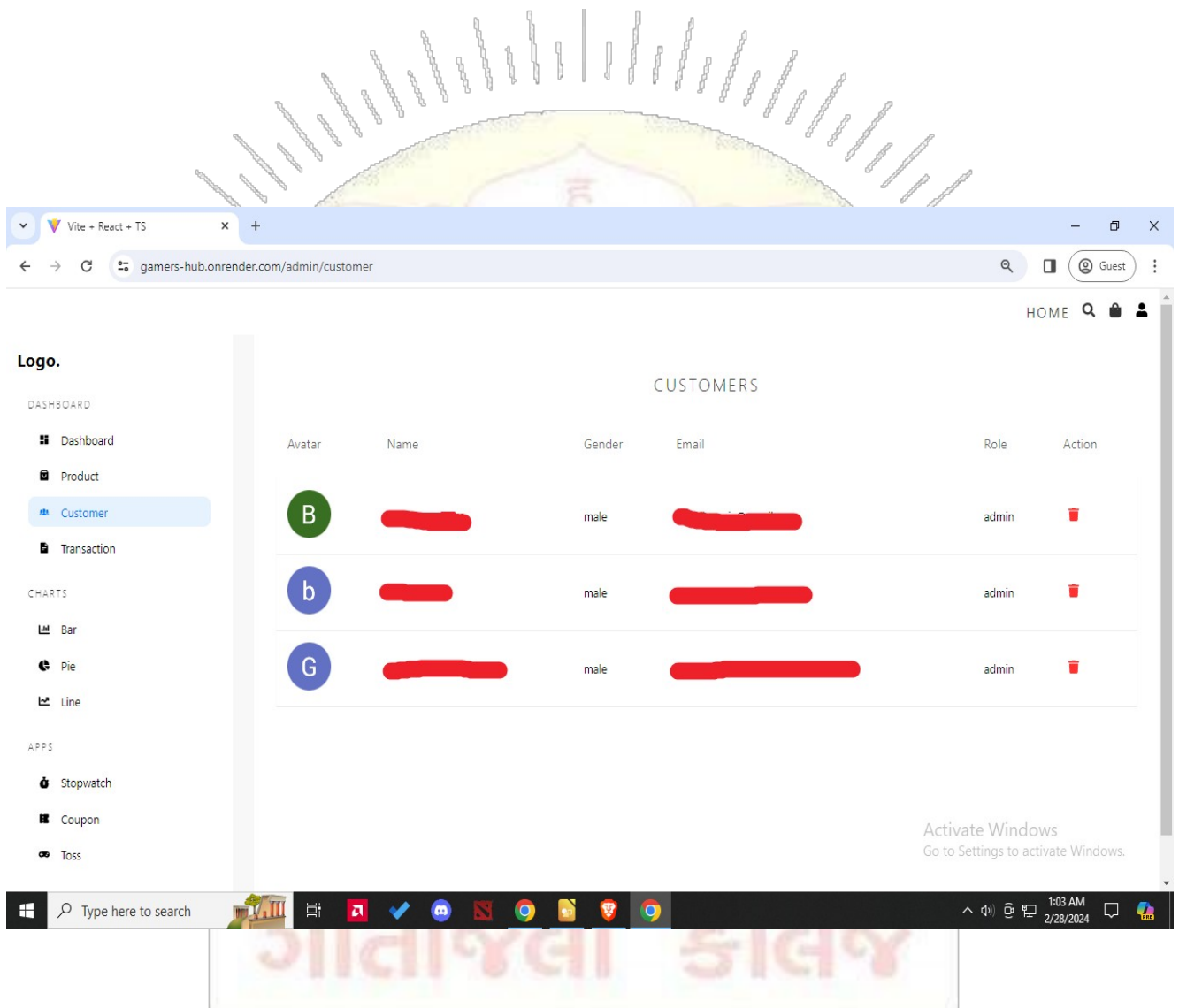
E-Commerce Website

Page Name: - Admin Transaction Page

Description: - The Transaction Page on the admin side provides administrators with an overview of all tra
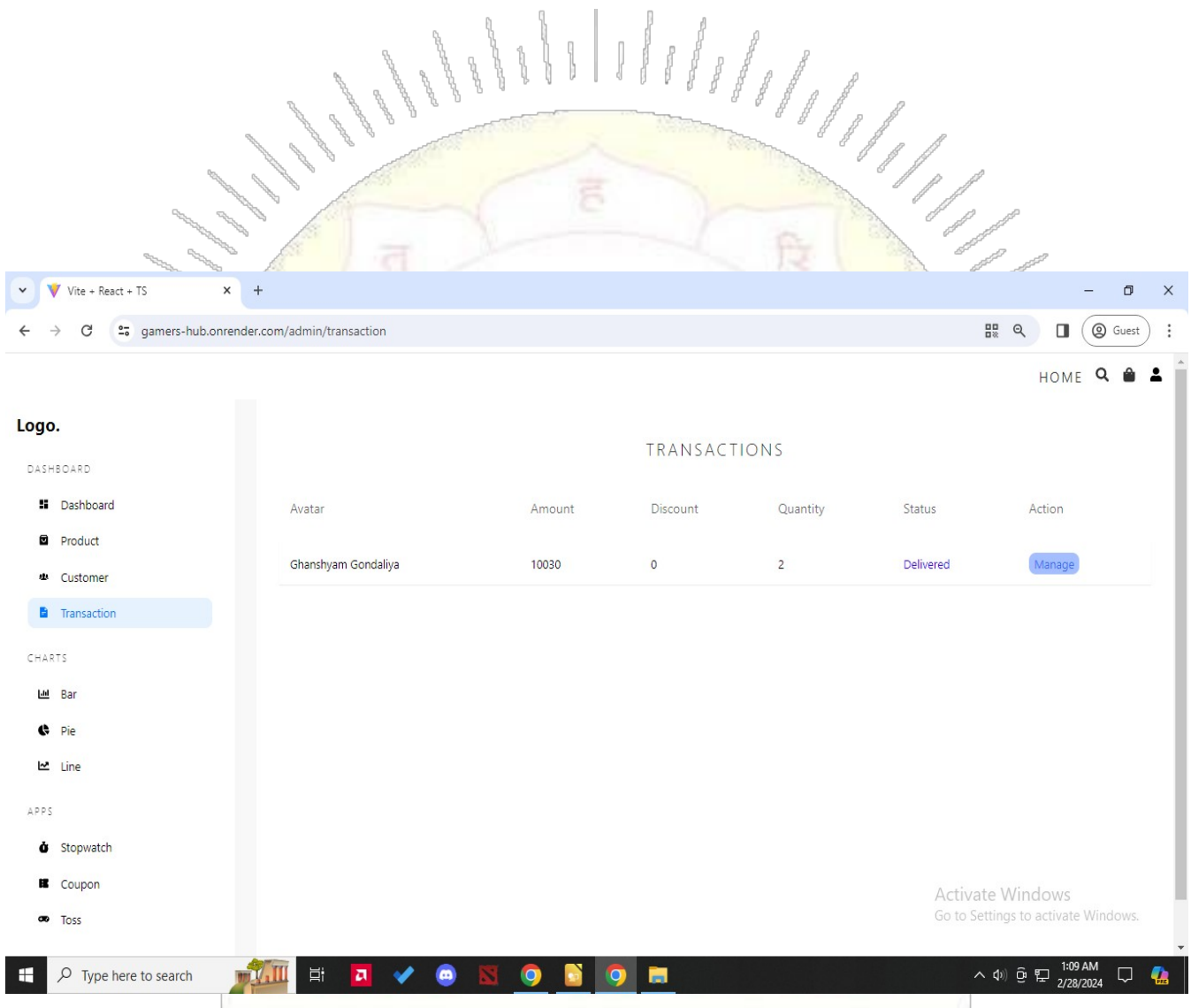
E-Commerce Website

Page Name: - Admin Bar chart user and order

Description: - The New User and Order Bar Chart Page provides administrators with a visual representation
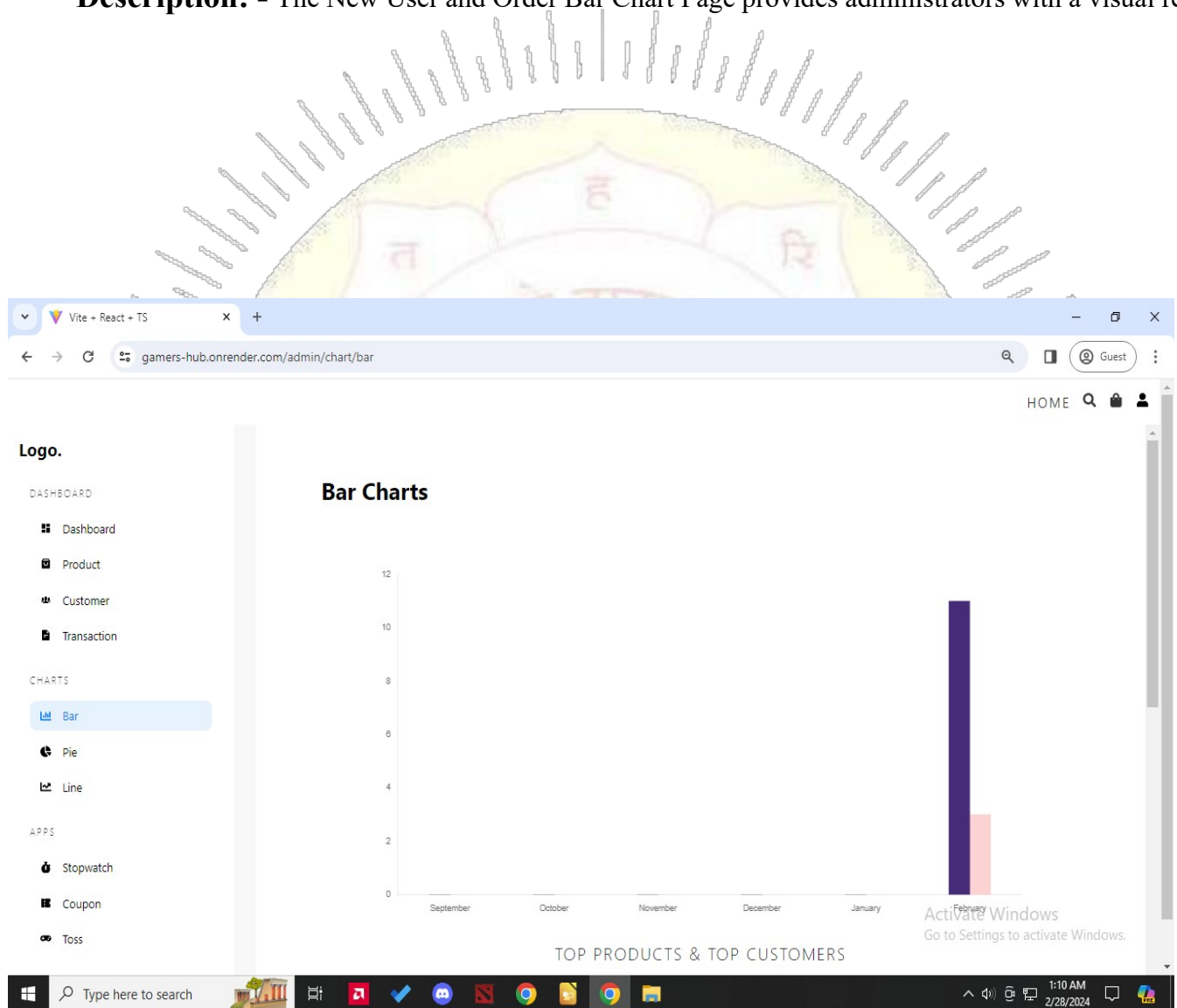
E-Commerce Website

Page Name: - Admin Orders Pie chart

Description: - The Order Fulfillment Chart Page provides administrators with a graphical representation o
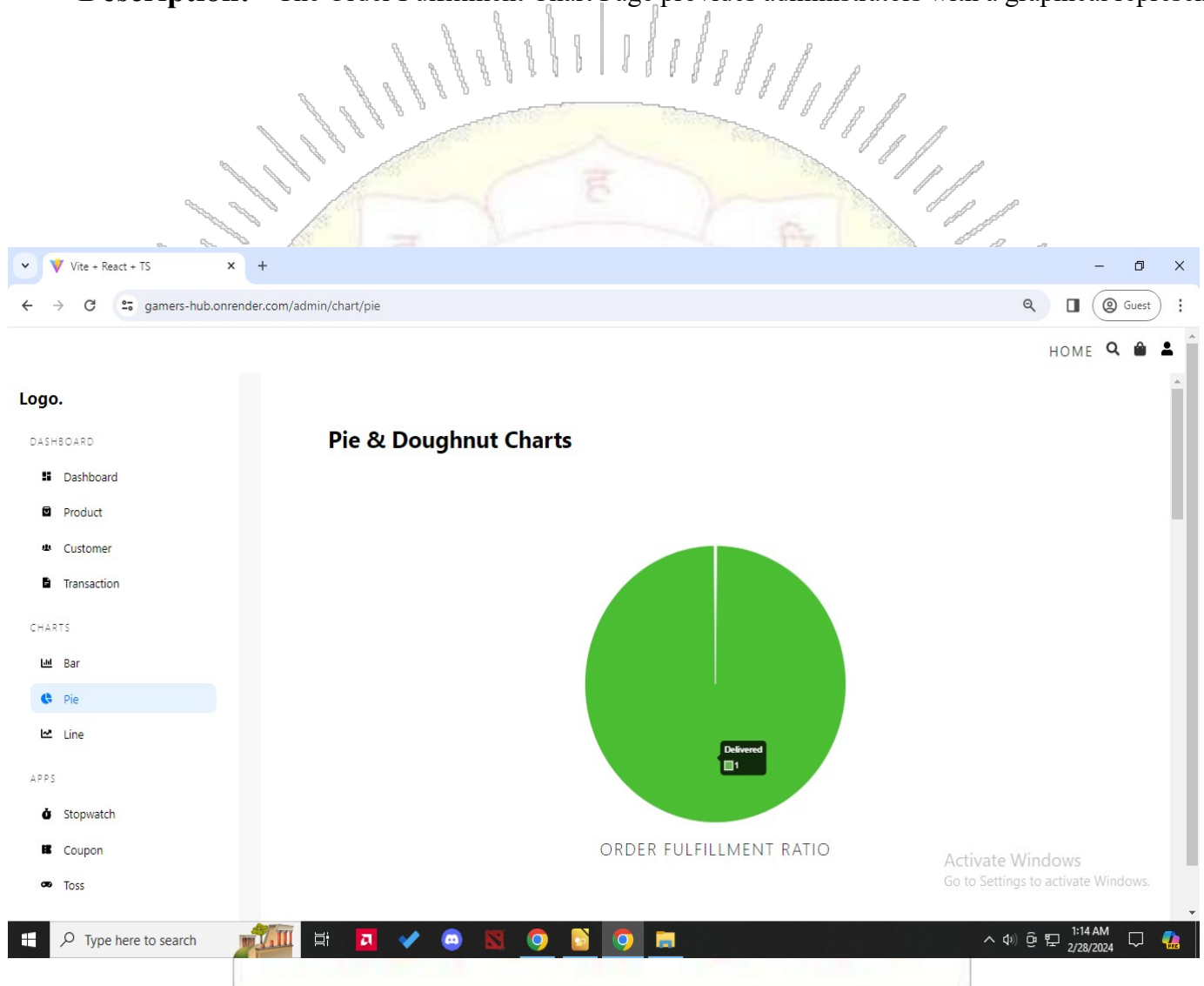
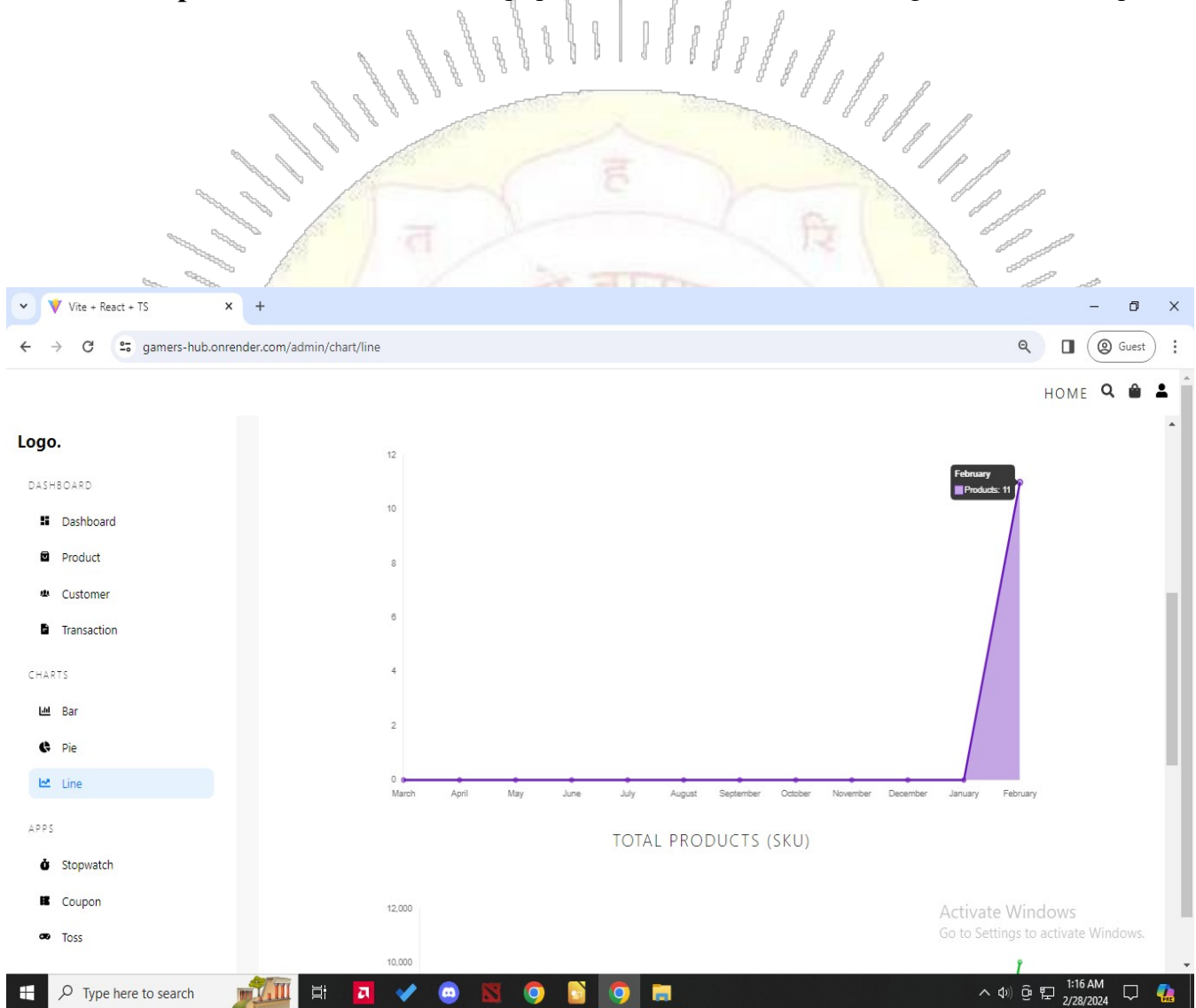# E-Commerce Website

Page Name: - Admin Active user chart

Description: - The Active User Chart Page provides administrators with insights into the engagement and
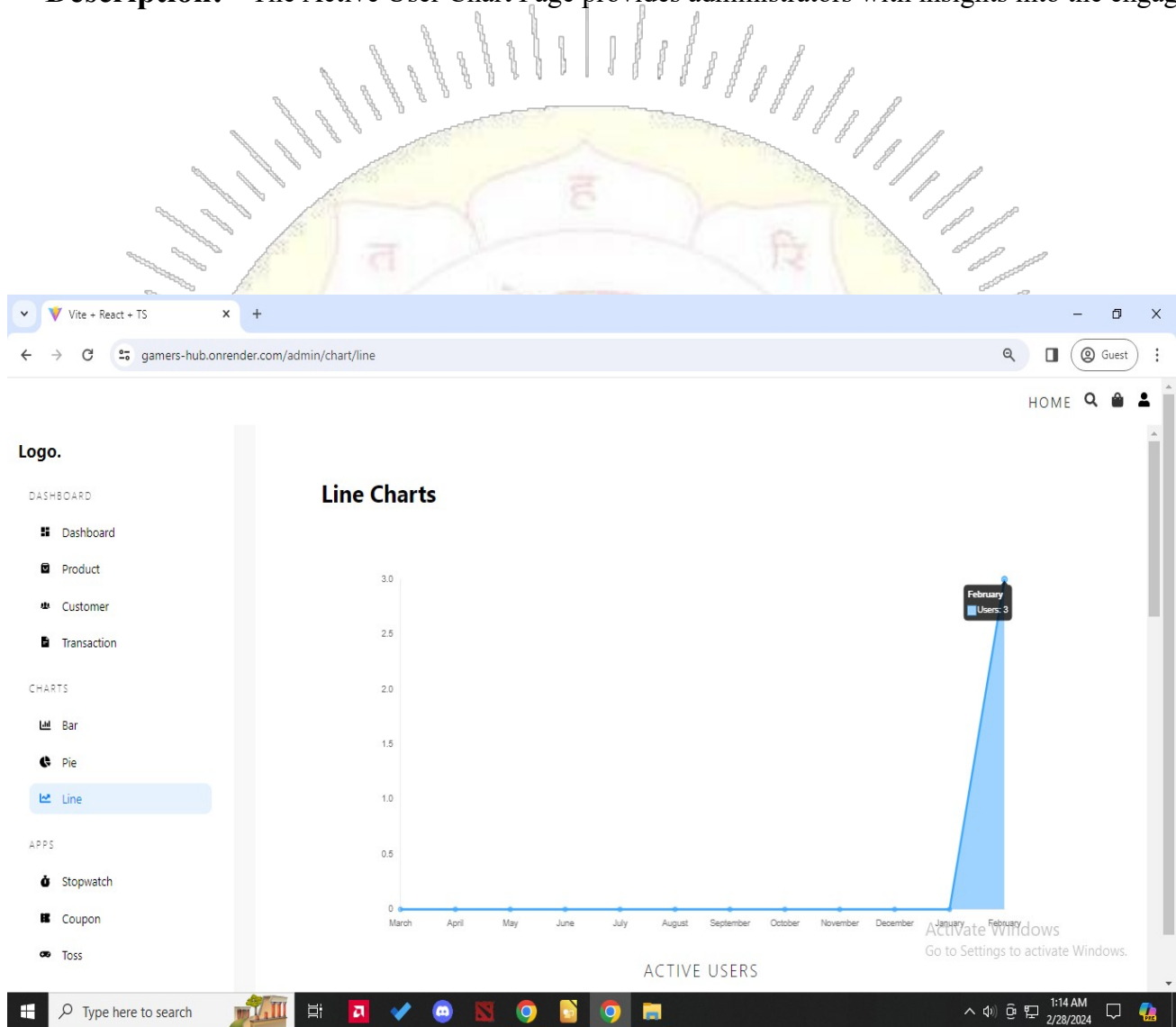
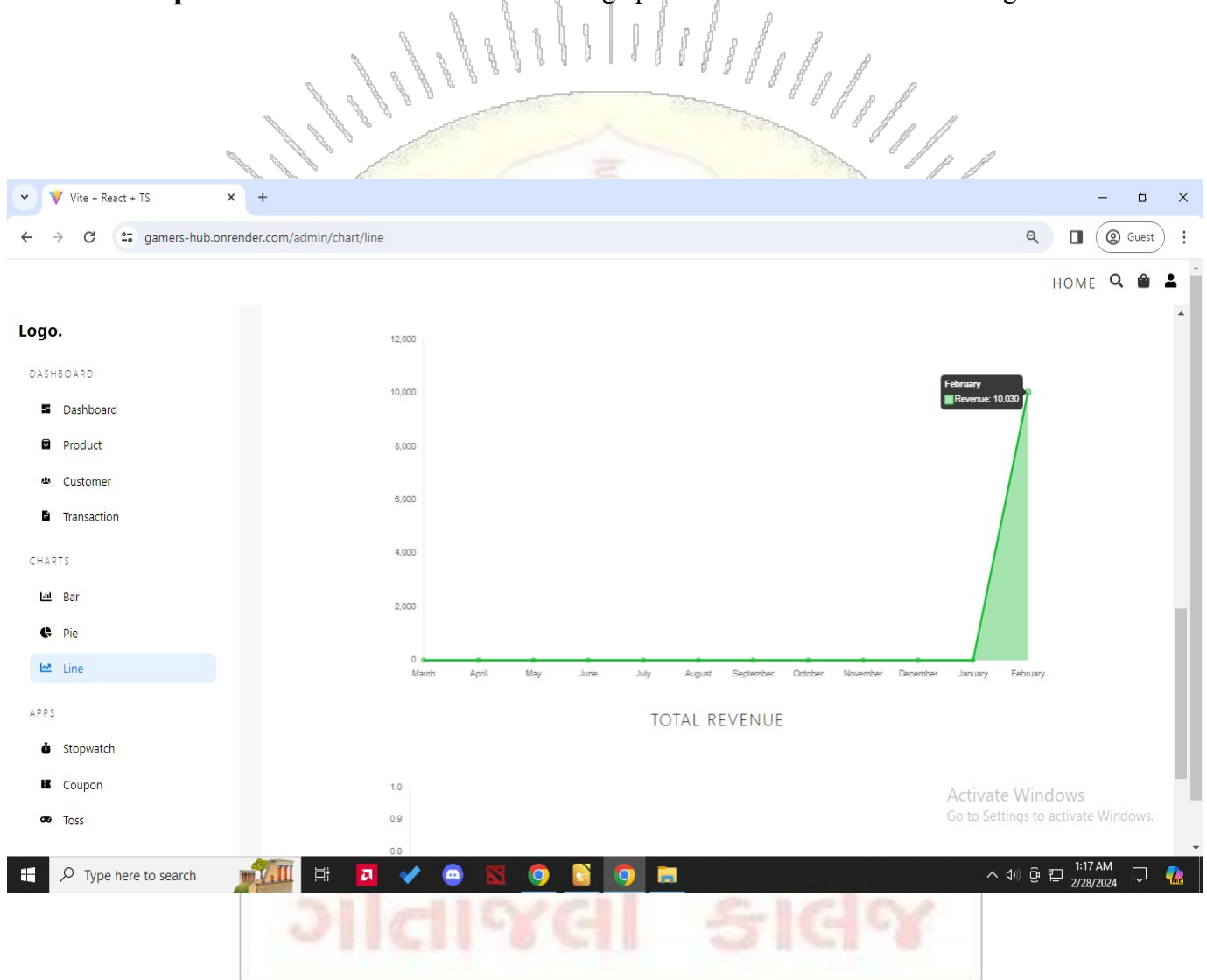# E-Commerce Website

Page Name: - Admin Product SKU chart

Description: - The SKU Chart Page provides administrators with insights into the sales performance and p

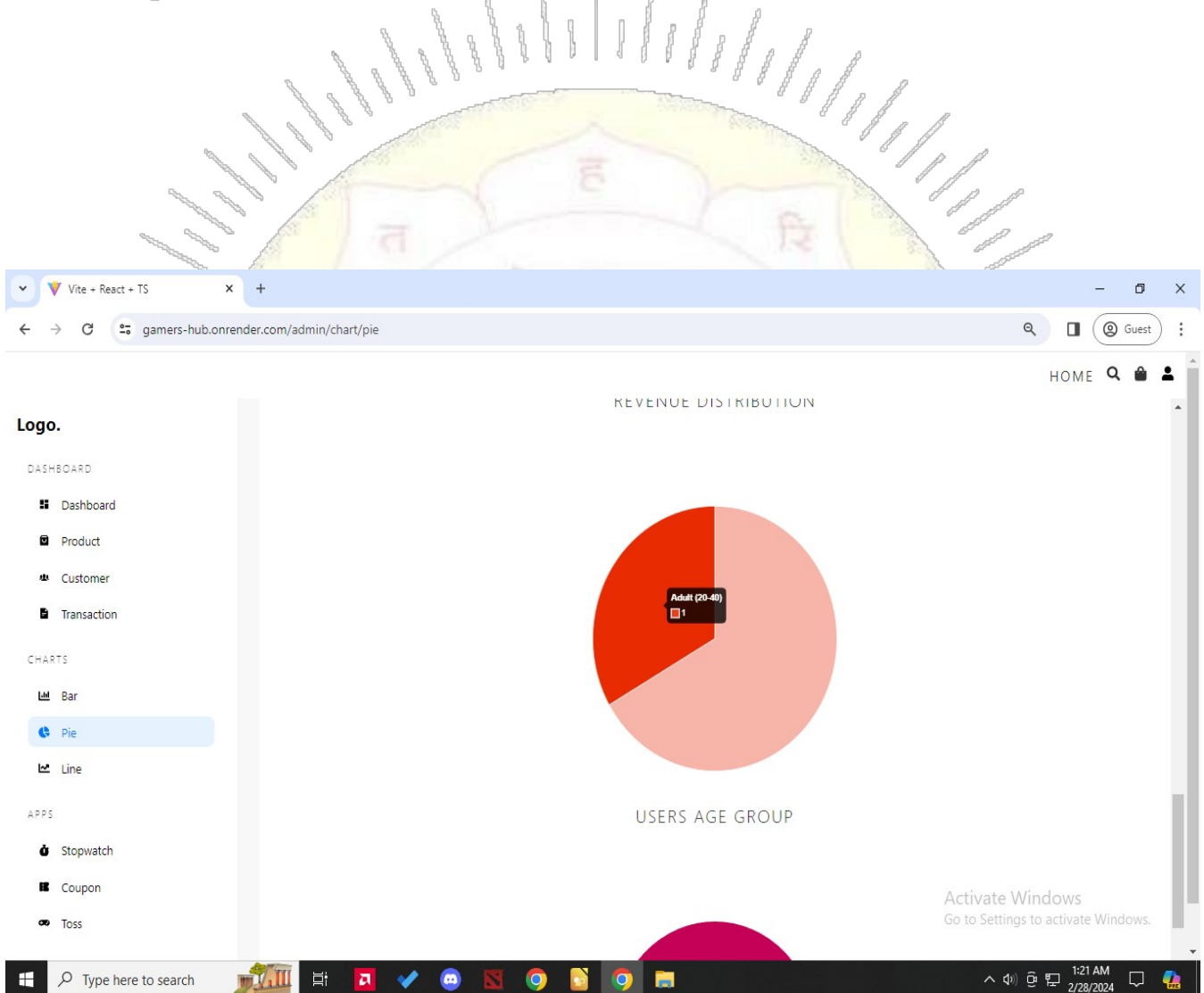# E-Commerce Website

Page Name: - Admin Total Revenue Chart

Description: - The Total Revenue Chart Page provides administrators with insights into the overall revenue

E-Commerce Website

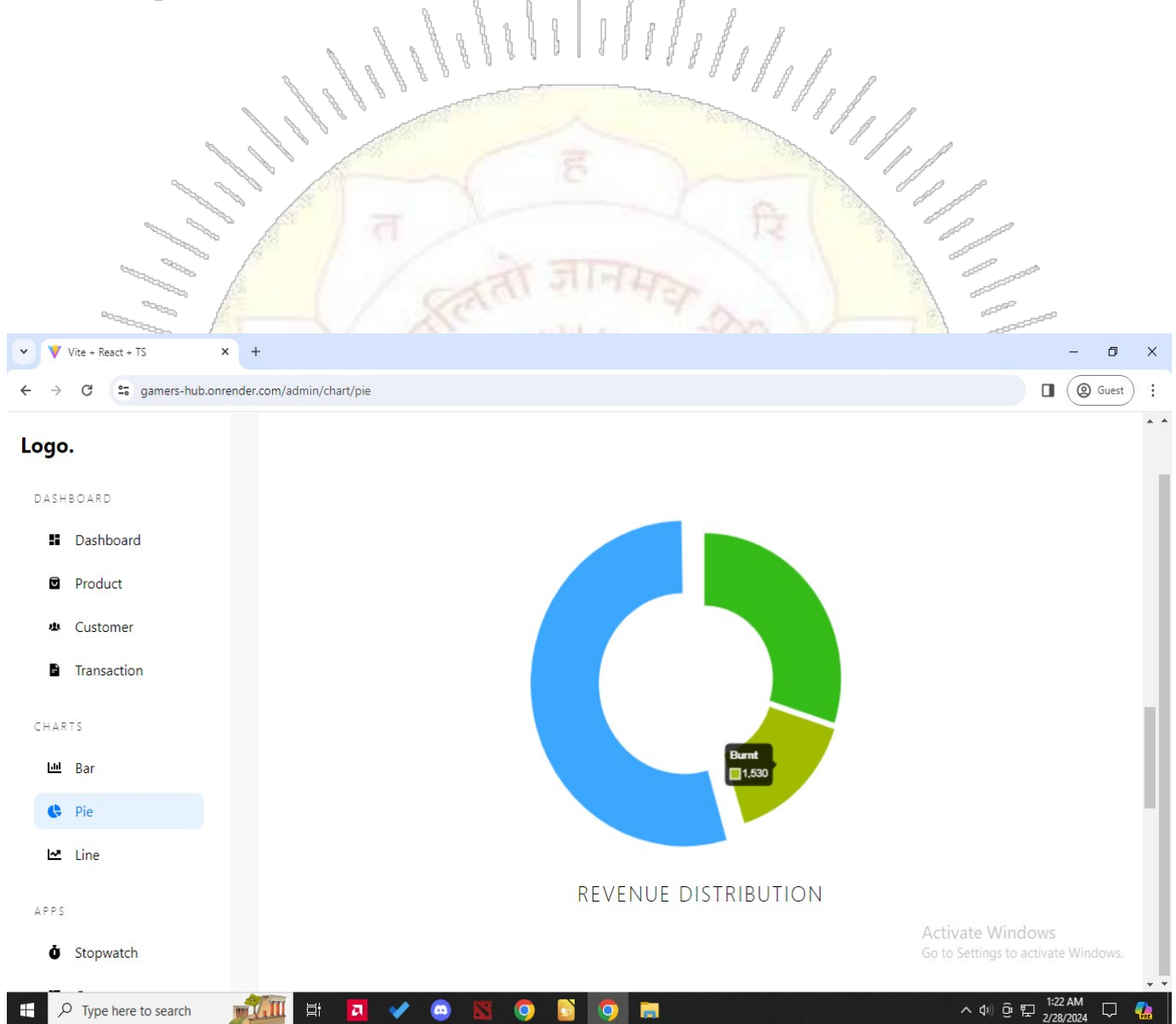**Page Name: -** Admin User Group Age Chart

Description: - The User Age Group Chart Page provides administrators with insights into the demographic

E-Commerce Website

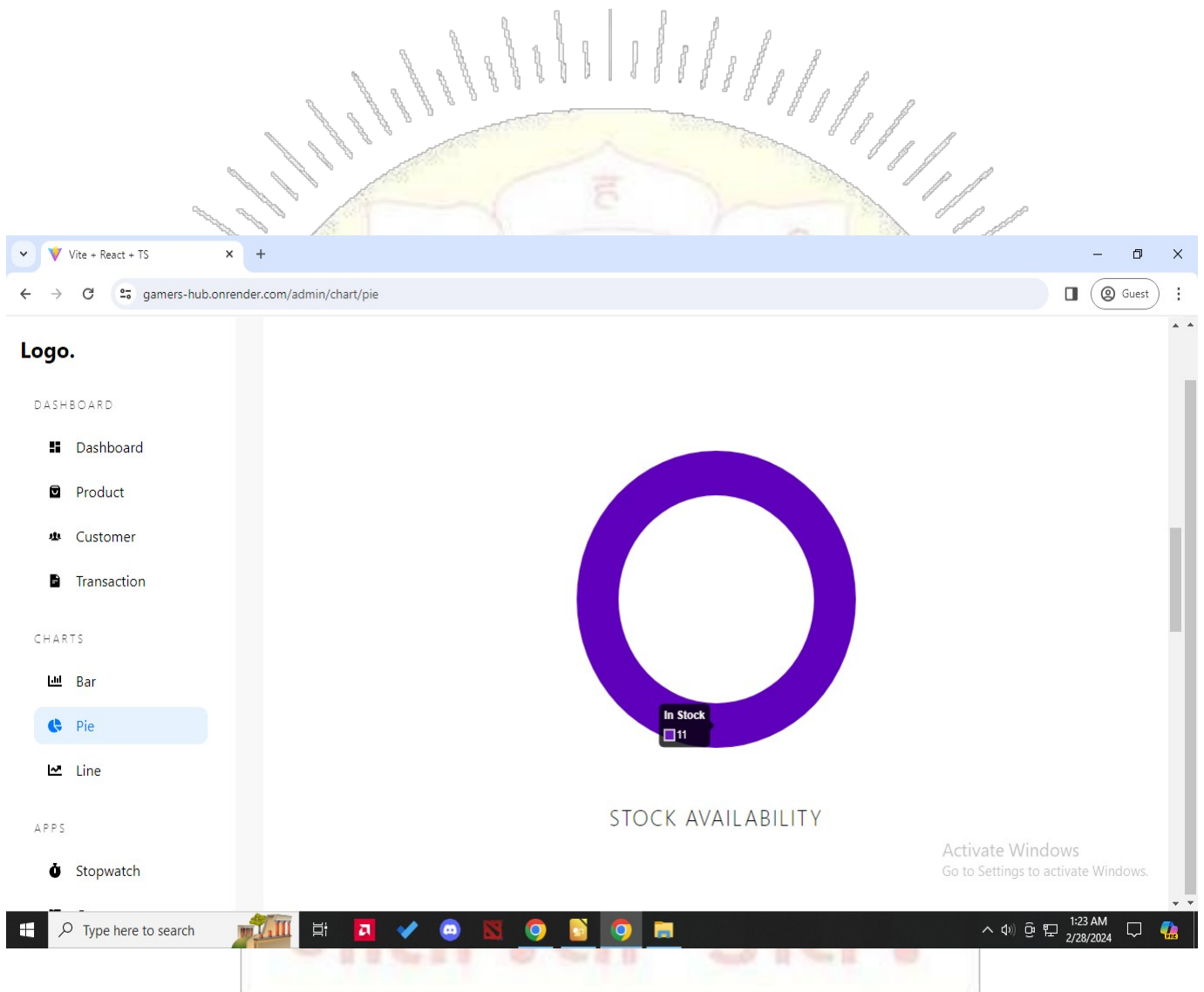**Page Name: -** Admin Revenue Distribution Chart

Description: - The Revenue Distribution Chart Page provides administrators with insights into the distribu...

E-Commerce Website

Page Name: - Admin Stock Avalable Chart

Description: - The Stock Available Chart Page provides administrators with insights into the distribution o

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Page Name: - Admin Inventory stock tab

Description: - The inventory tab within the e-commerce project serves as a centralized hub for managing p
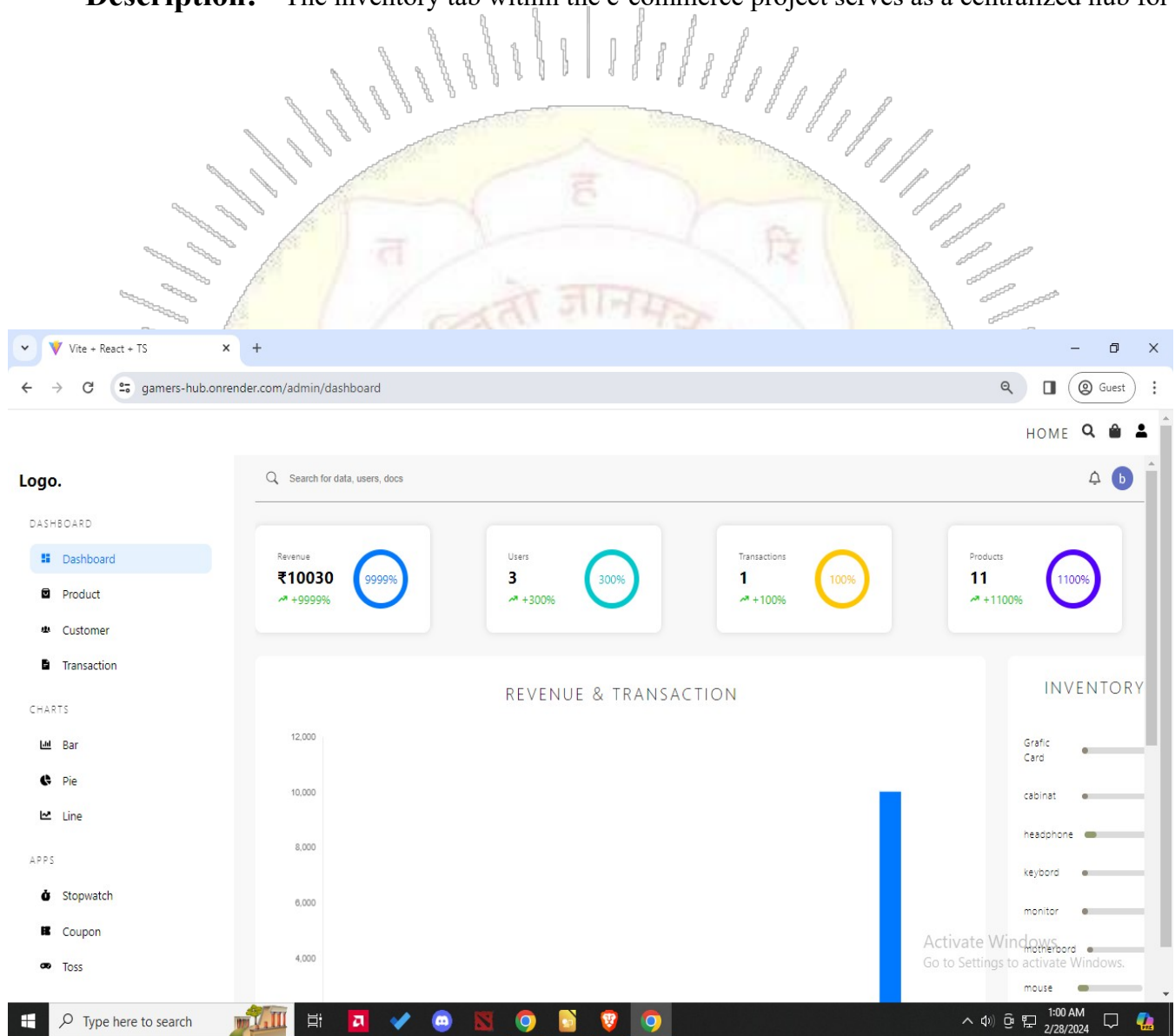
E-Commerce Website

Page Name: - Admin Recent Order Page

Description: - The Recent Orders Page provides administrators with a summary of the most recent orders
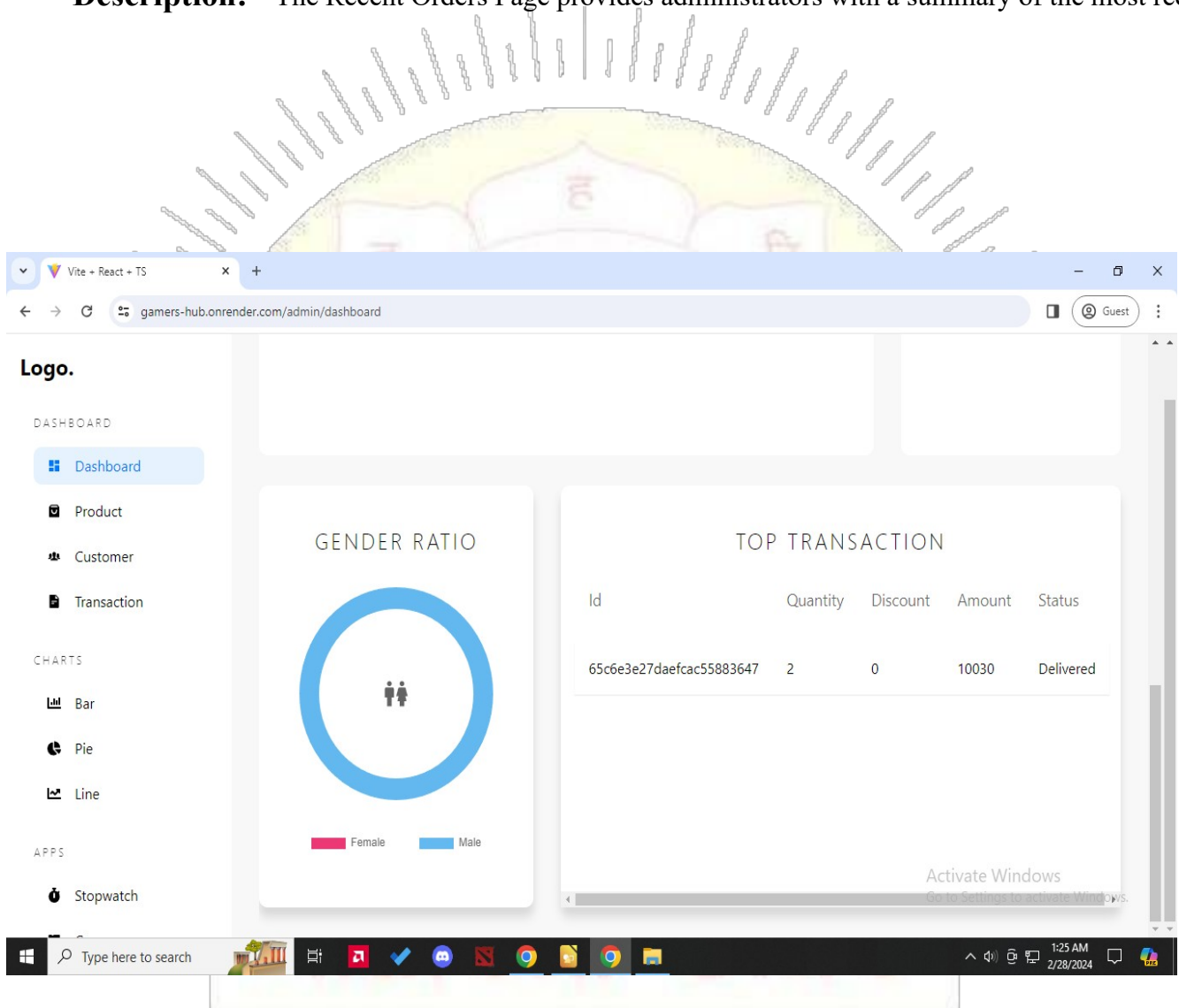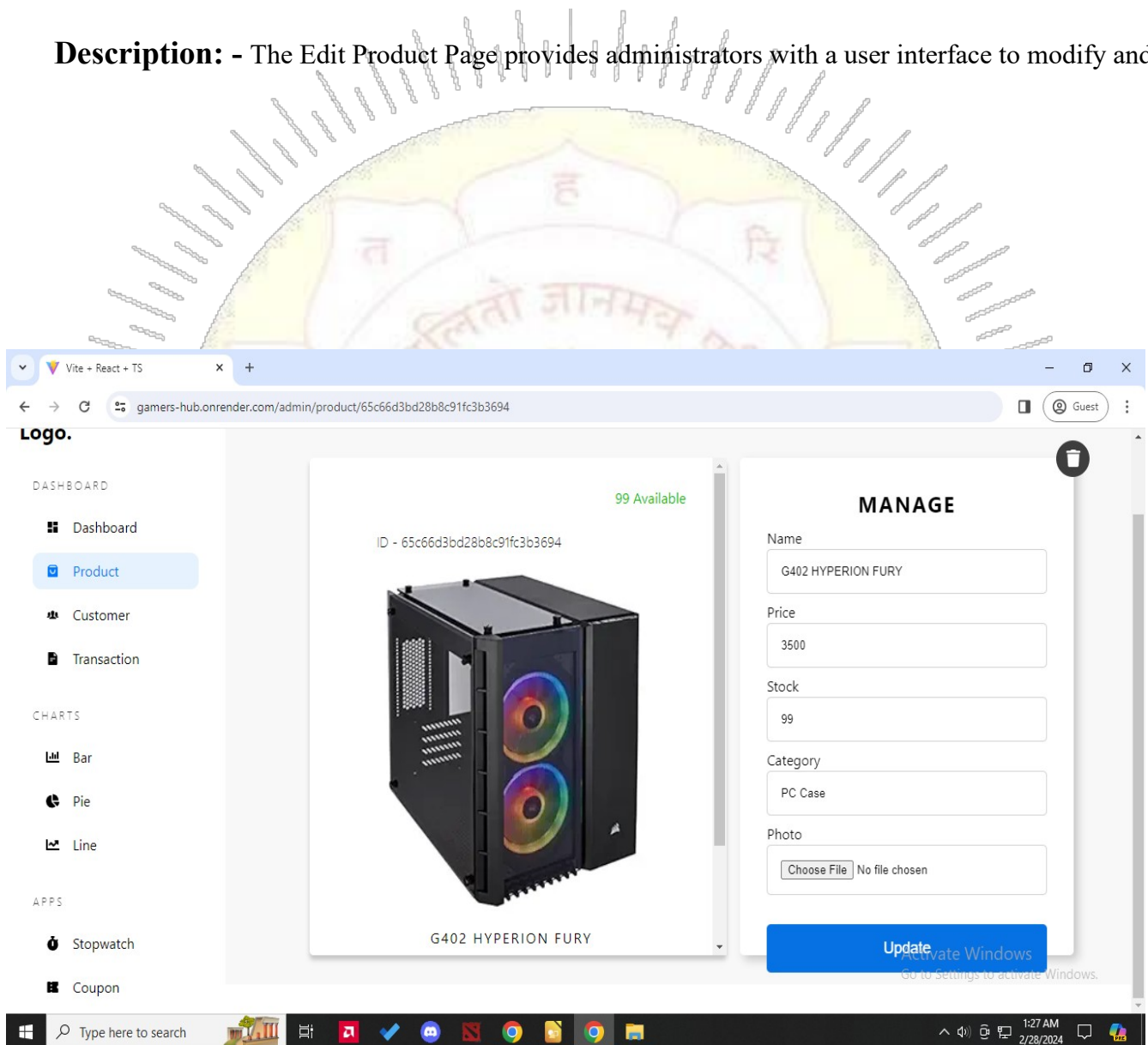
E-Commerce Website
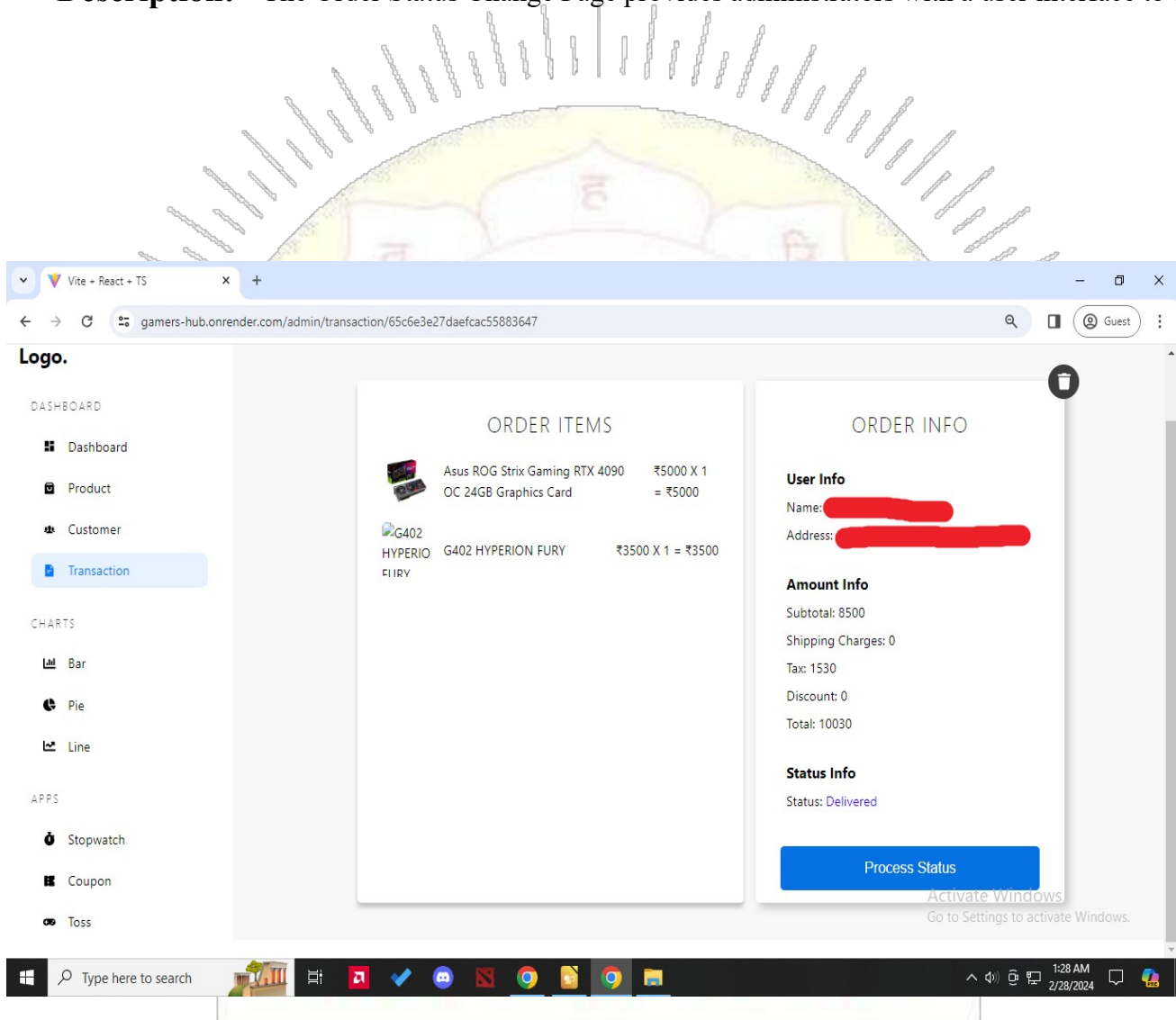
ADMIN

Page Name: - Product Edit Page

Description: - The Edit Product Page provides administrators with a user interface to modify and update th

E-Commerce Website

Page Name: - Admin Order Status Chage

Description: - The Order Status Change Page provides administrators with a user interface to update the st

E-Commerce Website

FUTURE REQUIREMENTS OF PROJECT

1. Mobile Commerce (mCommerce) Optimization:
   - Responsive design for mobile devices.
   - Mobile-friendly checkout processes.
   - Integration with mobile payment solutions.

2. Voice Commerce Integration:
   - Voice search optimization.
   - Voice-enabled product browsing.
   - Voice-activated shopping assistance.

3. Artificial Intelligence (AI) and Machine Learning (ML):
   - Personalized product recommendations.
   - Predictive analytics for inventory management.
   - Chatbots for customer support.
   - Fraud detection.

4. Augmented Reality (AR) and Virtual Reality (VR):
   - Product visualization in real-world environments.
   - Immersive shopping experience.
   - Reduced returns through accurate product representations.

5. Social Commerce Integration:
   - Direct selling through social media platforms.
   - Social sharing of products.
   - User-generated content for marketing.

6. Subscription-Based Services:
   - Subscription boxes.
   - Automatic product replenishment.
   - Access to premium content or services.

7. Blockchain Technology for Security and Transparency:
   - Secure payment solutions.
   - Supply chain tracking.
   - Product authentication.

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LIMITATION OF PROJECT

Limitations of an e-commerce project may arise from various factors, including technological constrai

1. **Digital Divide**: Not all potential customers may have access to the internet or digital devices, l

2. **Security Concerns**: E-commerce platforms are susceptible to security threats such as data brea

3. **Technical Issues**: Technical glitches, website downtime, and performance issues can disrupt th

4. **Logistics and Shipping Challenges**: Timely delivery, shipping costs, and logistics managemen

5. **Payment Gateway Issues**: Payment processing errors, transaction failures, and issues with payr

6. **Product Perception**: Customers may be hesitant to purchase certain products online, especially

7. **Return and Refund Policies**: Complicated or unfriendly return and refund policies may deter cu

8. **Competition and Market Saturation**: The e-commerce landscape is highly competitive, with nu

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BIBLIOGRAPHY

Resources Used

Google: https://www.google.com/

Stack Overflow: https://stackoverflow.com/

ChatGPT by OpenAI: https://chat.openai.com/

Cloud MongoDB: https://cloud.mongodb.com/

GitHub: https://github.com/

Gitpod: https://gitpod.io/

Tailwind CSS: https://tailwindcss.com/

Ant Design: https://ant.design/

React JS: https://react.dev/

React-Icons: https://react-icons.github.io/react-icons/