**Render URL :**  https://johnsons-online-store.onrender.com

**Django E-commerce Application**

I developed a database-driven Django e-commerce application that allows users to purchase products using open data records. The application includes various features, such as search functionality, user registration, multiple access levels, and admin charts. In this report, I will provide details on the design, development, implementation, and use of the application.

**Design and Development**

As a solo developer, I utilized various application components to design and develop the project. The application includes orders and order items, with a one-to-many relationship. It stores order details and order items, respectively. The application features a search facility that allows users to search for specific products, improving the user experience.

The application's user management system includes three levels of access: admin, user, and guest. Admin users can access all orders and view charts that represent order history. Users can register an account, log in, and add products to their cart for purchase. Guests can browse products, but they cannot make purchases.

The application's error handling system ensures that the user receives appropriate feedback when errors occur. For example, when a user enters invalid data while registering an account, they will receive an error message informing them of the problem.

**Usage**

The application provides a seamless user experience, allowing users to search for products, add them to their cart, and complete the purchase process. Admin users can view order history and track sales using the charts feature. The application's search functionality helps users find products quickly, improving their experience on the platform.

**Testing**

I conducted testing on the application to ensure that it is robust and error-free. I used Behave, a Python behavior-driven development (BDD) framework, to test various functionalities such as user registration, login, product search, and order placement. The tests ensured that the application functions as expected, with minimal issues.

**Future Improvements**

In the future, I plan to implement additional features such as product recommendations based on user purchase history and integration with payment gateways for secure transactions. Additionally, I will conduct user testing to gain insights on how to improve the user experience.

**Conclusion**

In conclusion, I have developed a robust Django e-commerce application that allows users to purchase products using open data records. The application features multiple levels of access, a search facility, appropriate error handling, and a seamless user experience. I will continue to improve the application, ensuring that it remains efficient and valuable for users.