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## DEVELOPMENT OF AN ONLINE STORE BASED ON THE DJANGO FRAMEWORK

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The ongoing digitalization of commerce has significantly transformed the retail landscape, compelling businesses to establish an online presence. This thesis presents the design and development of a functional e-commerce platform using the Django web framework and Python programming language. The project addresses the practical need for accessible and maintainable online stores suitable for small and medium enterprises.

The system was developed to include essential features such as product listing, categorization, shopping cart management, and administrator control via a Django-based admin interface. The website architecture follows a modular approach,

separating concerns into distinct components responsible for database modeling, page rendering, session-based cart handling, and user interface templating.

Technically, the backend is powered by Django 5.x and Python 3.11, while SQLite serves as the development database. The frontend was constructed using Django templates with custom CSS for styling. Product data is managed via Django models, and the shopping cart functionality is maintained using user session data without requiring authentication. The admin panel provides content managers with tools for editing products, categories, and inventory status in real time.

Screenshots of the homepage, cart page, and individual product page were included to demonstrate the user interface. The system successfully supports the core e-commerce flow: browsing, selecting, and managing products in the cart.

The interface of the system is user-friendly and visually minimalistic. As shown in Figure 1, the homepage displays all products in card format, including name, category, short description, and price.

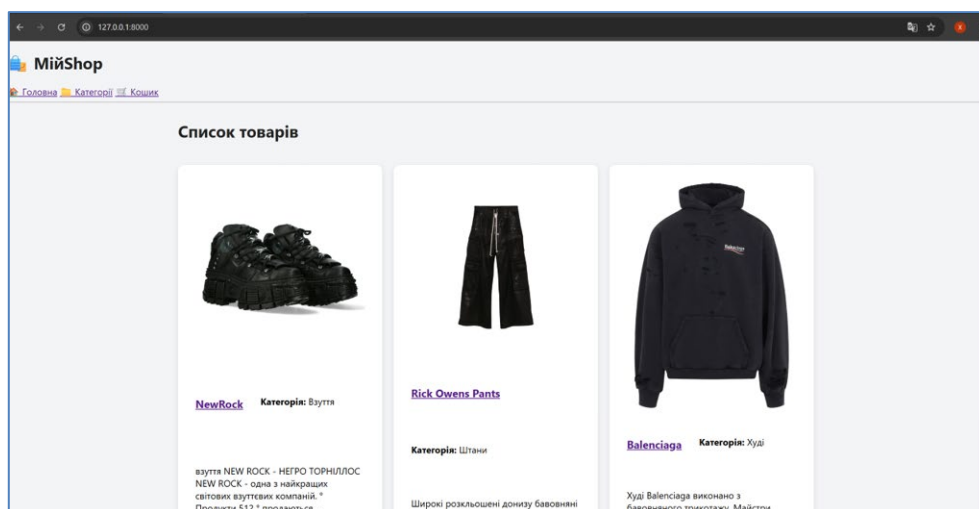


Figure 1 – Homepage displaying available products.

Figure 2 demonstrates the shopping cart page, where users can review selected items, prices, and remove items if needed.



Figure 2 – Shopping cart with selected items.

Figure 3 presents the product detail page with a larger image, full description, price, and stock status. These visual elements make interaction with the store intuitive and simple even for non-technical users.

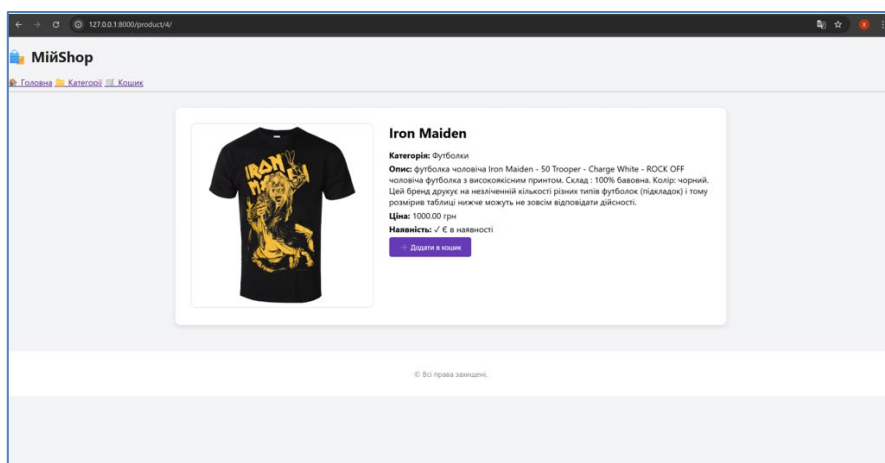


Figure 3 – Product detail page with full description.

This work demonstrates the effectiveness of Django in building scalable and customizable web platforms. The project can be extended to include user registration, online payment integration, order tracking, and adaptive design for mobile devices. Such improvements would align the platform with contemporary e-commerce standards and enhance its real-world applicability.

In conclusion, the development of this system highlights the importance of accessible technologies in enabling digital transformation for local businesses. The use of open-source tools and a structured framework like Django offers a reliable foundation for future improvements and deployment.

To further enhance the platform, various modern technologies can be incorporated. These may include implementation of AJAX for dynamic content loading, RESTful APIs for mobile app integration, and third-party payment systems for secure transactions.

Another important aspect is search engine optimization (SEO), which can be improved by generating readable URLs, adding meta-tags, and ensuring fast page loading times. Optimizing the site for search engines increases the chances of business visibility and customer reach.

Additionally, the platform's modular design allows for the future integration of machine learning features, such as personalized product recommendations or predictive stock management. This would turn the basic Django store into a smart, adaptable e-commerce solution.

This research demonstrates that open-source frameworks like Django offer accessible yet powerful tools for developers and small business owners to enter the digital market with a minimal budget and technical team.

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## ENGLISH AS A CATALYST FOR GLOBAL COLLABORATION IN COMPUTER ENGINEERING

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In today's world of globalization and rapidly changing technological relations, the role of the English language in the field of computer engineering is becoming increasingly important. The technological systems and professional communities of different countries face the need for cooperation and mutual understanding to solve common problems and challenges. In this context, the question arises about the role of the English language as a tool that contributes to reducing communication barriers and facilitating cooperation between the technological systems of different countries. In this study, we will consider the importance of English as the language of international communication in the computer engineering sphere and its influence on the promotion of cooperation between the technological systems of different countries.

The relevance of the topic is determined by the broad transnational challenges faced by modern computer engineering systems [1].

The growth of globalization and international interactions has made effective cooperation between technological systems worldwide indispensable. Fields such as software development, cybersecurity, and advanced data analytics critically rely on seamless information exchange and communication among diverse engineering professionals. English, serving as the lingua franca of international communication, plays a vital role in facilitating this crucial interplay. It acts as a primary conduit for bridging communication gaps and fostering collaborative efforts across different technological landscapes.

In addition, the relentless pace of technological progress and the deepening of inter-country relations underscore the necessity for standardized terminology and communication protocols in international tech engagements [2]. English, being the