MANIPAL INSTITUTE OF TECHNOLOGY
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Mini Project Report
of
Internet Technologies Lab (CSE 3262)

ROOTS HAIR CARE

SUBMITTED
BY

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May 2023

MANIPAL INSTITUTE OF TECHNOLOGY

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Manipal
12/05/2023

CERTIFICATE

This is to certify that the project titled **HAIR CARE** is a record of the bonafide work done by **SANJANA GANESH NAYAK (Reg. No. 200905022)** submitted in partial fulfilment of the requirements for the award of the Degree of Bachelor of Technology (B.Tech.) in COMPUTER SCIENCE & ENGINEERING of Manipal Institute of Technology, Manipal, Karnataka, (A Constituent Institute of Manipal Academy of Higher Education), during the academic year 2022-2023.

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ABSTRACT

An e-commerce site called Roots Hair Care seeks to precisely cater to various hair types and offers personalized recommendations through a quiz, which can be a game-changer for many people who struggle to find hair treatments that work for them. The main concept is to provide a platform where clients can quickly purchase important haircare items based on the kind, density, and condition of their hair. This is quite helpful for people who have busy lives and prioritize their hair care regimen in addition to their hectic schedules.

This was developed using web development frameworks Django for the backend, SQLite for the database, and HTML, CSS, JavaScript, and Bootstrap for the frontend. For the construction of an e-commerce platform that can manage a high amount of traffic and transactions, these technologies offer a solid and scalable base.

The website focuses on the significance of hair care and on assisting users in finding items that are appropriate for their hair type. This encourages good health and cleanliness in addition to giving consumers a sense of self-assurance about their looks.

CHAPTER 1

INTRODUCTION

The Roots haircare project is a web development initiative aimed at providing a comprehensive e-commerce platform for customers to purchase bathing essential products based on their hair type. The project is designed to address the growing demand for online shopping and personalized haircare solutions among individuals with busy lifestyles. By offering a range of bathing essential products that are personalized to different hair types and densities, Hair Care provides customers with an easy way to achieve a healthy and glowing hair.

One of the standout features of Roots Hair Care is the condition analysis quiz that helps customers identify their hair condition. This feature ensures that customers can select products that are tailored to their specific needs, which can lead to better results and greater customer satisfaction. Hence, enhancing user experience.

Overall, the Roots Hair Care project is a smart and practical solution that addresses a common problem faced by individuals who prioritize their hair care routine. By leveraging modern web development technologies, the project is poised to deliver a reliable and effective e-commerce platform that meets the needs of modern consumers.

CHAPTER 2

PROBLEM STATEMENT AND OBJECTIVES

Problem Statement:

With today's fast-paced lifestyle, people have very little time to dedicate to their hair care routine, which can lead to a variety of hair and scalp problems. Many individuals are unaware of the right products for their hair type and may end up using products that are not suitable for their hair, causing more harm than good. In addition, with the rise of e-commerce, customers are increasingly looking for convenient and personalized online shopping experiences. Therefore, there is a need for an e-commerce platform that provides personalized hair care solutions to busy individuals.

Objectives:

- To create a user-friendly e-commerce website that offers a variety of haircare essential products for different hair types and densities.
- To incorporate a condition analysis quiz that enables customers to identify their hair condition and select products that are tailored to their needs.
- To build a loyal customer base by offering competitive pricing for the products.
- To make the products accessible to a huge chunk of the population

By achieving these objectives, the Hair Care project aims to provide a practical and personalized solution to the problem of hair care for busy individuals, while also delivering a reliable and user-friendly e-commerce platform that meets the needs of modern consumers.

CHAPTER 3

METHODOLOGY

1. Project Scope and Objectives:
   The goal of this Django project is to build a dependable and scalable e-commerce website that allows customers to browse, search, and buy products. The project's scope involves constructing a scalable and secure backend as well as designing and implementing a user-friendly interface. It also includes a function that allows it to give customized products based on the user's inputs.

2. Data Collection:
   Data for the project was collected manually and comprises the products and their details. The data was then processed and saved using Django's built-in ORM (Object Relational Mapping) to ensure data integrity and consistency.

3. Technology Stack:
   This project's technology stack comprises Python as the core programming language, Django as the web framework, SQLite as the database management system, and several front-end technologies such as HTML, CSS, and Bootstrap.

4. Design and Architecture:
   The project's design and architecture adhere to the Model-View-Controller (MVC) pattern, with data models, view templates, and controller logic kept separate. The relational models in the database - Category, Product, Customer, Order - were mapped to each other with the corresponding cardinality. The queries were developed to respond to the user's varied inputs in order to give the appropriate product.

5. Implementation:
   The project's implementation included developing the Django app and templates for various functionality such as product management, shopping cart, checkout, and payment processing. For user authentication, the project additionally makes use of Django libraries and third-party packages such as Django-allauth. The queries were added to the database by including a Quiz feature.

6. Testing:
   Various testing approaches, such as unit testing, integration testing, were employed to assure the project's quality.

7. Deployment:
   The code was deployed locally using a virtual environment called virtualenv. The deployment process included preparing the server environment with the relevant packages, configuring the SQLite database, and running the Django application on the local server.

8. Maintenance and Support:
   After the project was completed, a maintenance and support plan were implemented, which included frequent updates and bug patches. To ensure seamless and effective functioning, the support process included the use of numerous monitoring and logging tools such as Django Debug Toolbar. Additionally, the project includes data privacy and security features such as user identification and role-based access control.

CHAPTER 4

RESULTS AND SNAPSHOTS

Results:

The ecommerce website was successfully developed using Django, with a user-friendly interface, a secure backend, and integrated payment processing. A virtual environment and SQLite database were used to deploy the website locally, and testing was done to assure its reliability.

The website has several services, including shopping, order placing, and product browsing. Users can check product descriptions and photographs, explore products by category, and add items to their shopping basket. Depending on their needs, users can also opt for products that are customized by filling out a form. In product browsing, users can add, remove, and update products, and checkout their order.

The website was tested using various testing methodologies, including unit testing, integration testing, and end-to-end testing. The testing process was successful, and the website was found to be working as intended, with no critical bugs or issues.

The website was deployed locally using a virtual environment and SQLite database, and the deployment process was successful. The website was tested in various browsers and was found to be compatible with all major browsers.

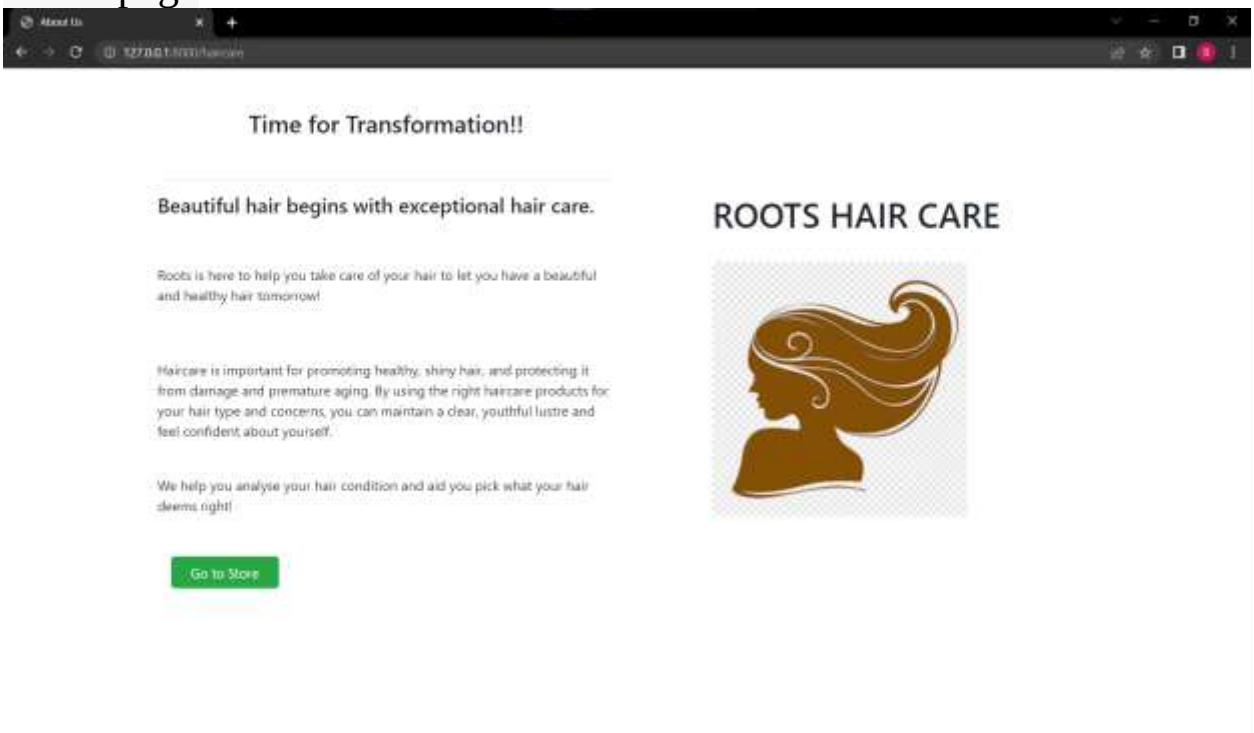
Overall, the Django-based e-commerce website that was built and launched locally succeeded in completing the project scope and meeting its goals. Users may shop with ease on the website because it is user-friendly, secure, and scalable.

Snapshots:

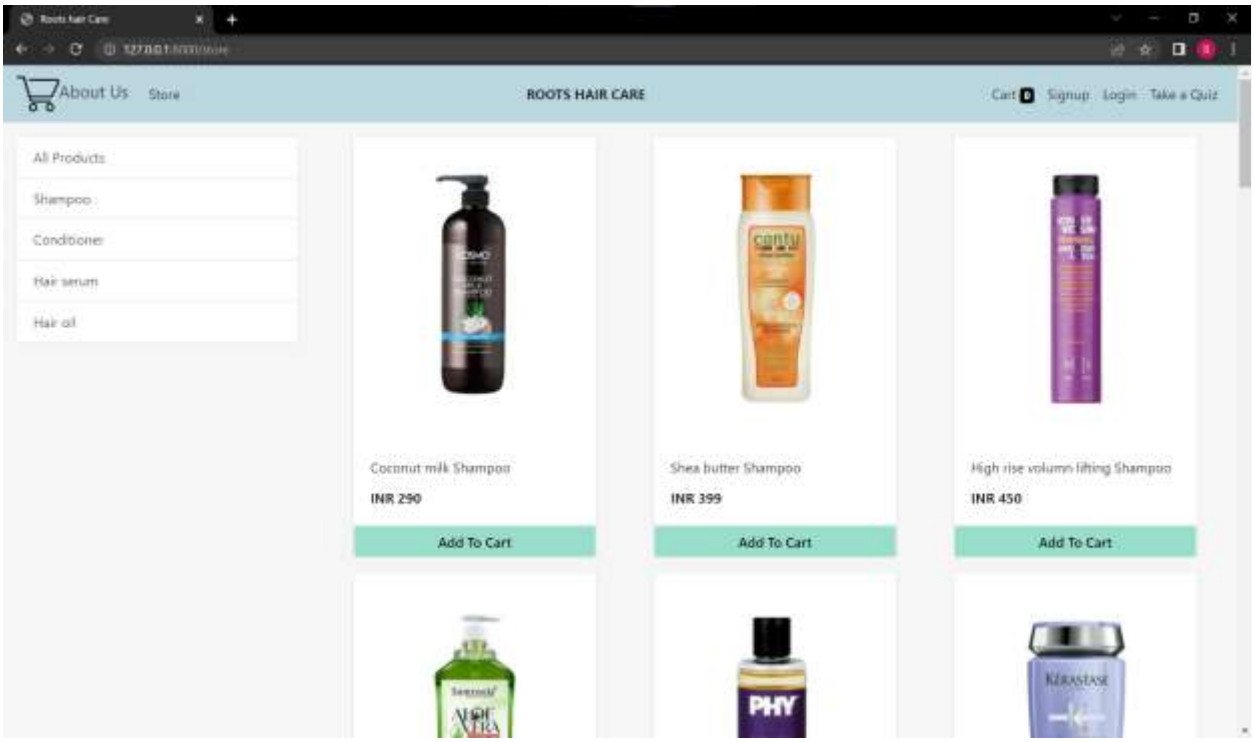
Running the server

```
Asus@LAPTOP-LS0C19C3 MINGW64 /d/ITLab/haircare/haircare/haircare
$ python manage.py runserver
Watching for file changes with StatReloader
Performing system checks...

System check identified some issues:

WARNINGS:
←[33;1mstore.Category: (models.W042) Auto-created primary key used when not defining a primary key type, by default 'django.db
.models.AutoField'.
        HINT: Configure the DEFAULT_AUTO_FIELD setting or the StoreConfig.default_auto_field attribute to point to a subclass
of AutoField, e.g. 'django.db.models.BigAutoField'.←[0m
←[33;1mstore.Customer: (models.W042) Auto-created primary key used when not defining a primary key type, by default 'django.db
.models.AutoField'.
        HINT: Configure the DEFAULT_AUTO_FIELD setting or the StoreConfig.default_auto_field attribute to point to a subclass
of AutoField, e.g. 'django.db.models.BigAutoField'.←[0m
←[33;1mstore.Order: (models.W042) Auto-created primary key used when not defining a primary key type, by default 'django.db.mo
dels.AutoField'.
        HINT: Configure the DEFAULT_AUTO_FIELD setting or the StoreConfig.default_auto_field attribute to point to a subclass of Aut
oField, e.g. 'django.db.models.BigAutoField'.←[0m
←[33;1mstore.Products: (models.W042) Auto-created primary key used when not defining a primary key type, by default 'django.db.model
s.AutoField'.
        HINT: Configure the DEFAULT_AUTO_FIELD setting or the StoreConfig.default_auto_field attribute to point to a subclass of Aut
oField, e.g. 'django.db.models.BigAutoField'.←[0m

System check identified 4 issues (0 silenced).
May 12, 2023 - 10:56:58
Django version 4.2, using settings 'haircare.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CTRL-BREAK.
```

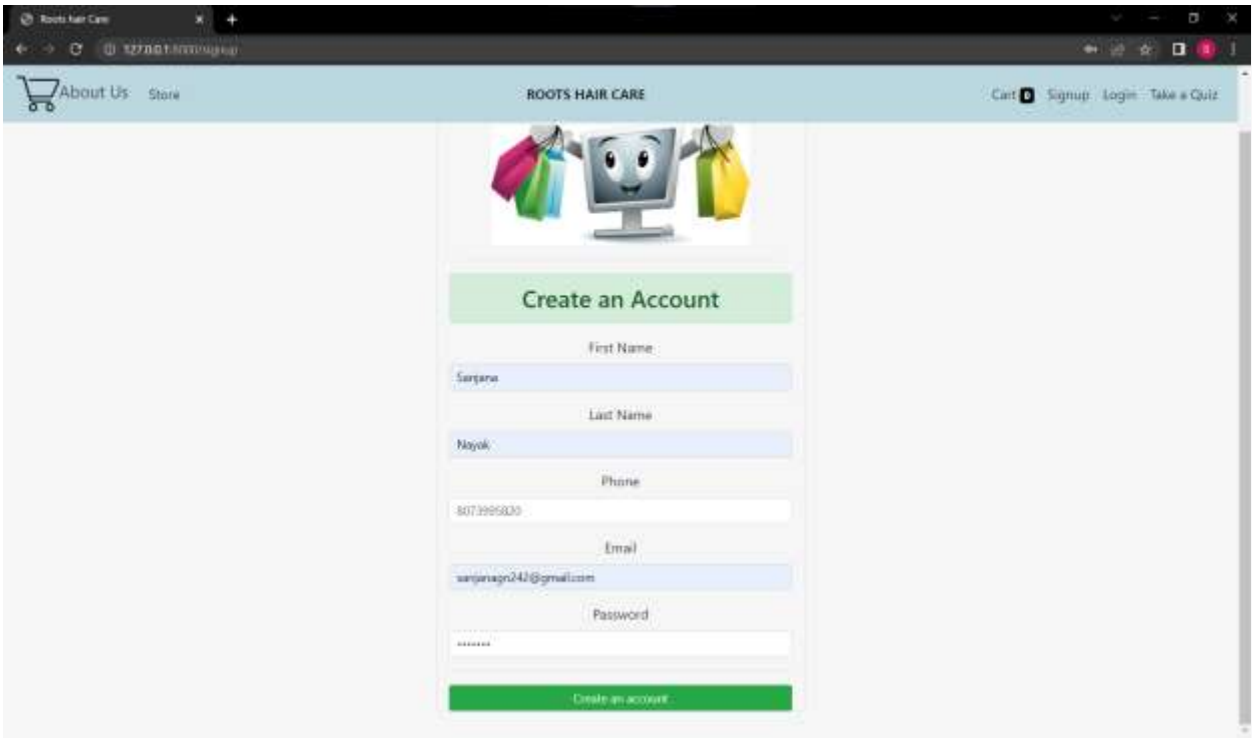
Home page



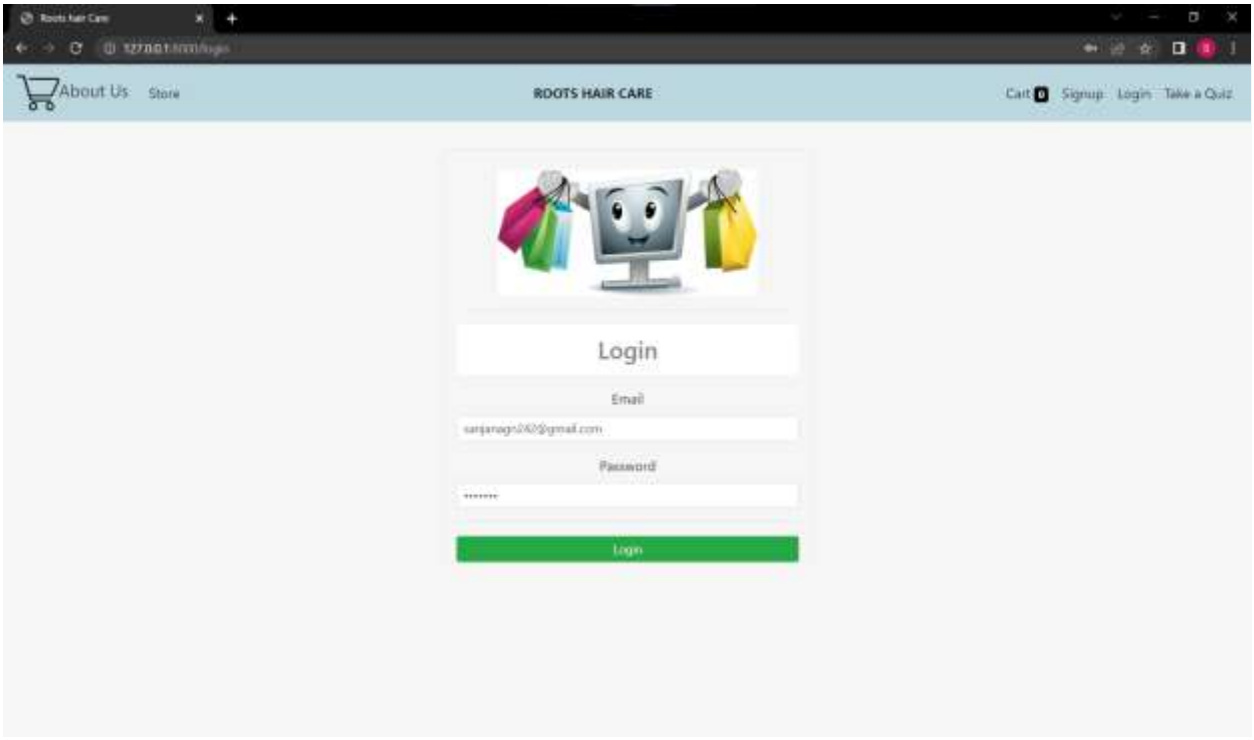
Store page



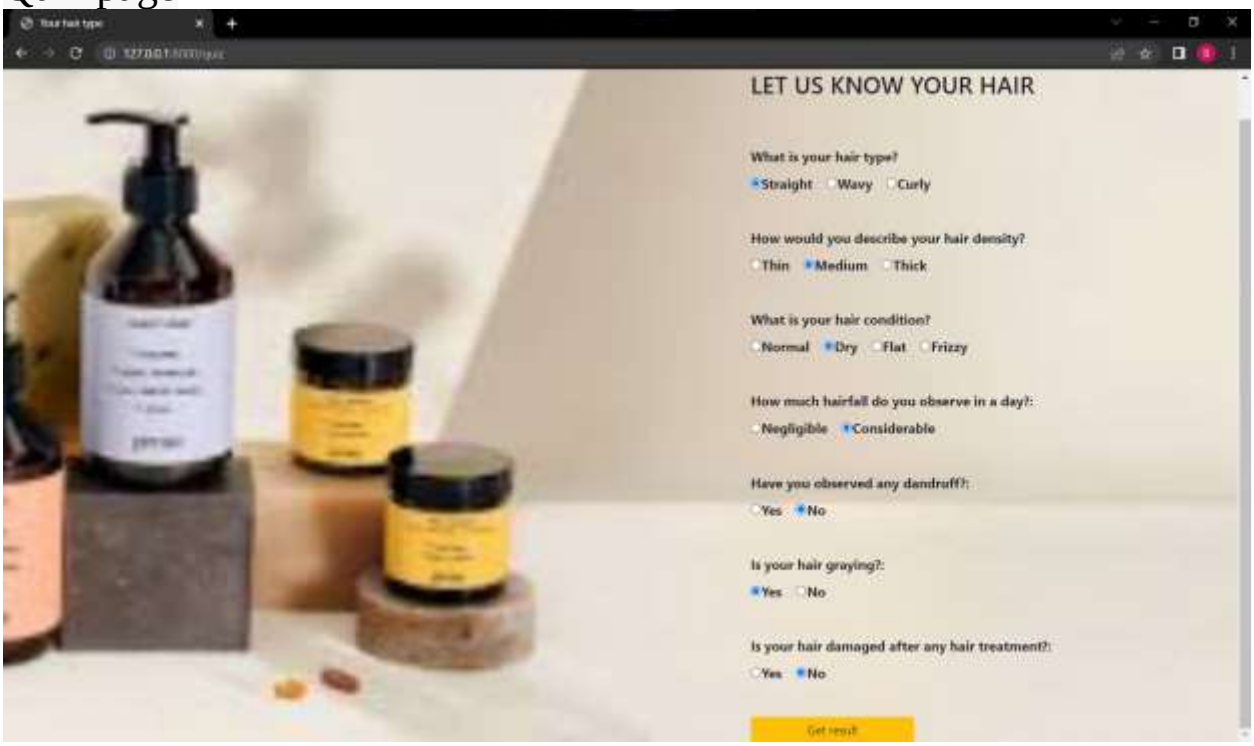
Signup page



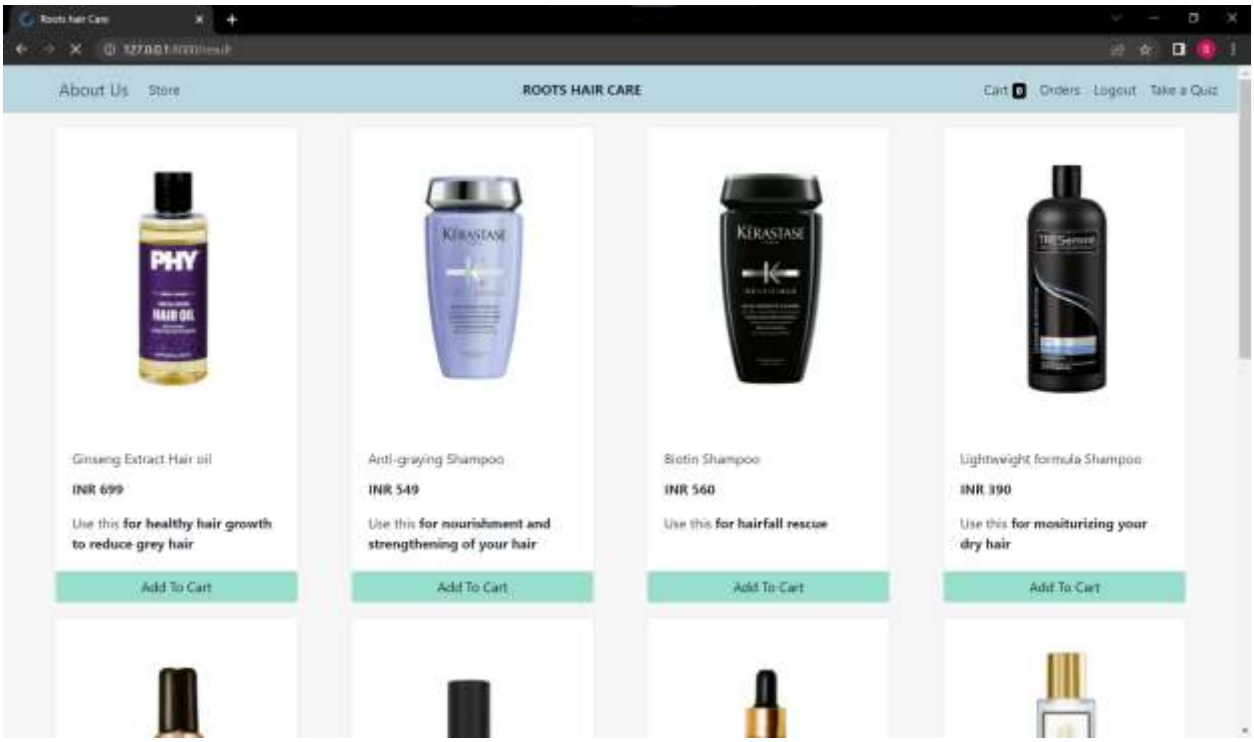
Login page



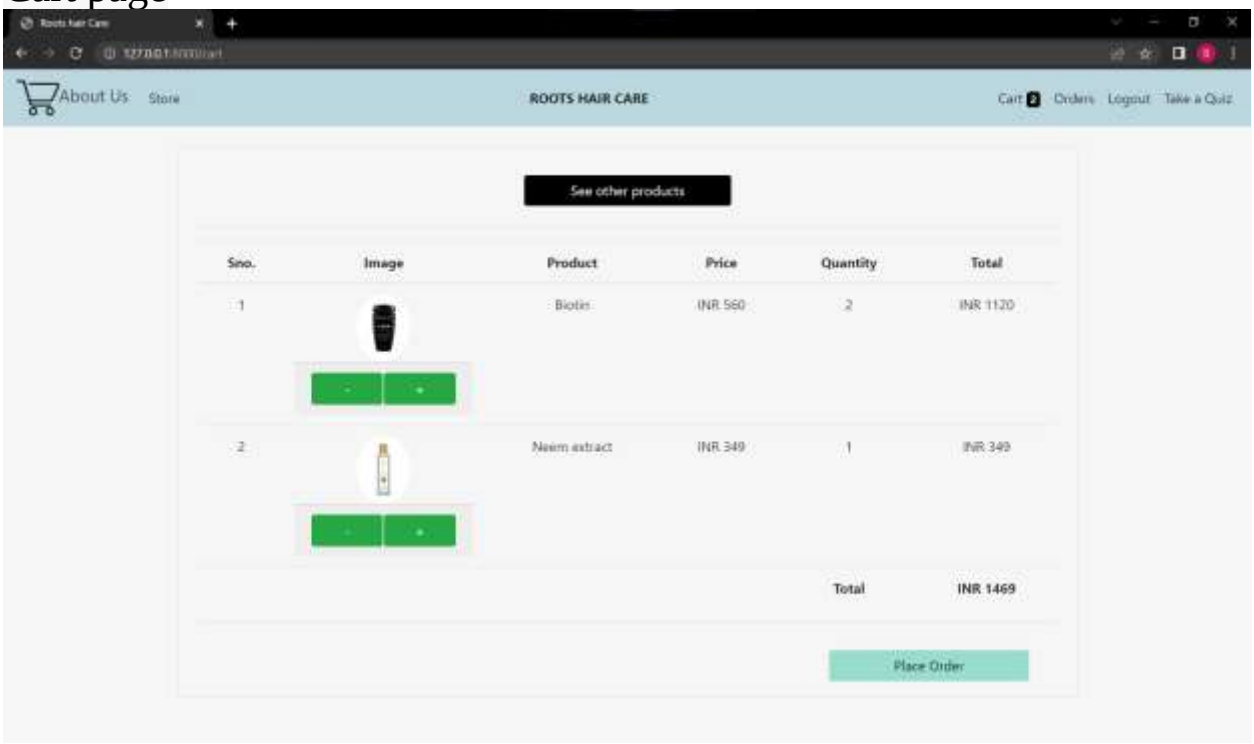
Quiz page



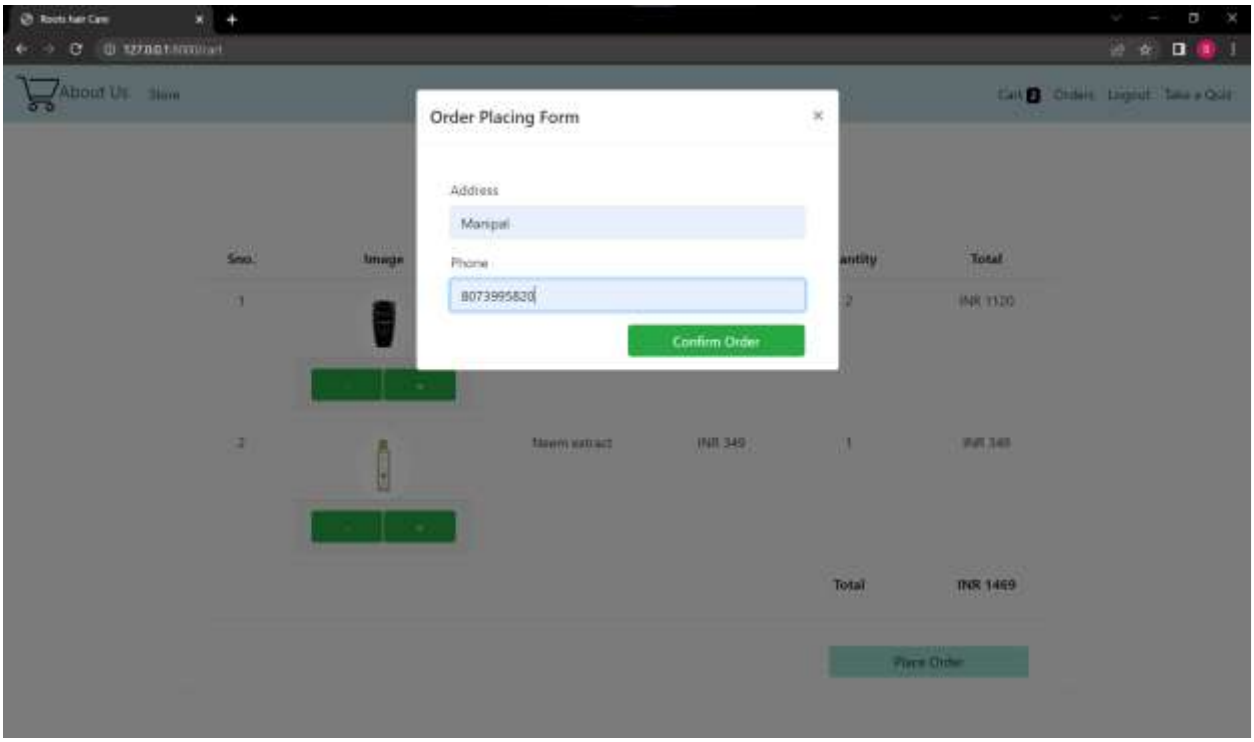
Result page



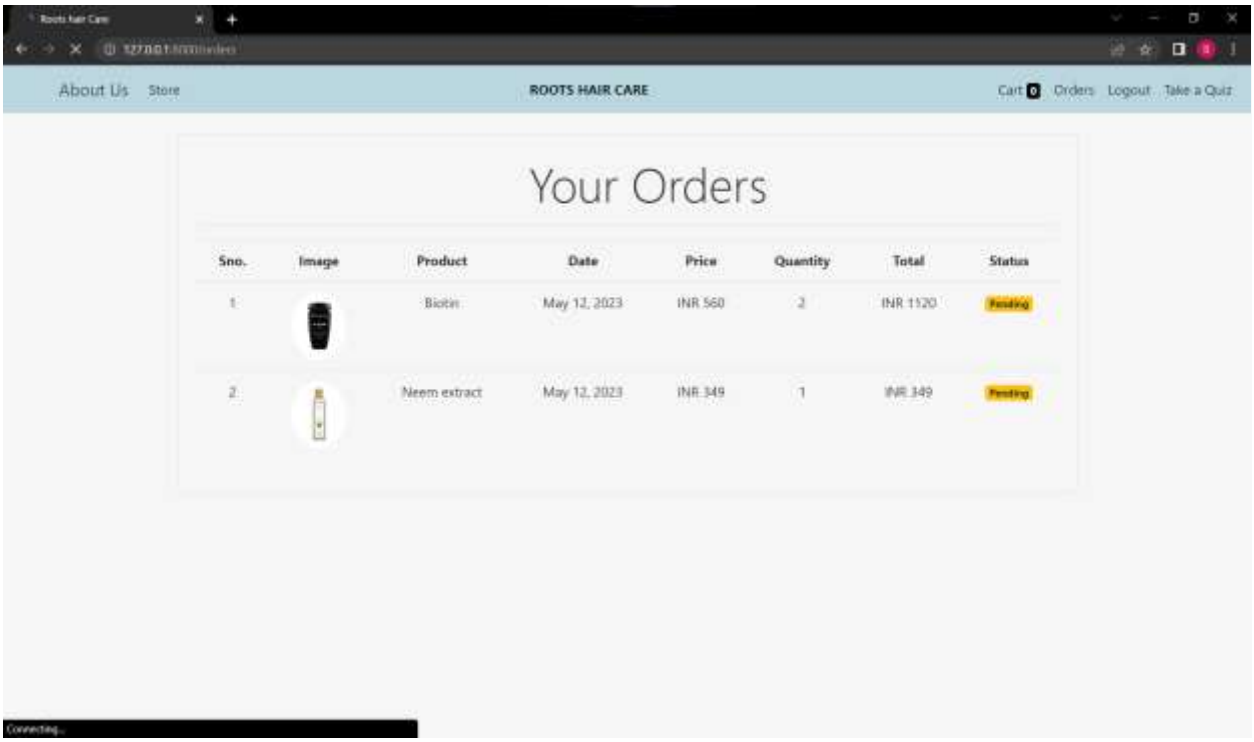
Cart page



Order page



Order tracking page



CHAPTER 5

CONCLUSION

The Roots Hair Care project aimed to address the problem of providing personalized and convenient hair care solutions for busy individuals. By leveraging web development technologies such as Django, SQLite, HTML, CSS, and Bootstrap, the project successfully delivered a user-friendly e-commerce platform that offers a wide range of haircare essential products tailored to different hair types. The condition analysis quiz feature helps customers identify their hair condition and choose the right products, while data privacy and security features like user identification and role-based access control ensure the safety and protection of customer information.

Furthermore, a robust maintenance and support plan was implemented to ensure the website's continuous functioning and security. By providing exceptional customer service, competitive pricing, exclusive discounts, and a loyalty program, the project aimed to build a loyal customer base and continuously improve the website's functionality and user experience.

Overall, the Roots Hair Care project is a successful example of how web development technologies can be leveraged to create practical solutions to modern problems, delivering a reliable and user-friendly e-commerce platform that meets the needs of busy individuals looking for personalized hair care solutions.

CHAPTER 6

LIMITATIONS AND FUTURE WORK

- The range of products available for purchase can be expanded to meet the diverse needs of customers.
- Secure and reliable payment methods can be integrated into the website to ensure that customers can make purchases with confidence.
- The user interface can be improved to enhance the shopping experience and make it more intuitive and user-friendly.
- The website's organization and presentation can be refined to make it more visually appealing and easier to navigate.
- Automated email notifications can be sent to customers to confirm their orders and provide updates on their delivery status.
- An order tracking mechanism can be implemented to enable customers to track their purchases and know when they will arrive.
- To enhance the user experience and increase customer engagement, we can add features such as social network integration, personalized product recommendations, and user reviews. These features can potentially expand the website's reach, promote customer loyalty, and provide valuable insights for improving the product offerings and customer service.

Overall, adding these features can help the Roots Hair Care website continue to evolve and improve, ultimately leading to a better shopping experience for customers and a more successful e-commerce platform.

CHAPTER 7

REFERENCES

- https://docs.djangoproject.com/en/4.2/topics/db/queries/
- https://www.healthline.com/health/shampoo-ingredients-for-different-hair-needs#natural-ingredients
- https://mycocosoul.com/blogs/ayurvedic-hair-care/best-ingredients-for-hair
- Stock image sites