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Community Trade360: A Comprehensive Market Place For Divergent Communities

* Devangulasetty Jahnvi¹, Mothukuri Durga Bhanu Sri², Polisetty Meghana³,

Goddanti Kusuma Sree⁴

U.G. Student, CSE(IoT, Cybersecurity including Blockchain Technology), Vasireddy Venkatadri Institute of Technology, Nambur, Andhra Pradesh, India^{1,2,3,4}

ABSTRACT: A new platform that combines the convenience of online garage sales with discount shopping, enabling direct connections for buying, selling, and swapping items is proposed in this paper. The users can find freebies, great deals, and connect with like-minded individuals using the newly laid platform. It fosters a friendly community focused on smart shopping, waste reduction, and discovering hidden treasures. The system emphasizes user authentication, search functionality, seamless listing management, user engagement tools, and robust cybersecurity measures. With a dynamic interface, it ensures safe and efficient transactions, promoting community interaction.

KEYWORDS: Object-Relational Mapper, Django, Community Trade360, Exchange items

I. INTRODUCTION

Introducing a brand new platform that makes buying and selling easier than ever. It's like having a giant online garage sale combined with a discount store, all in one place. You can directly connect with other users to buy, sell, or even swap unwanted items. Plus, find free stuff within communities. This platform is all about creating a friendly community of shoppers who can shop smarter, reduce waste, and discover hidden gems all with a few clicks. While some existing platforms allow for selling used items, they primarily focus on monetary transactions.

These platforms allow communication between buyers and sellers, the ability to directly request unwanted items might be missing. The proposed system is an online platform designed to facilitate the buying, selling, exchanging, and sharing of various items within communities. The platform offers features such as user authentication and authorization, search functionalities for communities and items, a seamless process for creating and managing product listings, comments and notifications for user engagement, and a comprehensive user profile. Emphasis is placed on cybersecurity to ensure the security and privacy of user data. The system provides a dynamic and user-friendly interface for users to engage in safe and efficient transactions, fostering a sense of community interaction.

Paper is organized as follows. Section II describes the detail information technologies used in the website. In Section III the methodology of data transfer between front end and backend is explained. Section IV is final results of the website CT360. Finally Section V presents conclusion.

II. RELATED WORK

CT360 stands out as a unique platform that caters to the specific needs of communities by facilitating buying, selling, and even exchanging items among their members. Unlike traditional e-commerce platforms like Amazon or eBay[1], CT360 prioritizes communities. Users can create groups based on shared interests, workplaces, or even neighbourhoods (e.g., college groups, hospital staff groups, local residents' groups). This fosters a sense of trust and familiarity within the buying and selling process. CT360 goes beyond just buying and selling new or used items. This allows for tailored experiences. It allows users to conveniently exchange items with each other. College students might exchange textbooks, while hospital staff could swap medical supplies or scrubs.

To bring this community-driven marketplace to life, CT360 leverages a combination of technologies:

Front-End: The user interface, what you see and interact with on the platform, is built using HTML5 and CSS3. These are the fundamental building blocks of webpages, ensuring a visually appealing and user-friendly experience.

Back-End: Django[2], a high-level Python web framework, powers the engine of CT360. It handles tasks like user authentication, product information management, and facilitating transactions (buying, selling, or exchanging). Database: SQLite3[3] serves as the data storage solution for CT360. It efficiently stores user login information and product details, ensuring everything is organized and readily accessible.

III.METHODOLOGY

CT360 utilizes the Model-View-Template (MVT) architecture[4], a core concept in Django. Users interact with the front-end through forms, buttons, and links built with HTML and styled with Bootstrap CSS. This initiates actions that send requests to the Django server. Django receives the user's request and routes it to the appropriate view function in the back-end. This function is written in Python and handles the request logic. The view function might need to interact with the database (SQLite3 in this case) using Django's Object-Relational Mapper (ORM)[5]. The ORM simplifies database interactions by allowing Python code to access and manipulate data using models that represent database tables. Based on the user's request, the view function might process data, like retrieving product information, validating user input, or performing calculations. Depending on the outcome, the view function selects an appropriate Django template. It populates the template with data retrieved from the database or processed within the view function. Django renders the template, combining the HTML structure with the dynamic data. This generates the final HTML response that is sent back to the user's browser. The user's browser receives the HTML response and updates the webpage accordingly. This creates the illusion of real-time data transfer between the user and the platform.

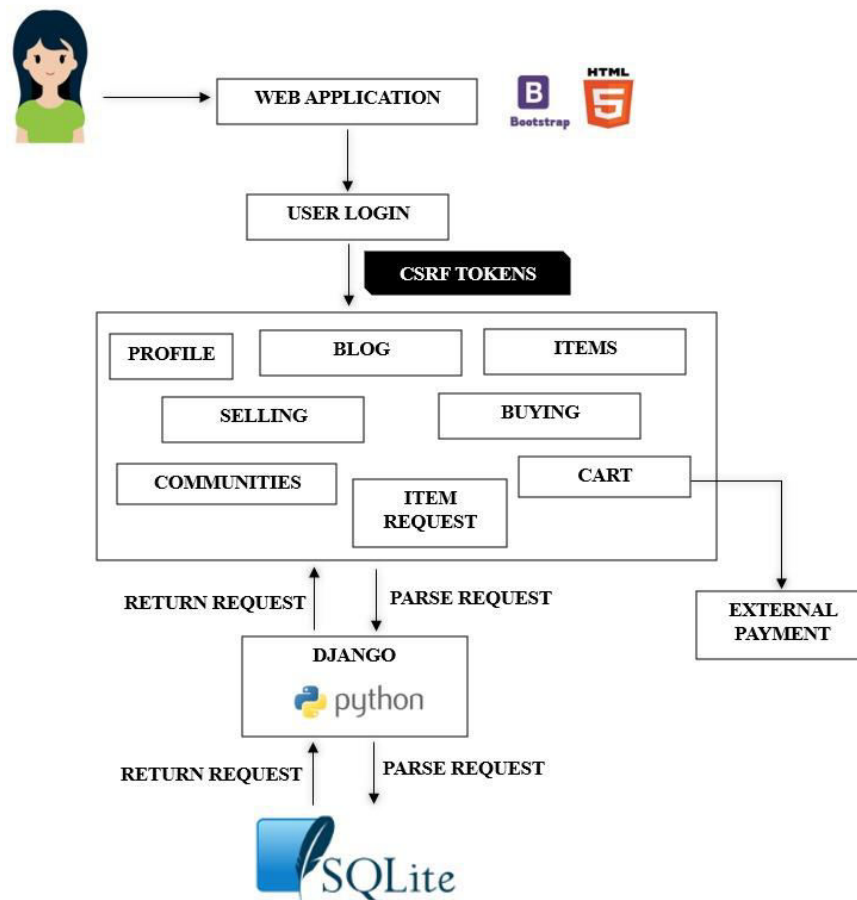


Figure 1: Control Flow of Application



IV. EXPERIMENTAL RESULTS

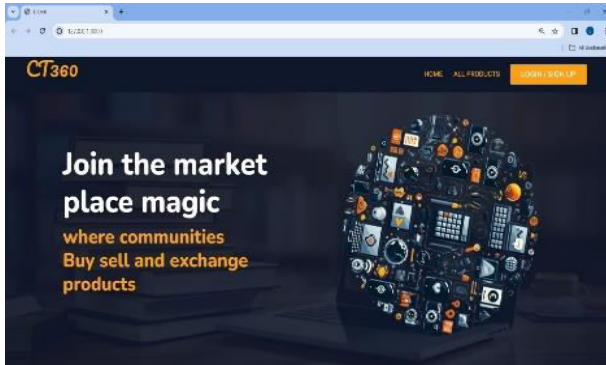


Figure 2: Home page

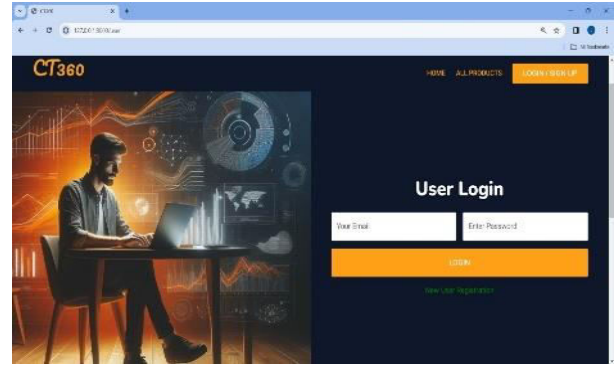


Figure 3: User login page

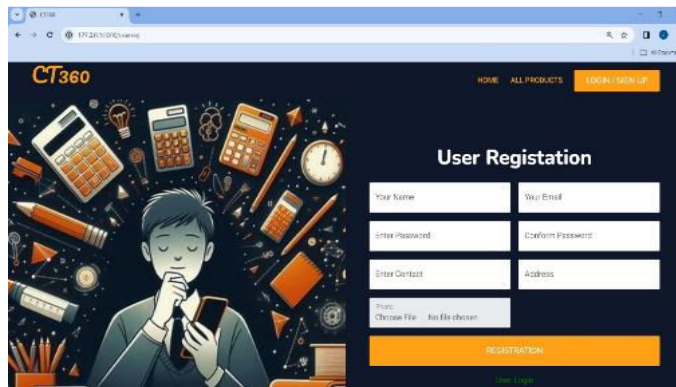


Figure 4: Signup page

Figures 2, 3, 4 shows the results of front-end implementation of CT360 i.e. user Home page, User login page, signup page.

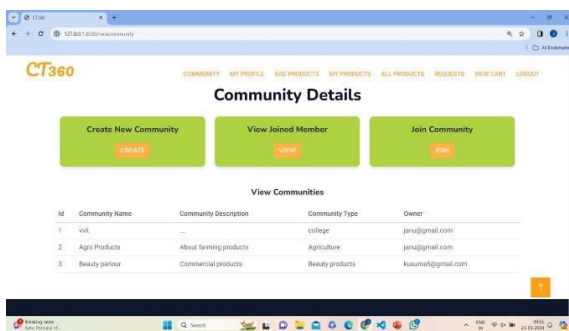


Figure 5: Communities page

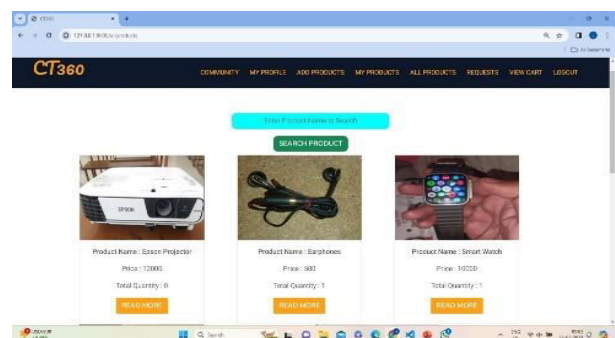


Figure 6: Products page

Whenever the user login the website they will be able to join or create a community and then can proceed with adding the products within community or buying the products and even exchanging as shown in figures 5 & 6.

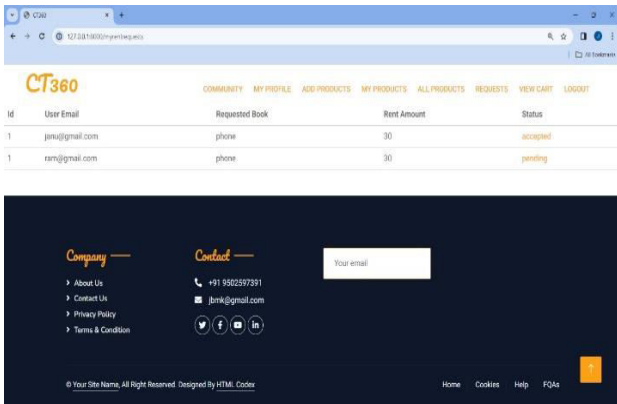


Figure 7: Payment request page of users

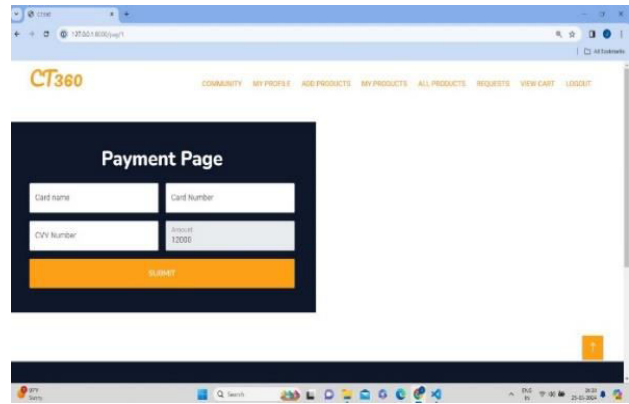


Figure 8: Payment page

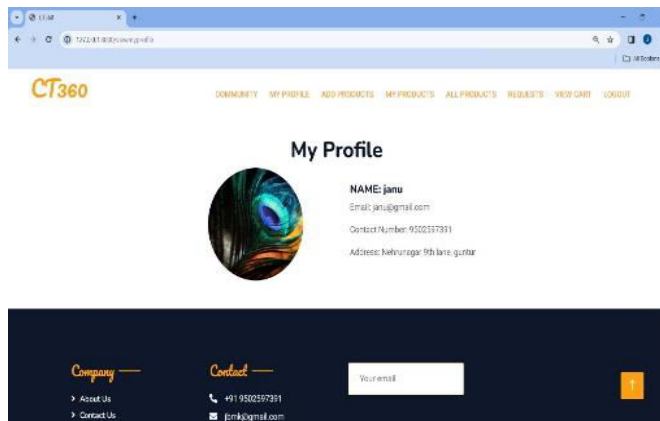


Figure 9: Profile page

If any user wanted to buy a product will request the seller that will be displayed as shown in figure 7. If the request is accepted then the user can proceed to payment page as shown in figure 8.

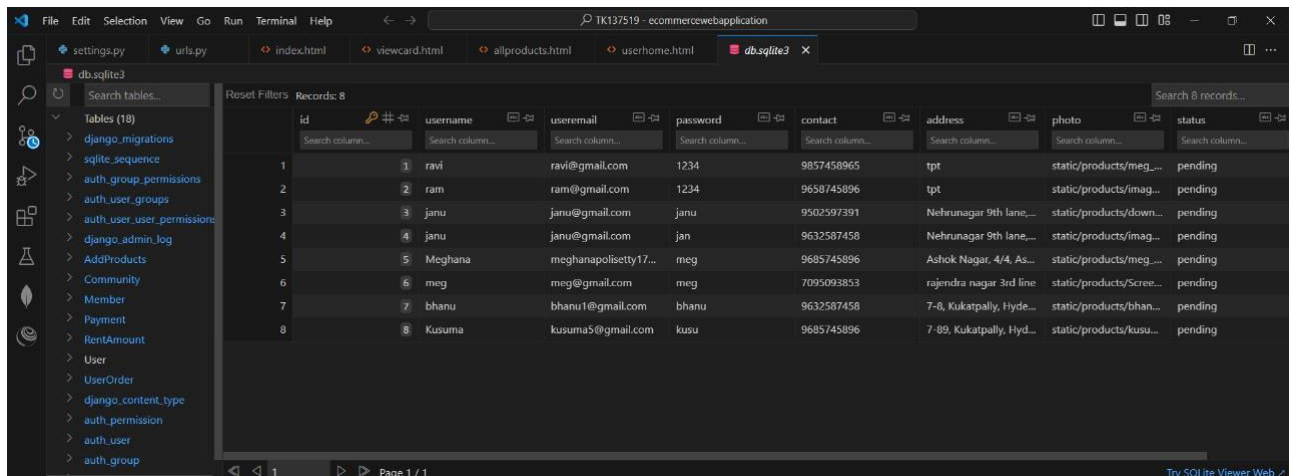


Figure 10

The database in figure 10 shows the users information i.e username, email, password, address, phone number and profile photo.



V. CONCLUSION

In conclusion, this paper presented the development of a web application extension that leverages the capabilities of existing online listing platforms like OLX to create a more localized and community-driven trading experience. The application, built using a full-stack development approach with technologies like Bootstrap, HTML, JavaScript, the Django framework, Python, XAMPP server, and SQLite3, introduces the concept of user-created communities within a specific geographic region. This allows users with shared interests and locations to connect, fostering a more social and collaborative trading environment. The success of this project demonstrates the potential for extending existing online marketplaces by incorporating features that cater to a sense of community and hyperlocal focus. Future research directions include exploring user behaviour within these communities, analysing the impact on transaction volume and user satisfaction, and investigating the scalability of the solution for larger user bases and geographically dispersed communities. By understanding these aspects, we can further refine the design and functionality of such extensions, ultimately enhancing the online trading experience for users across various regions and fostering a more connected and localized online marketplace.

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