An Internship Report on

"Health Care Product Recommendation"

At the organization

"TOPS TECHNOLOGY"

Submitted by

Harshil

Kalavadiya

(190200111047)

In partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

In

Electronics & Communication

Government Engineering College

Mavdi - Kankot Road,

Near Hanuman Mandir, Rajkot.

Gujarat Technological University, Ahmedabad

May 2023

Government Engineering College, Rajkot

Mavdi- Kankot Road, Near Hanuman Mandir, Rajkot.

CERTIFICATE

This is to certify that the internship report submitted along with the training in **Back End Web Development** has been carried out by Harshil Kalavadiya under my guidance in partial fulfillment for the degree of Bachelor of Engineering in **Electronics & Communication**, 8th Semester of Gujarat Technological University, Ahmadabad during the academic year 2023-24.

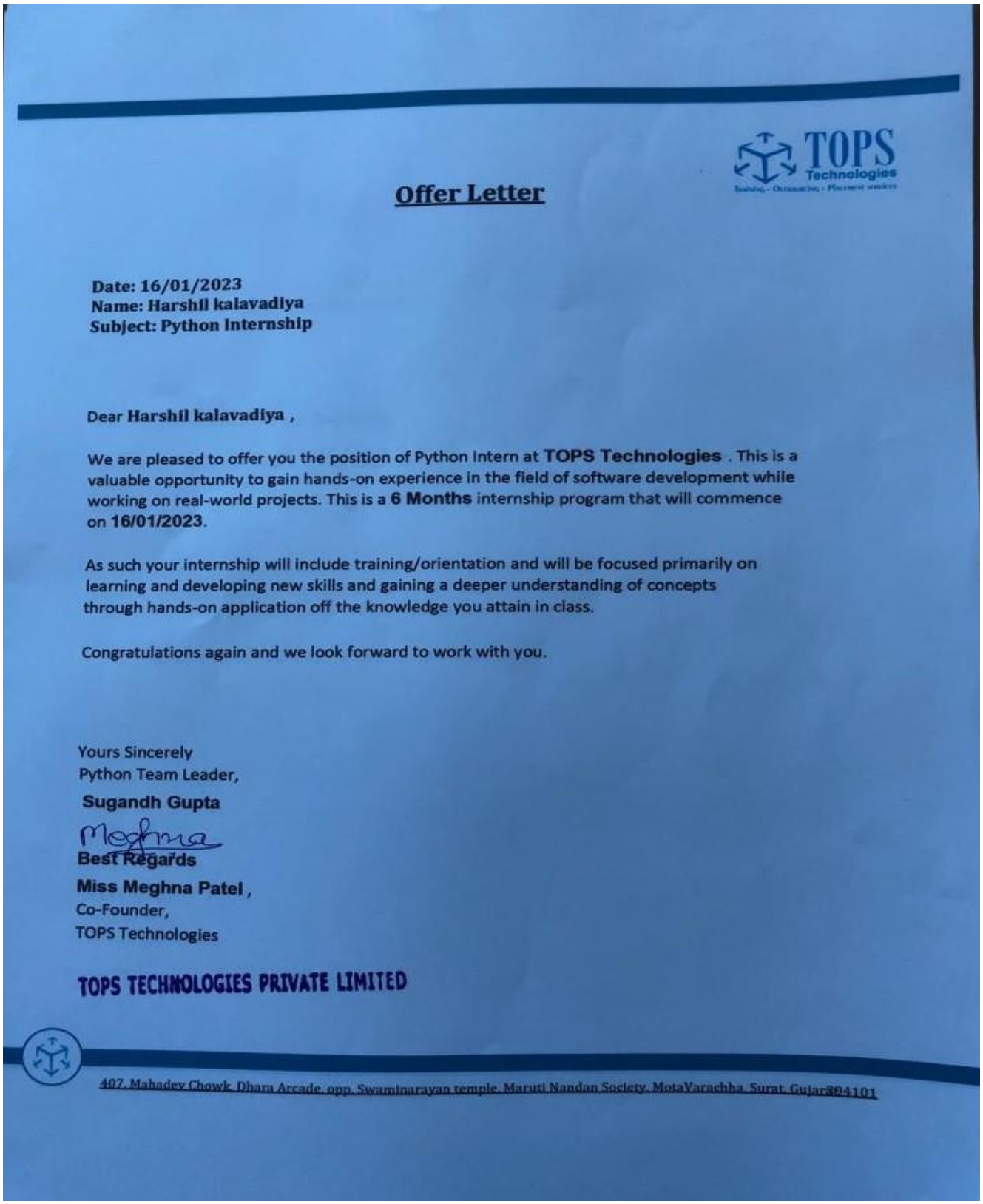
Prof. Prapti Pandya

Internal Guide

Prof. S. B. Parmar

Head of the Department

INTERNSHIP OFFER LETTER



TOPS Technologies

Offer Letter

Date: 16/01/2023
Name: Harshil kalavadiya
Subject: Python Internship

Dear **Harshil kalavadiya** ,

We are pleased to offer you the position of Python Intern at **TOPS Technologies** . This is a valuable opportunity to gain hands-on experience in the field of software development while working on real-world projects. This is a **6 Months** internship program that will commence on **16/01/2023**.

As such your internship will include training/orientation and will be focused primarily on learning and developing new skills and gaining a deeper understanding of concepts through hands-on application off the knowledge you attain in class.

Congratulations again and we look forward to work with you.

Yours Sincerely
Python Team Leader,
Sugandh Gupta

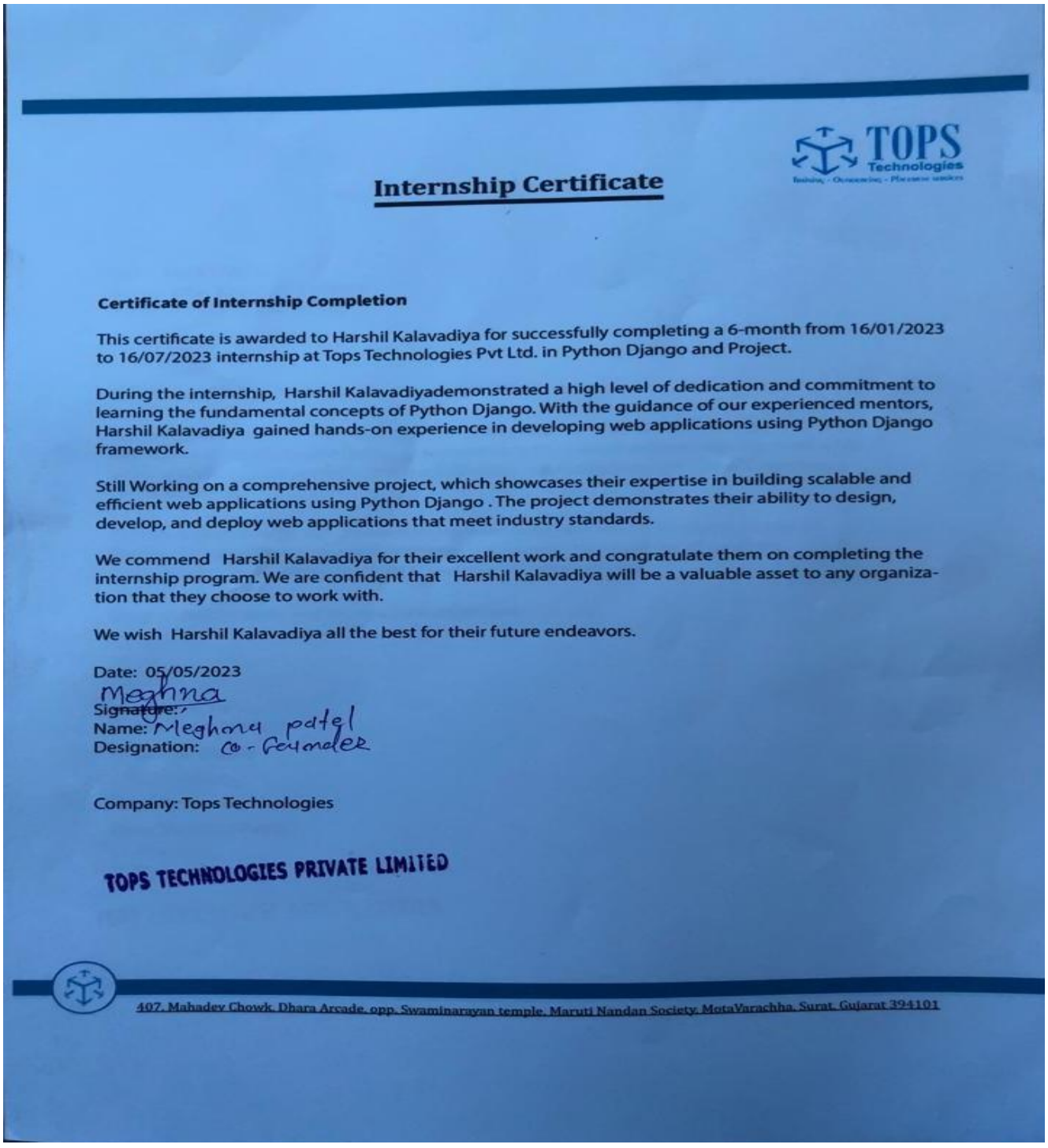
Meghna

Best Regards
Miss Meghna Patel ,
Co-Founder,
TOPS Technologies

TOPS TECHNOLOGIES PRIVATE LIMITED

407, Mahadev Chowk, Dhara Arcade, opp. Swaminarayan temple, Maruti Nandan Society, MotaVarachha, Surat, Gujarat 394101

COMPANY CERTIFICATE



TOPS Technologies

Internship Certificate

Certificate of Internship Completion

This certificate is awarded to Harshil Kalavadiya for successfully completing a 6-month from 16/01/2023 to 16/07/2023 internship at Tops Technologies Pvt Ltd. in Python Django and Project.

During the internship, Harshil Kalavadiyademonstrated a high level of dedication and commitment to learning the fundamental concepts of Python Django. With the guidance of our experienced mentors, Harshil Kalavadiya gained hands-on experience in developing web applications using Python Django framework.

Still Working on a comprehensive project, which showcases their expertise in building scalable and efficient web applications using Python Django . The project demonstrates their ability to design, develop, and deploy web applications that meet industry standards.

We commend Harshil Kalavadiya for their excellent work and congratulate them on completing the internship program. We are confident that Harshil Kalavadiya will be a valuable asset to any organization that they choose to work with.

We wish Harshil Kalavadiya all the best for their future endeavors.

Date: 05/05/2023
Signature: Meghna
Name: Meghna patel
Designation: Co-Founder

Company: Tops Technologies

TOPS TECHNOLOGIES PRIVATE LIMITED

407, Mahadev Chowk, Dhara Arcade, opp. Swaminarayan temple, Maruti Nandan Society, MotaVarachha, Surat, Gujarat 394101

Government Engineering College, Rajkot

Mavdi- Kankot Road, Near Hanuman Mandir, Rajkot.

DECLARATION

I hereby declare that the Internship report submitted along with the Internship entitled **Back End Web Development** submitted in partial fulfillment for the degree of Bachelor of Engineering in **Electronics & Communication** to Gujarat Technological University, Ahmedabad, is a bonafide record of original project work carried out by me at **TOPS TECHNOLOGY PVT. LTD.** under the supervision of **Mr. Sugandh Gupta** and that no part of this report has been directly copied from any students' reports or taken from any other source, without providing due reference.

Name of Student **Sign of Student**

_____ _____

ACKNOWLEDGEMENT

The internship opportunity I had with "**TOPS TECHNOLOGY PVT. LTD.**" was a great chance for learning and professional development. Therefore, I consider myself asa very lucky individual as I was provided with an opportunity to be a part of it. I am also grateful for havinga chance to meet so many wonderful people and professionals who led me through this internship period.

Bearing in mind previous I am using this opportunity to express my deepest gratitude and special thanks to the MD of "**TOPS TECHNOLOGY PVT. LTD.**" who in spite of being extraordinarily busy with his duties, took time out to hear, guide and keep me on the correct path and allowing me to carry out my training at their esteemed organization and extending during the training.

I express my deepest thanks to **MR. SUGANDH GUPTA** for taking part in useful decision & giving necessary advices and guidance which were extremely valuable for my study both theoretically and practically and arranged all facilities at my work place. I choose this moment to acknowledge his contribution gratefully.

I perceive as this opportunity as a big milestone in my career development. I will striveto use gained skills and knowledge in the best possible way, and I will continue to work on their improvement, in order to attain desired career objectives.

I also express my sincere appreciation to **Prof. Prapti Pandya** of Government Engineering College, Rajkot Who provide his valuable suggestions and precious time in accomplishing my training report.

HarshilKalavadia,

(190200111047)

ABSTRACT

I have confirmed my internship at **TOPS TECHNOLOGIES**. This abstractwill cover the details of my internship in the Web development department for a duration of six months which began from 16 January 2023 till 16 July 2023 at **TOPS TECHNOLOGIES** which is located at Dhara Complex ,Surat. **TOPS TECHNOLOGIES** will provide task for industrial problem which we have to solve. First, we will serve the market and then we will find optimal solution for it. Then we will create appropriate circle and program for task. Then debugging and troubleshooting will be done.

List of Figure

Table of Content

CHAPTER: 1
OVERVIEW OF THE COMPANY

1.1 ABOUT COMPANY

Tops technologies is a company offering services in the field of Software Development, Website Development, Mobile App Development, Graphic Designing, Digital Marketing, Testing & QA, Bulk SMS & Hosting Provider and IT Consultancy . In Terms Of Services, Designing and Coding. Services include customized Software Development, Website Development And Programming, Mobile App Development, Graphic Designing, Digital Marketing, Testing & QA, Bulk SMS & Hosting Provider And IT Consultancy and Maintenance. Company has a vast experience in development for Software/Web And Mobile Application. Our Processes are highly streamlined and proven to ensure fastest delivery of a high quality solution at a reasonable cost. We understand our client's need and changes over period of time. We have expertise to accommodate changes at any stage of software lifecycle. We Provide A Wide Range Of Web Solutions Such As Professional Website Design And Development, Customized Software Development, Website Development And Programming, Mobile App Development, Graphic Designing, Digital Marketing, Testing & QA, Bulk SMS & Hosting Provider And IT Consultancy To A Wide Range Of Clients. We Give Our First Priority To Our Client Satisfaction. We Solve Any Query Of Our Customer With Appropriate Explainations And Also Adopt Their Ideas After Proper Discussions. We Are Available At Any Time According To Our Clients Requirement. We Do Our Best To Fulfill The Requirement Of Our Clients. We Deliver Our Product On Time And To Every Specification. We Accurately Follow The Best And Usual Web Developing Life Cycle Which Is: Planning, Analysis, Design, Implementing And Review.

Website of Company:- https://www.tops-int.com/

1.2 ORGANIZATION CHART:

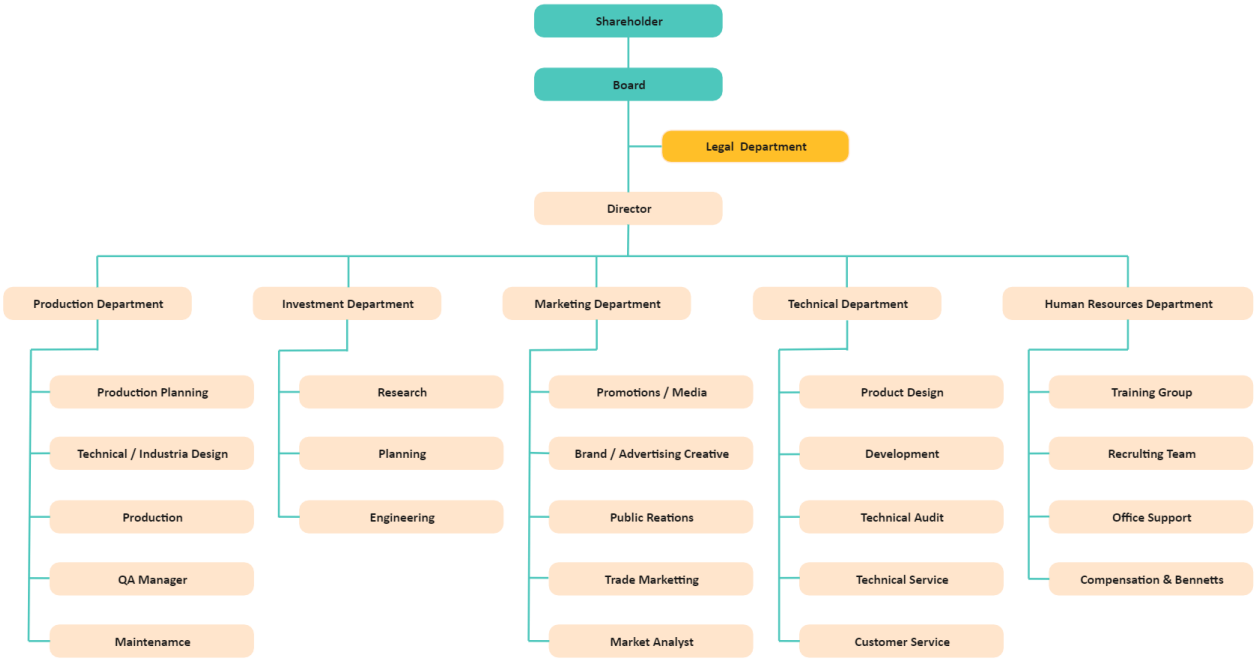


Fig. 1.1CHART

Why Choose US?

Tops Technologies is a company in offering services in the field of Software development, Website Development, Mobile Application Development and Customized ERP Solutions.

1.3 TECHNICAL SPECIFICATIONS OF MAJOR EQUIPMENT USED IN EACH DEPARTMENT:

- Laptop or desktop with any os
- 8GB RAM
- Internet connectivity

1.4 PRODUCTION STAGES (SDLC):

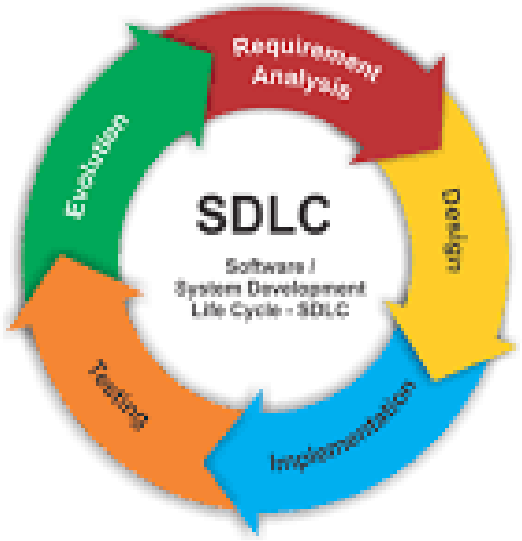


Fig. 1.2 SDLC

- **Stage 1: Project Planning:**

  The first stage of SDLC is all about "What do we want?" Project planning is a vital role in the software delivery lifecycle since this is the part where the team estimates the cost and defines the requirements of the new software.

- **Stage 2: Gathering Requirements & Analysis:**

  The second step of SDLC is gathering maximum information from the client requirements for the product. Discuss each detail and specification of the product with the customer.

- **Stage 3: Design:**

  In the design phase (3rd step of SDLC), the program developer scrutinizes whether the prepared software suffices all the requirements of the end-user. Additionally, if the project is feasible for the customer technologically, practically, and financially.

- **Stage 4: Coding or Implementation:**

  Time to code! It means translating the design to a computer-legible language. In this fourth stage of SDLC, the tasks are divided into modules or units and assigned to various developers. The developers will then start building the entire system by writing code using the programming languages they chose. This stage is considered to be one of the longest in SDLC.

- **Stage 5: Testing:**

  Once the developers build the software, then it is deployed in the testing environment. Then the testing team tests the functionality of the entire system. In this fifth phase of SDLC, the testing is done to ensure that the entire application works according to the customer requirement.

- **Stage 6: Deployment:**

  The sixth phase of SDLC: Once the testing is done, and the product is ready for deployment, it is released for customers to use. The size of the project determines the complexity of the deployment. The users are then provided with the training or documentation that will help them to operate the software. Again, a small round of testing is performed on production to ensure environmental issues or any impact of the new release.

- **Stage 6: Maintenance:**

  The actual problem starts when the customer actually starts using the developed system and those needs to be solved from time to time. Maintenance is the seventh phase of SDLC where the developed product is taken care of. According to the changing user end environment or technology, the software is updated timely.

CHAPTER: 2

INTRODUCTION OF INTERNSHIP

2.1 INTERNSHIP SUMMARY:

Web development refers to the building, creating, and maintaining of websites. It includes aspects such as web design, web publishing, web programming, and database management. It is the creation of an application that works over the internet.

Web Development can be classified into two ways:

- Frontend Development (User Interface)
- Backend Development (Server-side)

2.2 WHAT IS BACK END WEB DEVELOPMENT? :-

Backend web development is the part of web development that deals with the server-side of web applications. It involves building and maintaining the components of a web application that are not visible to users, such as the server, databases, and APIs.

Backend developers are responsible for writing code that runs on the server and handles tasks such as data storage and retrieval, user authentication, server-side scripting, and application logic. They work with languages such as Java, Python, PHP, Ruby, and .NET, as well as frameworks such as Node.js, Django, Flask, and Ruby on Rails.

Backend developers also work closely with front-end developers, who build the visible parts of the web application that users interact with. Together, they create a complete web application that delivers content and services to users via the internet.

- **Back-end:**

  The server-side development of web application or website with a primary focus on how the website works. It is responsible for managing the database through queries and APIs by client-side commands. This type of website mainly consists of three parts front end, backend, and database.

  Back-end languages:

  - **PHP**
  - **JAVASCRIPT**
  - **PYTHON**
  - **JAVA**

  Back End Frameworks:

  - **Express**
  - **Django**
  - **Laravel**
  - **Rails**

- **Database:**

  Database is the collection of inter-related data which helps in efficient retrieval, insertion and deletion of data from database and organizes the data in the form of tables, views, schemas, reports etc.

  - **LARAVEL**
  - **MONGODB**
  - **MYSQL**

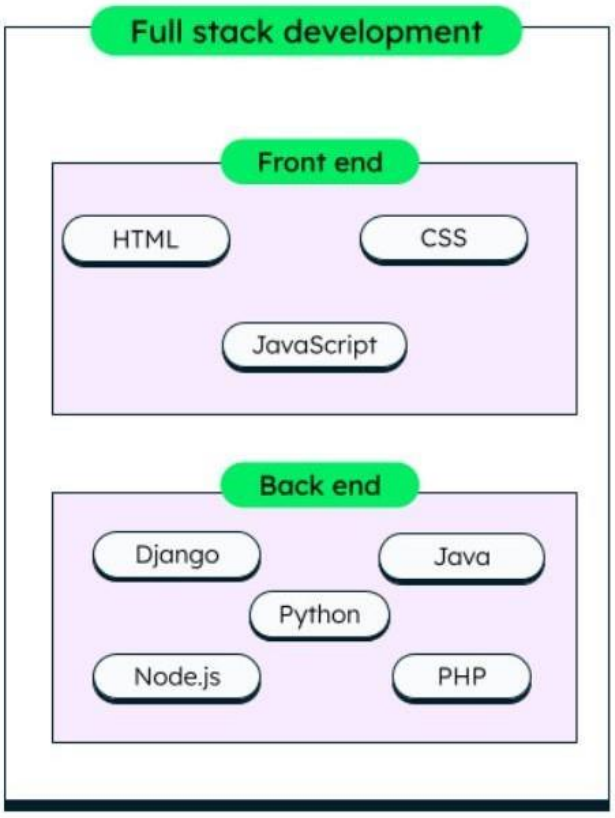


Fig 2.1 The main components of a full stack development are the front-end, back-end and database

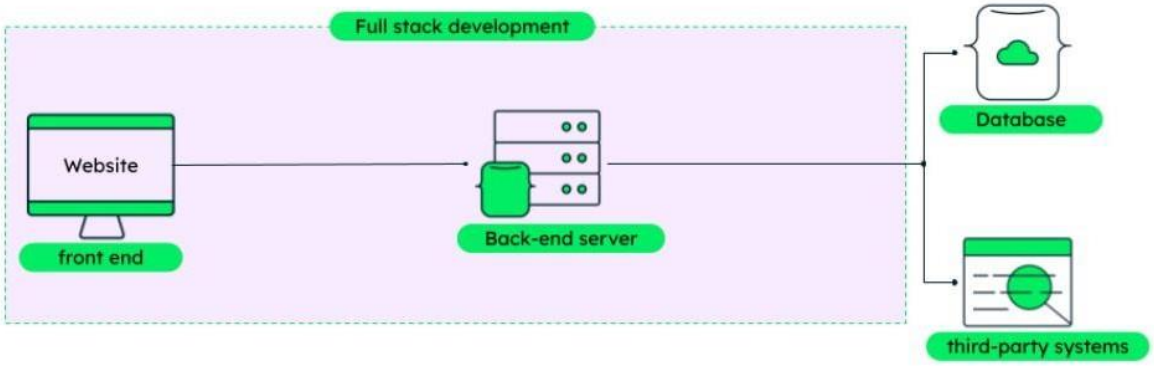


Fig 2.2 Demonstration of full stack development in an end-to-end workflow

- **Deployment:**

  Web deployment refers to the process of uploading and configuring the files and code of a website or web application to a web server or hosting service, making it available to be accessed by users on the internet. This process typically includes tasks such as transferring files, configuring database connections, and setting up security settings. It can also involve updating and maintaining the website or web application on an ongoing basis.

- **Deployment Platforms:**
  - Vercel
  - Heroku
  - Netlify
  - Firebase
  - GitHub Pages
  - AWS Amplify
  - DigitalOcean
  - Render

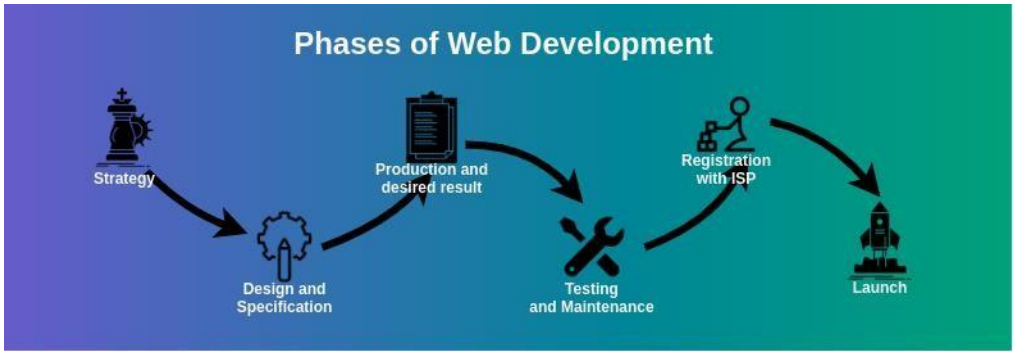


Fig 2.3 Deployment

CHAPTER: 3
WEB DEVELOPMENT BASIC

3.1 WEB PAGE:

A web page is a document that is accessed through a web browser on the internet. It is typically written in HTML (Hypertext Markup Language) and may also include other languages such as CSS (Cascading Style Sheets) and JavaScript. A web page can contain various types of content such as text, images, videos, and links to other web pages. Web pagescan be static or dynamic, with dynamic pages generating content on the fly based on user input or other variables. Web pages can be accessed by entering the URL (Uniform Resource Locator) into a web browser or by clicking on a hyperlink from another web page.

3.2 THE STEP TO CREATE WEBSITE:

Creating a web site requires multiple steps which includes the following:

- Creating a UI (User Interface)
- Scripting (Both at server-end client-end)
- Creating a back-end or the database

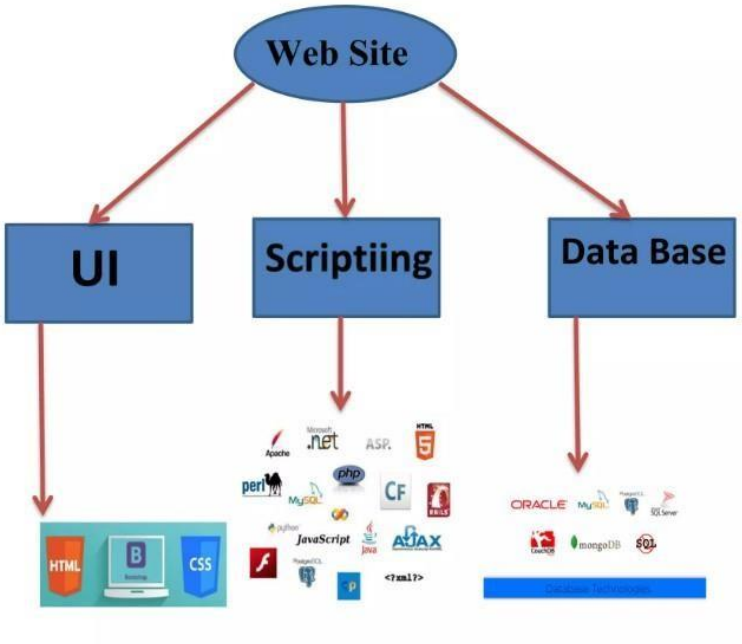


Fig. 3.1 Website

3.3 UI DEVELOPMENT:

Technologies that are mostly used to develop a User Interface are:

- HTML
- CSS
- Bootstrap

Hypertext Markup Language (HTML): HTML (Hypertext Markup Language) is a markup language that is used to create content for the World Wide Web. It is a standard language used for creating web pages and is essential for building any kind of website or web application.

HTML is a markup language that is made up of a set of markup tags and attributes. Markup tags are used to define the structure and content of a web page. These tags are enclosed in angle brackets (< >) and appear in pairs - an opening tag and a closing tag. The content of the web page is placed between these tags.

HTML documents are made up of several parts, including the doctype declaration, the head section, and the body section. The doctype declaration specifies the version of HTML being used. The head section contains metadata about the document, including the document title, character set, and links to CSS and JavaScript files. The body section contains the main content of the web page.

HTML supports a wide range of markup tags, including headings, paragraphs, lists, tables, forms, images, videos, and more. Each tag has a specific purpose and is used to create a specific type of content.

HTML also allows developers to add attributes to tags, which can be used to provide additional information about the tag or modify its behavior. For example, the href attribute is used with the <a> tag to specify the URL that the link should point to.

HTML can be used in conjunction with other web development technologies like CSS and JavaScript to create rich, interactive, and responsive web pages. CSS is used to style the content of the web page, while JavaScript is used to add interactivity and dynamic functionality.

```
<!DOCTYPE html>
<html>
  <head>
    <title>Page Title</title>
  </head>
  <body>
    <h1>Heading</h1>
    <p>Paragraph</p>
  </body>
</html>
```

Fig. 3.2 Html Structure

Cascading Style Sheets (**CSS**): is a style sheet language used to describe the presentation of HTML or XML documents. CSS is used to control the layout, formatting, and appearance of web pages. With CSS, you can define styles for individual HTML elements, as well as groups of elements, and apply those styles across multiple pages on your website.

Here are some examples of what CSS can do:

- Change the color, font, size, and spacing of text on a page
- Add borders, backgrounds, and other visual effects to elements
- Control the layout of a page, including the position and size of elements
- Create animations and transitions that make elements appear and disappear in a visually pleasing way
- Make a web page responsive, so that it adapts to different screen sizes and devices

CSS works by selecting HTML elements and applying styles to them. The styles are defined using CSS properties and values, which can be written directly in the HTML code or in a separate CSS file. CSS styles can be applied to elements using selectors, which specify which elements should be affected by the styles.

CSS (Cascading Style Sheets) is a style sheet language used to describe the presentation of HTML or XML documents. CSS is used to control the layout, formatting, and appearance of web pages. With CSS, you can define styles for individual HTML elements, as well as groups of elements, and apply those styles across multiple pages on your website.

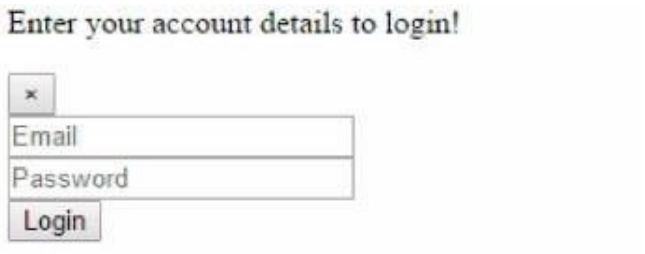


Fig. 3.3 Before using CSS in HTML page

Fig. 3.4 After using CSS in HTML page

BOOTSTRAP: is a popular open-source front-end framework used for building responsive and mobile-first websites and web applications. It was originally developed by Twitter and is now maintained by a community of developers.

Bootstrap includes pre-built HTML, CSS, and JavaScript components, such as navigation bars, buttons, forms, modals, carousels, and more. These components are designed to be easily customizable and can be combined to create complex layouts and interactive user interfaces.

Some of the key features of Bootstrap include:

- Responsive design: Bootstrap includes a responsive grid system that makes it easy to create layouts that adapt to different screen sizes and devices.
- Customizable themes: Bootstrap includes a number of built-in themes that can be customized to match your branding and design preferences.
- Cross-browser compatibility: Bootstrap is designed to work with all modern web browsers, including Chrome, Firefox, Safari, and Internet Explorer.
- JavaScript plugins: Bootstrap includes a number of JavaScript plugins that add advanced functionality to your website or application, such as sliders, modals, and tooltips.
- Large community: Because Bootstrap is open source, it has a large and active community of developers who contribute to its development, provide support, and create additional plugins and resources.

Bootstrap is a powerful tool for developers who want to create modern, responsive, and visually appealing websites and applications. It is relatively easy to learn and can help speed up development time by providing a framework for building consistent and scalable user interfaces.

Fig. 3.5 Responsive

3.4 SCRIPTING:

There are mainly two scripting method:

- Server-side scripting
- Client-side scripting

Client-side scripts are scripts that run in a user's web browser and are used to interact with the user interface of a web page. These scripts can be embedded in the HTML code of a web page or included in a separate JavaScript file that is linked to the web page.

Server-side scripts, on the other hand, are scripts that run on the server-side and are used to generate dynamic content that is sent to the user's web browser. These scripts are typically written in JavaScript on the Node.js platform, but can also be written in other server-side scripting languages such as PHP or Python.

The most popular used client-side scripting languages is J**avaScript.** The flow of request from the browser to server.

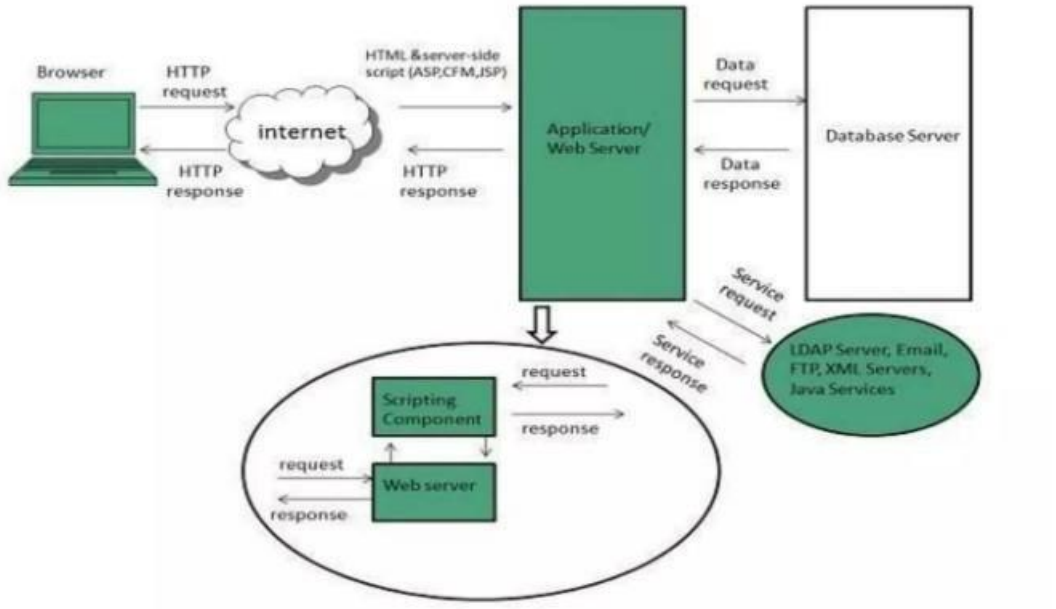


Fig. 3.6 Flow of request

TECHNOLOGIES LEARNT DURING INTERNSHIP

CHAPTER: 4

Django Technologies

4.1 OVERVIEW:

Django is a high-level, open-source web framework written in Python. It is designed for rapid development and clean, pragmatic design of web applications. Django follows the Model-View-Controller (MVC) architectural pattern, but it refers to it as the Model-View-Template (MVT) pattern.

4.2 What is Django: -

Django is a high-level, open-source web framework written in Python. It was created to help developers build web applications quickly and easily by providing pre-built components and conventions for common web development tasks.

4.3 Why Django:-

There are several reasons why developers choose to use Django for web development:

Rapid development: Django is designed for fast development, providing many pre-built components and conventions for common web development tasks. This allows developers to focus on building their application logic instead of writing boilerplate code.

1. High-level and easy-to-use: Django is built with Python, which is known for its simplicity and readability. Django's high-level abstractions and elegant syntax make it easy to use and learn, even for beginner developers.

2. Scalability: Django is designed to scale well, whether you're building a small personal project or a large enterprise-level system. It provides many built-in features for handling caching, load balancing, and other scalability concerns.

3. Security: Django provides many built-in security features, such as protection against common web vulnerabilities like SQL injection and cross-site scripting (XSS) attacks.

It also includes built-in user authentication and authorization features.

4. Large and supportive community: Django has a large and active community of developers who contribute to the framework, provide support, and share knowledge and resources. This makes it easy to find help and resources when you need it.

Overall, Django is a powerful and popular web framework that can help developers build web applications quickly, easily, and securely.

4.4 Feature of Django:-

Django is a powerful web framework that provides many built-in features for web development. Some of the key features of Django include:

1. Object-Relational Mapping (ORM): Django includes a powerful ORM that allows developers to interact with databases using Python code, rather than SQL. This makes it easier to work with databases and reduces the likelihood of errors.

2. Admin interface: Django provides an automatic admin interface for managing application data. This interface is customizable and provides an easy way to manage data without writing custom code.

3. URL routing: Django includes a built-in URL routing system that allows developers to map URLs to views in the application. This makes it easy to create clean and organized URLs for your application.

4. Templating engine: Django includes a built-in templating engine that allows developers to create dynamic HTML pages using Python code. This makes it easy to create dynamic and responsive web pages.

5. Authentication and security: Django includes built-in features for user authentication and authorization, as well as protection against common web vulnerabilities like SQL injection and cross-site scripting (XSS) attacks.

6. Scalability: Django is designed to scale well, whether you're building a small personal project or a large enterprise-level system. It provides many built-in features for handling caching, load balancing, and other scalability concerns.

7. Internationalization (i18n) and localization (l10n): Django includes built-in support for translating applications into multiple languages and localizing content based on the user's location.

Overall, Django is a feature-rich web framework that can help developers build complex web applications quickly and easily. Its built-in features make it easy to create secure, scalable, and internationalized applications.

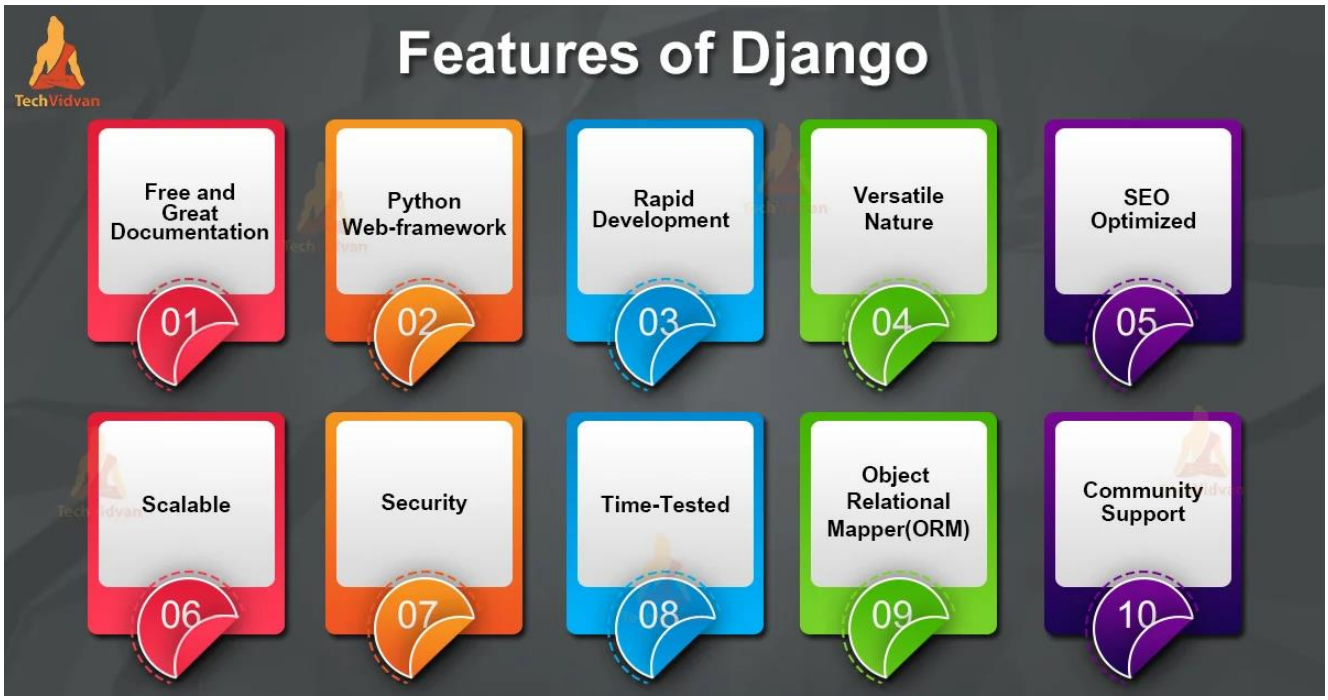


Fig 4.1 Django Feature

4.4 Feature of ORM:-

ORM stands for Object-Relational Mapping. It is a programming technique that allows developers to interact with a relational database using an object-oriented programming language, such as Python, instead of writing SQL queries directly.

In an ORM, database tables are mapped to classes, and database rows are mapped to objects of those classes. Developers can interact with the database by manipulating these objects, rather than writing SQL queries.

ORMs provide several benefits over writing SQL queries directly:

Simplifies database interaction: Developers can interact with the database using Python code, which can be easier to write and understand than complex SQL queries.

Object-oriented programming: ORM allows developers to work with objects and classes, which is a more natural and intuitive way of programming for many developers.

Portability: ORM can make the code more portable between different database systems, as it abstracts the database interactions and allows developers to switch between databases without changing the code.

Django, for example, includes a built-in ORM that allows developers to interact with a database using Python code, making it easier to create database-driven web applications. Other popular ORM libraries for Python include SQLAlchemy and Peewee.

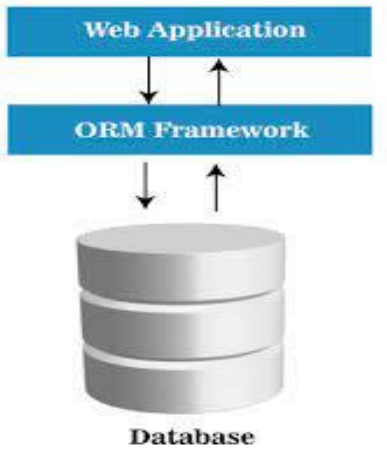


Fig 4.2 ORM

4.5 Django Module

Django is a comprehensive web framework that includes many built-in modules and packages to help developers build web applications. Some of the key modules and packages in Django include:

1. django.db: This module provides the Object-Relational Mapping (ORM) system for working with databases. It includes classes and methods for creating database models, querying the database, and managing database migrations.

2. django.urls: This module provides the URL routing system for mapping URLs to views in the application. It includes functions and classes for defining URL patterns and matching URLs to views.

3. django.views: This module provides generic views and classes for handling common web development tasks, such as rendering HTML templates, handling forms, and working with authentication.

4. django.template: This module provides the templating system for rendering dynamic HTML pages. It includes classes and methods for defining templates, rendering context data, and working with template tags and filters.

5. django.contrib: This package includes various contrib modules that provide additional functionality for Django, such as an admin interface, authentication, and support for geographic data.

6. django.middleware: This package includes middleware classes for processing requests and responses in the application. Middleware can be used for tasks such as handling authentication, caching, and compressing responses.

7. django.forms: This module provides a framework for working with HTML forms in the application. It includes classes and methods for defining form fields, validating user input, and rendering form HTML.

These are just a few of the many modules and packages that are included in Django. Each module and package provides a specific set of functionality to help developers build web applications quickly and easily.

4.6 Scope:-

Django is a powerful and versatile web framework that can be used to build a wide range of web applications. Its popularity and widespread adoption have created a large community of developers and contributed to its success.

Here are some areas where Django can be used:

1. Web applications: Django is a popular choice for building web applications of all sizes, from small personal projects to large-scale enterprise applications. Its built-in features and easy-to-use API make it an excellent choice for building complex web applications quickly and easily.

2. Content management systems (CMS): Django can be used to build powerful CMS platforms that allow content creators to manage and publish content easily. Django's built-in admin interface and content management features make it an ideal choice for building custom CMS platforms.

3. E-commerce websites: Django can be used to build e-commerce websites that can handle large amounts of traffic and transactions. Its built-in security features and support for payment gateways make it an excellent choice for building custom e-commerce platforms.

4. Social networking sites: Django's scalability and built-in features make it an excellent choice for building social networking sites. It provides the tools needed to build user profiles, social graphs, and other features common to social networking sites.

5. Scientific computing: Django's flexibility and powerful ORM make it an excellent choice for building scientific computing applications that require database integration. It provides an easy way to create data visualizations, perform data analysis, and build custom scientific applications.

Overall, Django's wide range of features and flexibility make it a powerful tool for building web applications in a variety of industries and use cases. Its popularity and large community of developers also make it a reliable and well-supported choice for web development.

CHAPTER: 5
Python

5.1 What is Python: -

Python is a high-level, interpreted programming language that was first released in 1991 by Guido van Rossum. It is a versatile and powerful language that is widely used in a variety of industries, including web development, scientific computing, data analysis, and artificial intelligence.

5.2 Why Do We Use Python? –

Python is a versatile and powerful programming language that can be used for a wide range of tasks in many different industries. Here are some reasons why Python is a popular choice among developers:

1. Easy to learn: Python has a simple syntax and is easy to learn, which makes it an ideal language for beginners who are just starting to learn how to code.

2. Large community: Python has a large and active community of developers who contribute to a wide range of libraries and frameworks. This means that there is a lot of support available for Python developers, and it is easy to find answers to questions and solutions to problems.

3. Cross-platform: Python code can be run on a variety of operating systems, including Windows, Mac, and Linux, which makes it a versatile choice for building applications that need to run on multiple platforms.

4. Large standard library: Python comes with a large standard library that provides a wide range of functionality for tasks such as file handling, networking, and regular expressions. This means that developers can get a lot done without needing to install additional libraries.

5. Scalability: Python is a highly scalable language that can be used for everything from small scripts to large-scale applications. It is used by companies such as Google, Instagram, and Dropbox for building large-scale applications.

6. Data science and AI: Python has become a popular choice for data science and artificial intelligence (AI) tasks because of its powerful libraries such as NumPy, Pandas, and TensorFlow.

5.3 FEATURES OF PYTHON:

- Free and Open Source
- Easy to Read
- Easy to Code
- Object Oriented Language
- GUI Programming Support
- High Level language
- Extensible Feature
- Easy to Debug

5.4 PARTS OF PYTHON:

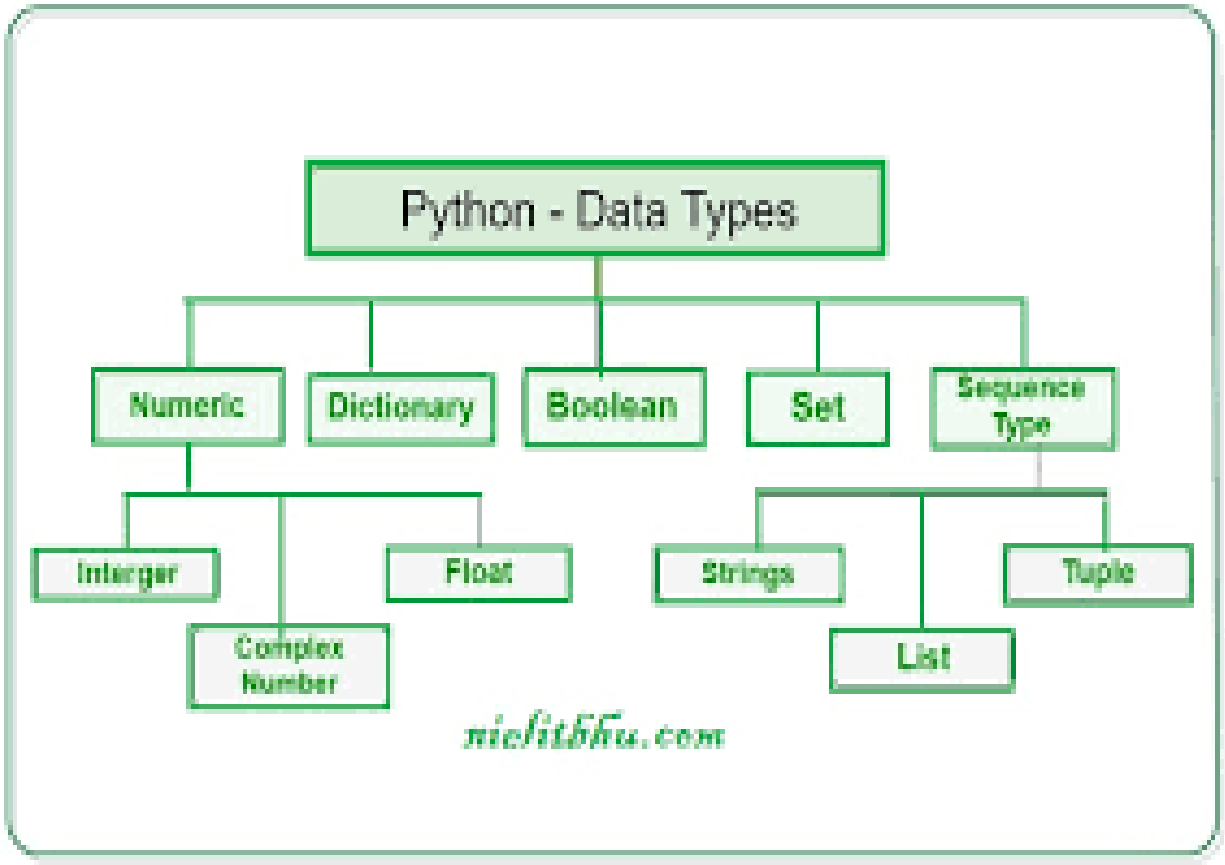


Fig 5.1 Parts of Python

5.5 THE CORE FEATURES OF THE PYTHON:

Easy to learn: Python's syntax is simple and easy to understand, making it an ideal language for beginners.

Interpreted: Python is an interpreted language, which means that code can be executed without the need for compilation. This makes it easy to write and test code quickly.

Cross-platform: Python code can be run on a variety of operating systems, including Windows, Mac, and Linux.

Large standard library: Python comes with a large standard library that provides a wide range of functionality for tasks such as file handling, networking, and regular expressions.

Dynamic typing: Python is dynamically typed, which means that variable types are determined at runtime. This makes it easier to write and modify code quickly.aa

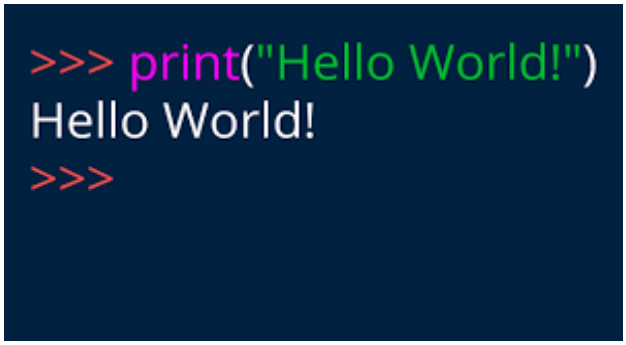


Fig.5.2 PYTHON, "Hello World."

CHAPTER: 6

IMPLEMENTATION PLATFORM

6.1 PLATFORM/EDITOR:

Editor: Visual Studio Code:

Visual Studio Code (VS Code) is a source code editorial manager created by Microsoft that can be run on Windows, macOS, and Linux. It is free, open-source, and offers help for investigating just as implicit Git variant control, linguistic structure features, scraps, etc. The UI of the VS Code is exceptionally adjustable, as clients can change to various subjects, console alternate ways.

Visual Studio Code is a lightweight but powerful source code editor which runs on your desktop and is available for Windows, macOS and Linux. It comes with built-in support for JavaScript, Typescript and Node.js and has a rich ecosystem of extensions for other languages (such as C++, C#, Java, Python, PHP, Go) and runtimes (such as .NET and Unity).

Features:

VS Code supports a wide array of programming languages from Java, C++, and Python to CSS, Go, and Docker file. Moreover, VS Code allows you to add on and even creating new extensions including code linters, debuggers, and cloud and web development support.

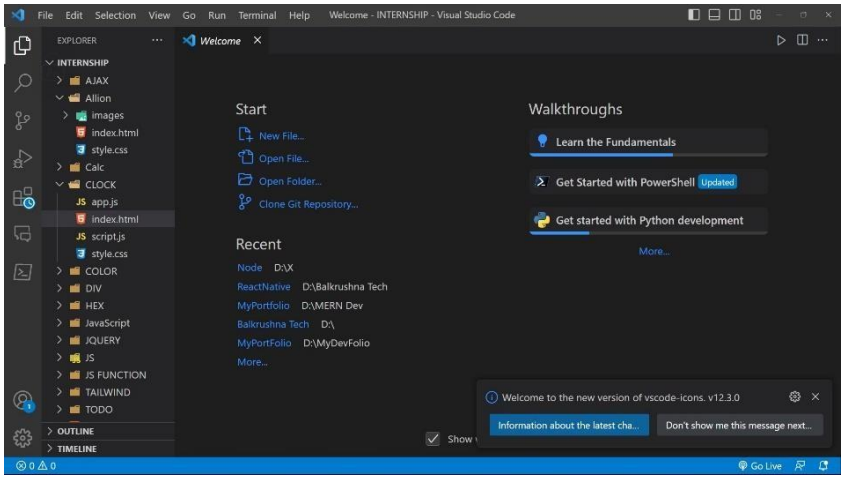


FIG 6.1

CHAPTER: 7

PROJECTS/ASSIGNMENT CARRIED OUT DURING INTERNSHIP

➢ Health System:

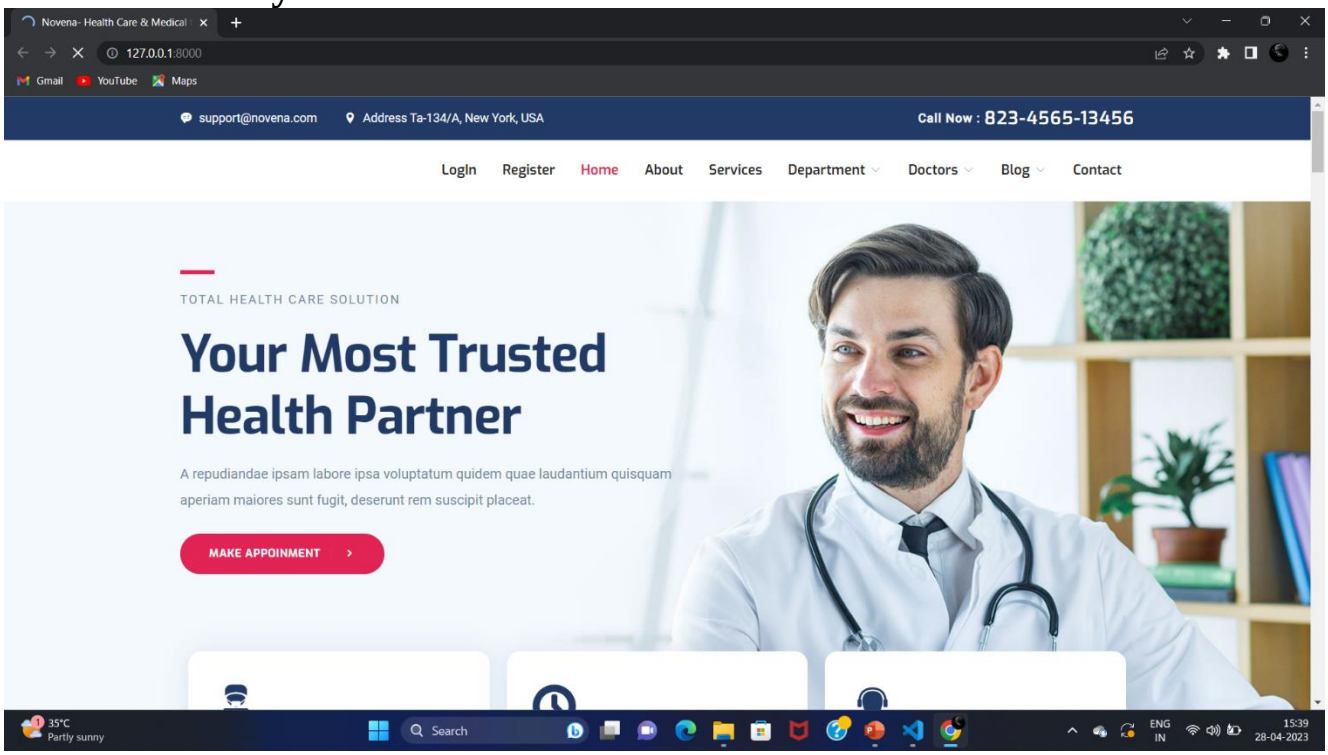


Fig. 7.1 .Health System Cover page

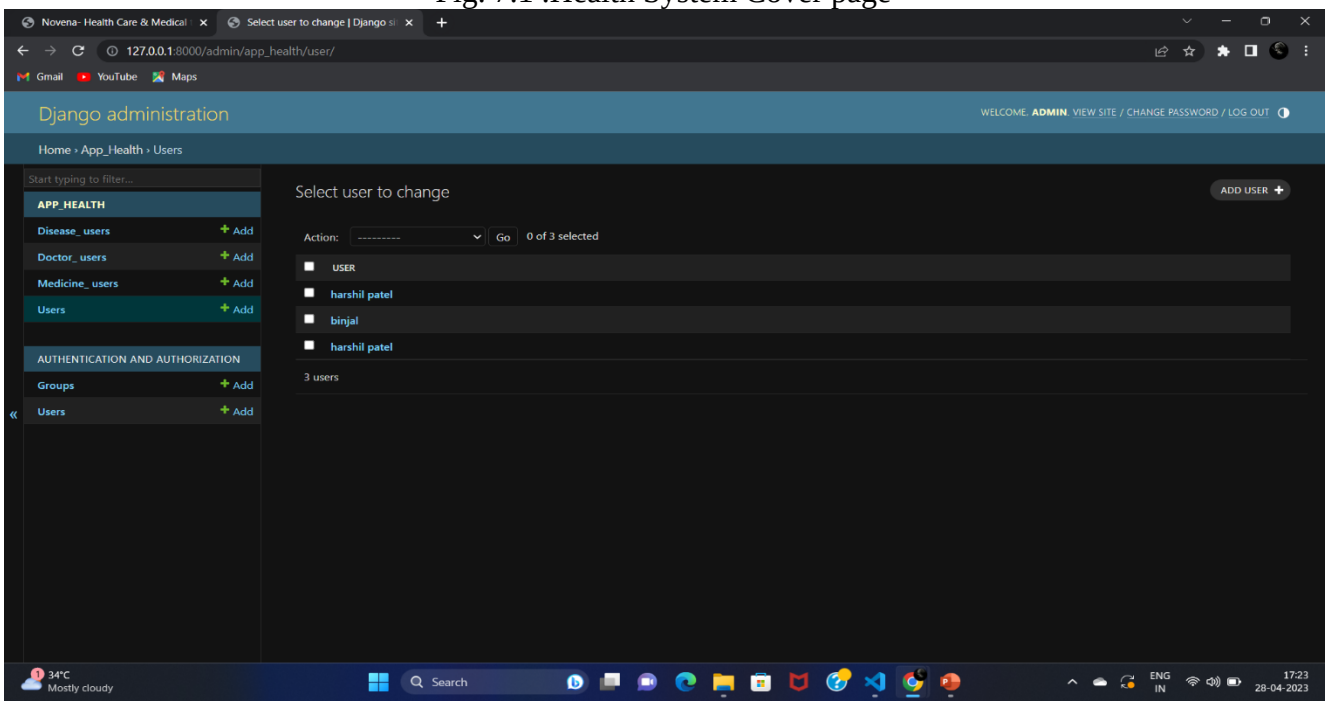


Fig. 7.2 Admin

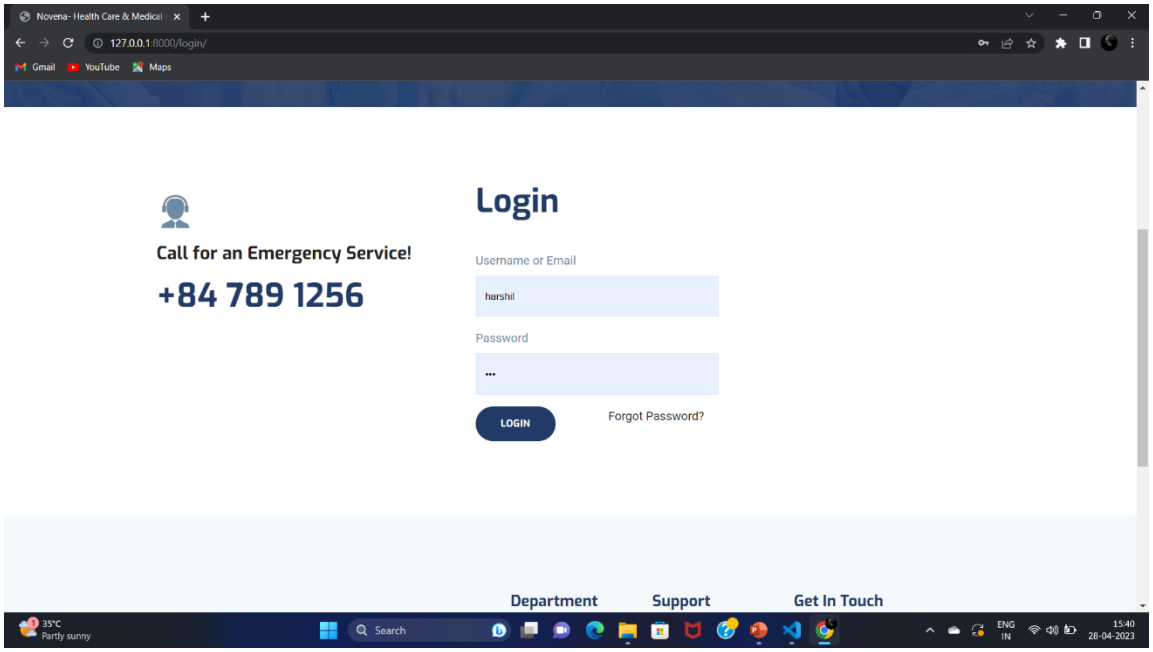


Fig. 7.3 -Login

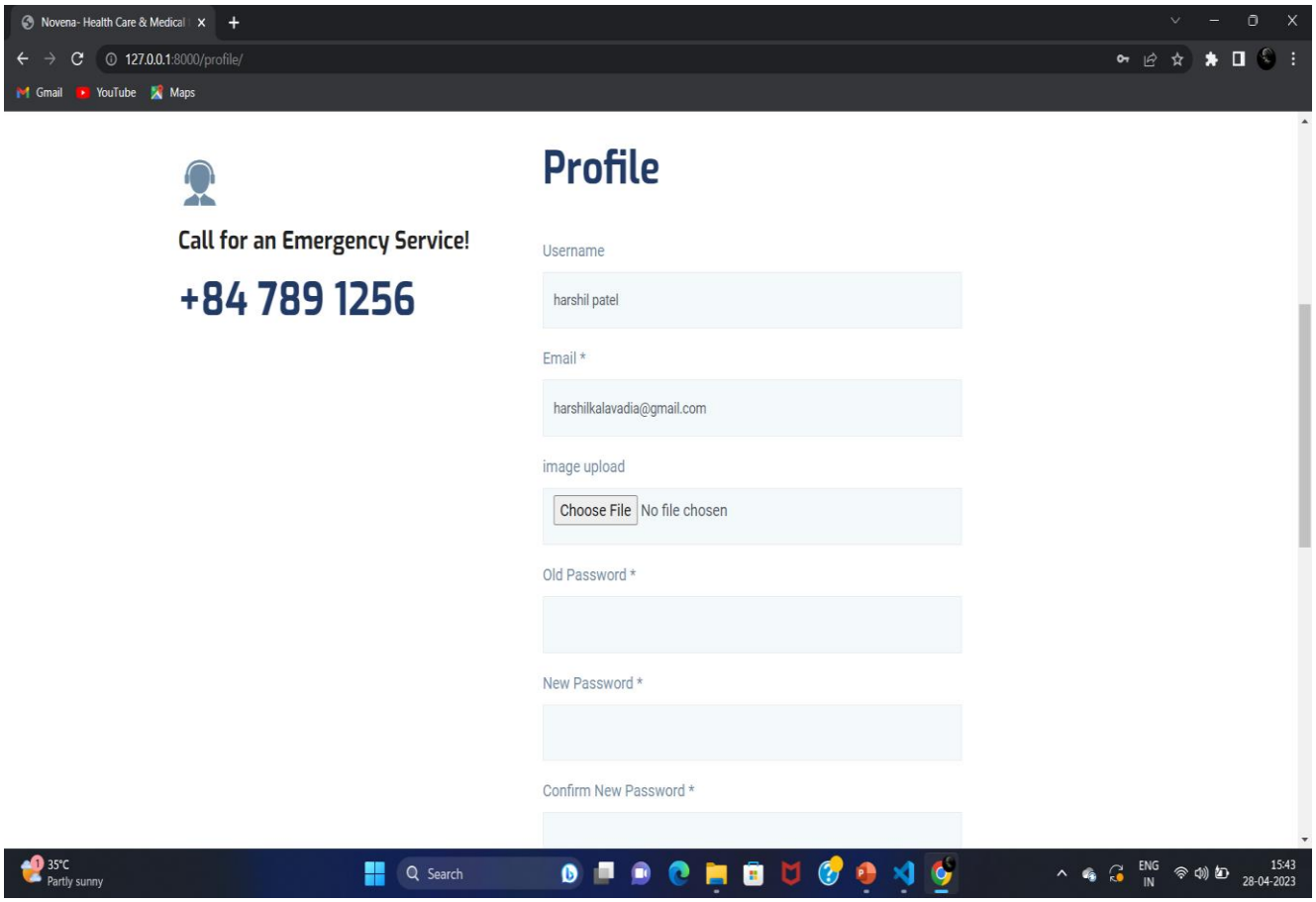


Fig. 7.4 Profile

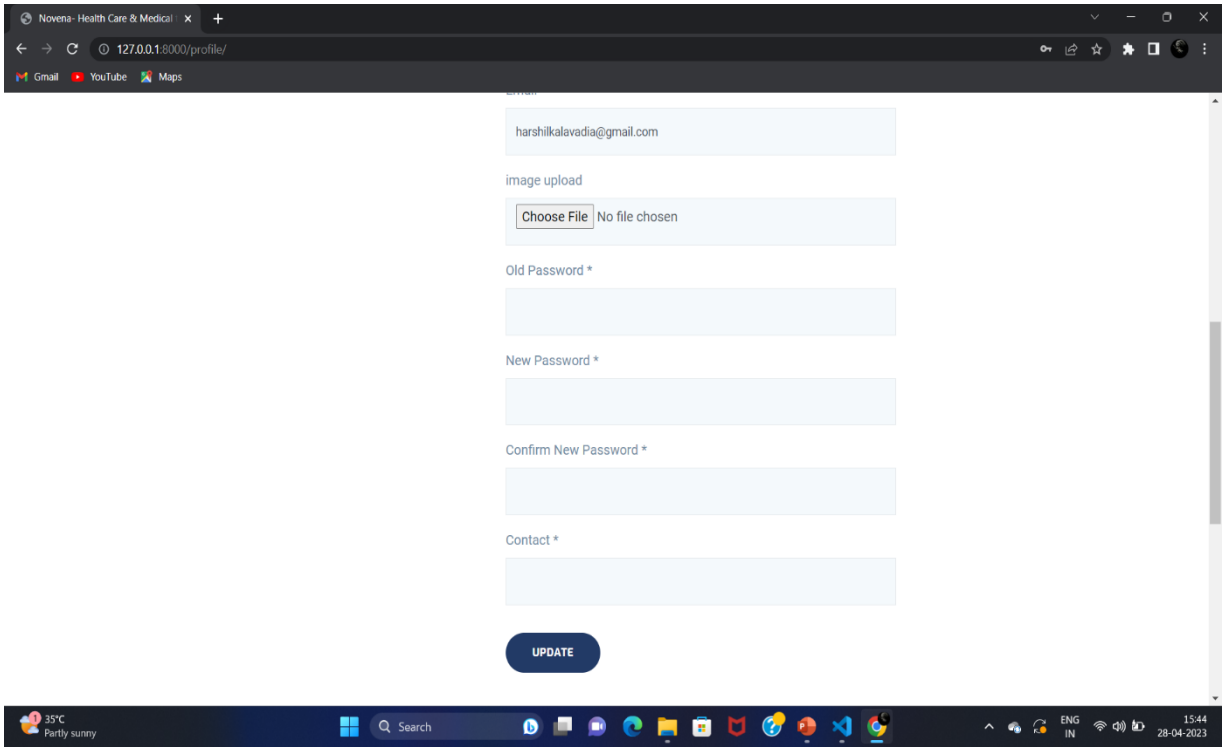


Fig. 7.5 Profile(1)

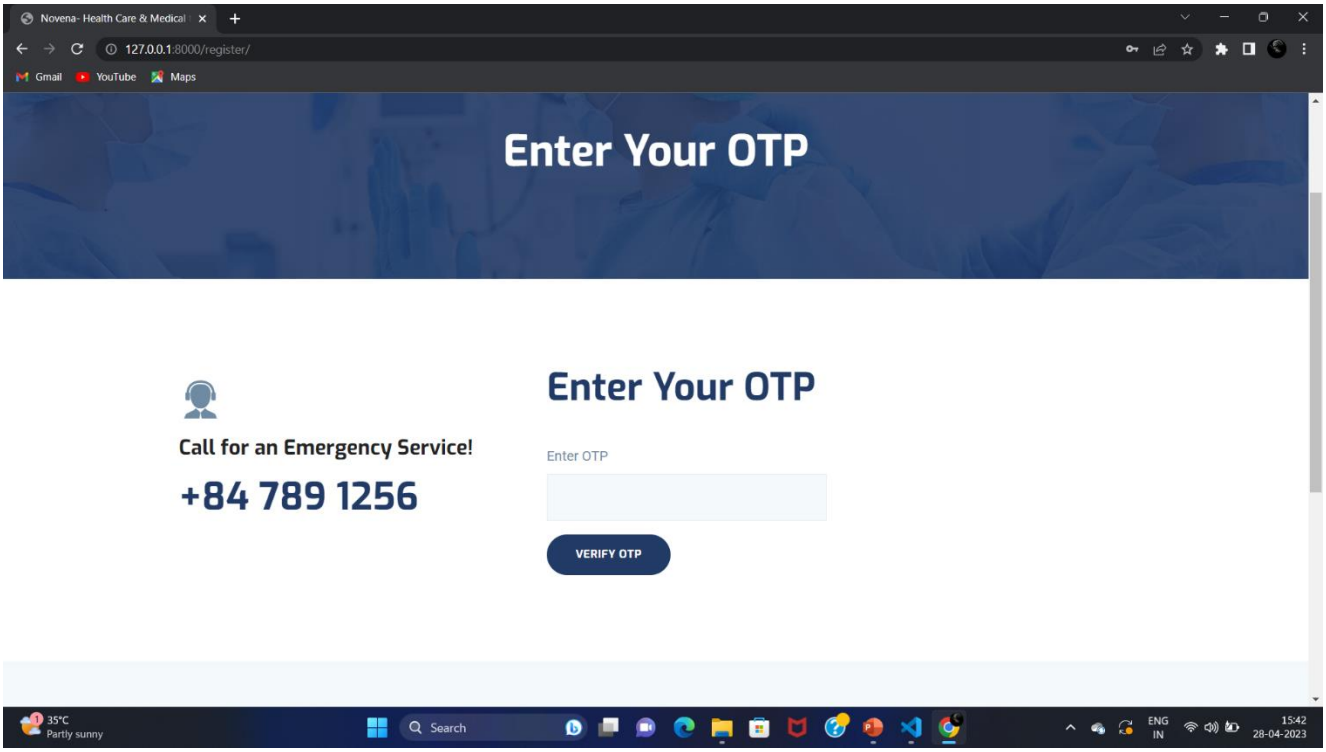


Fig. 7.6 OTP page

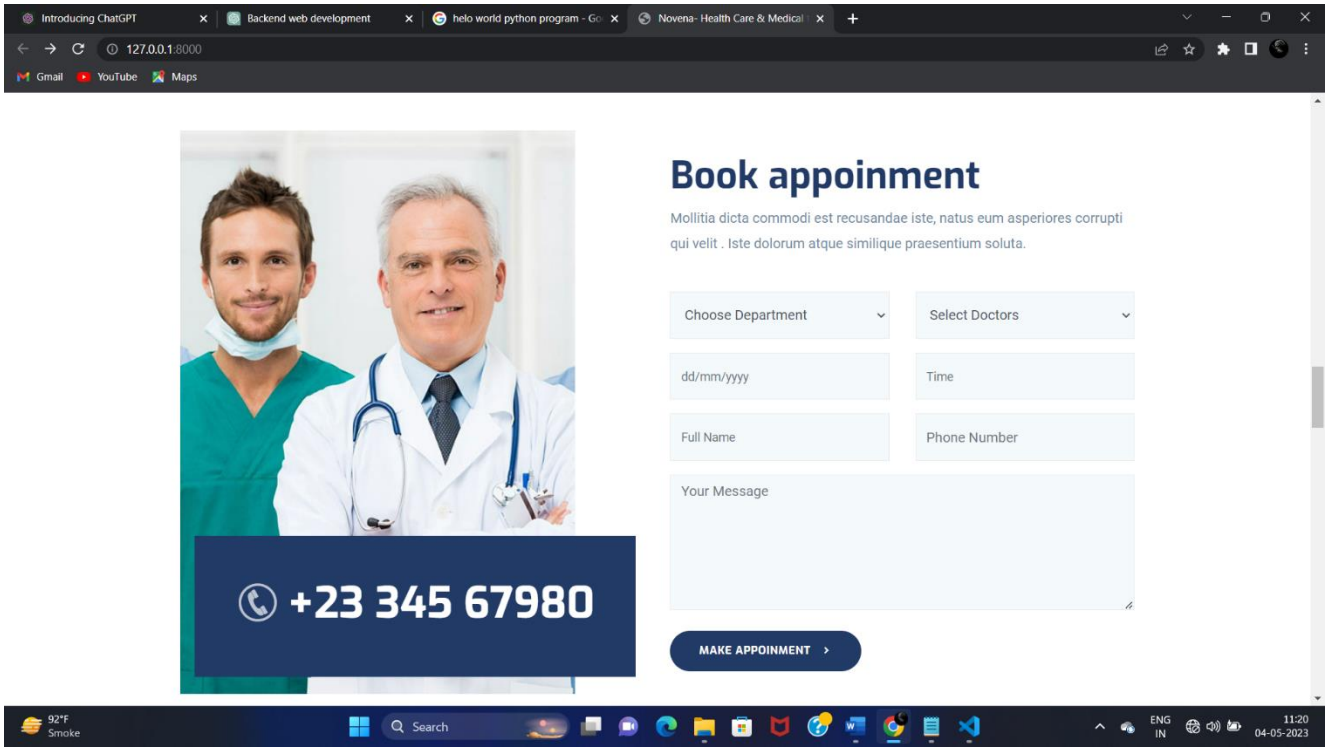


Fig. 7.7 Appointment

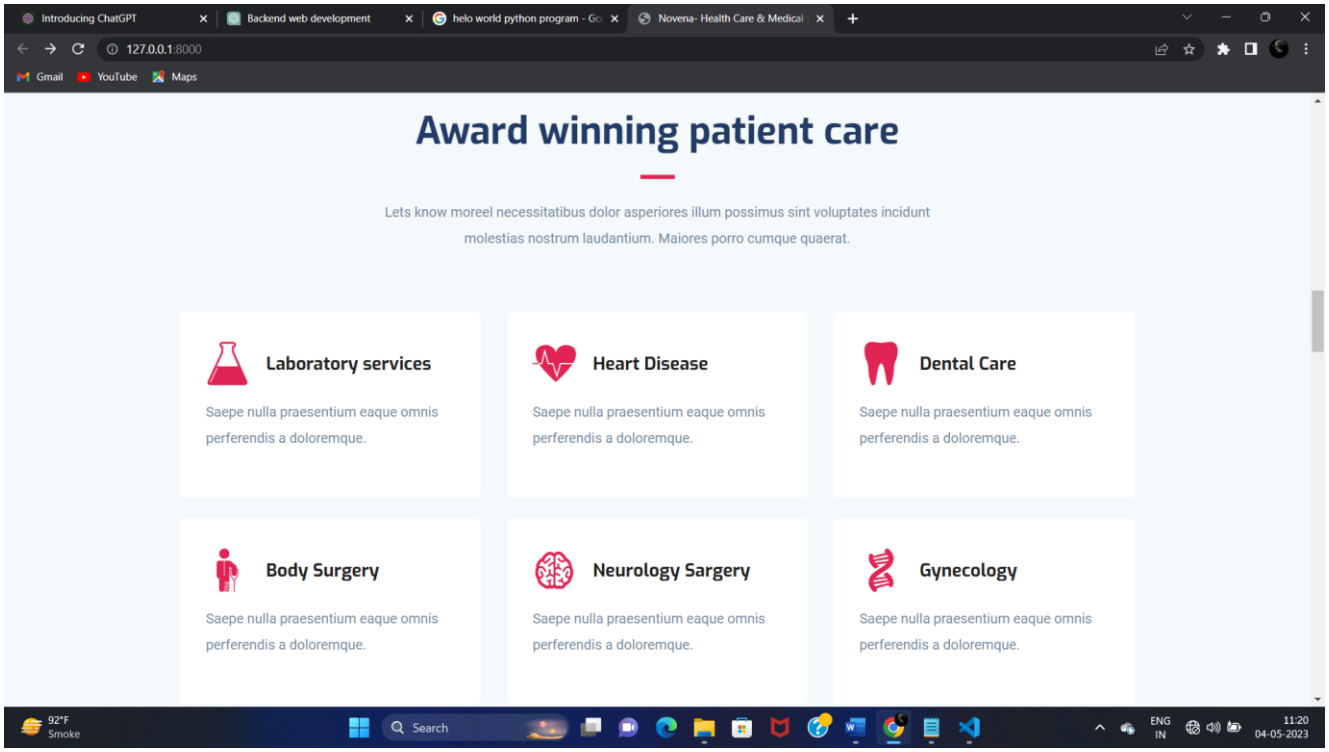


Fig. 7.8 Service

EVIB E-COMMERCE

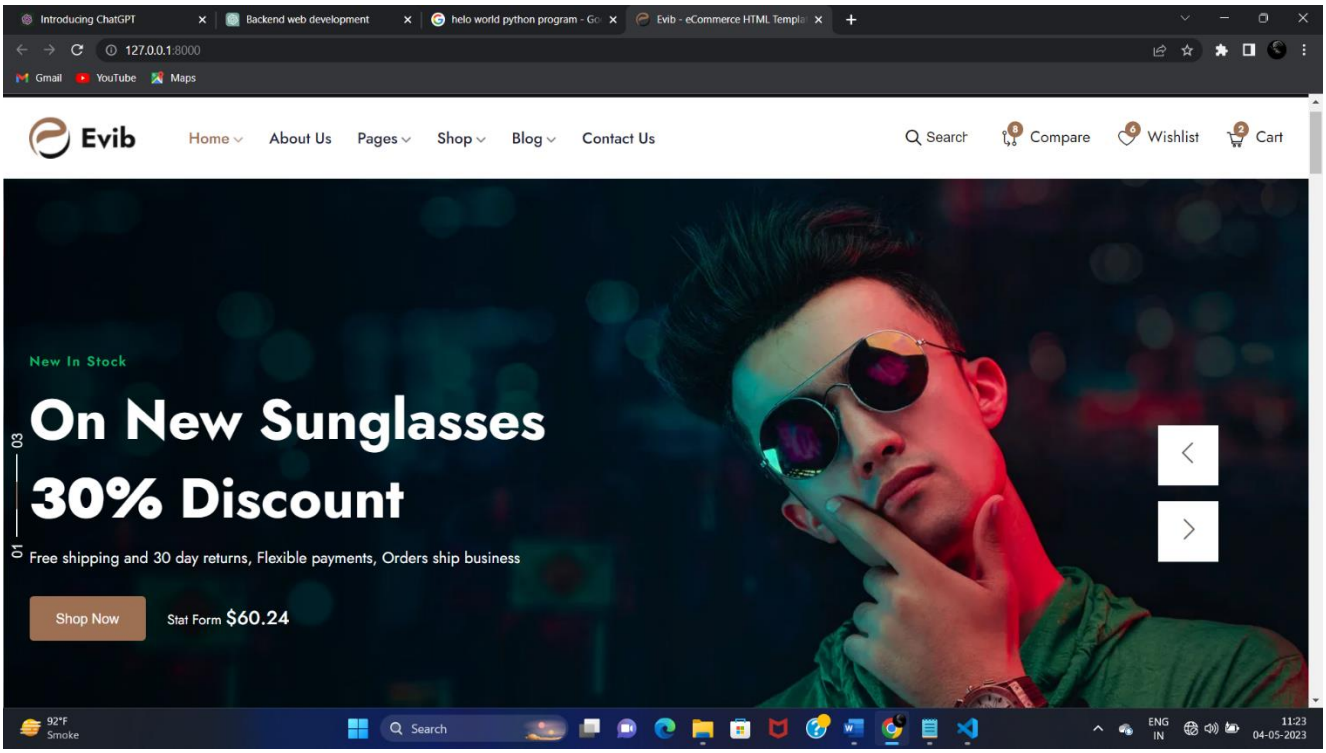


Fig. 7.9 Home

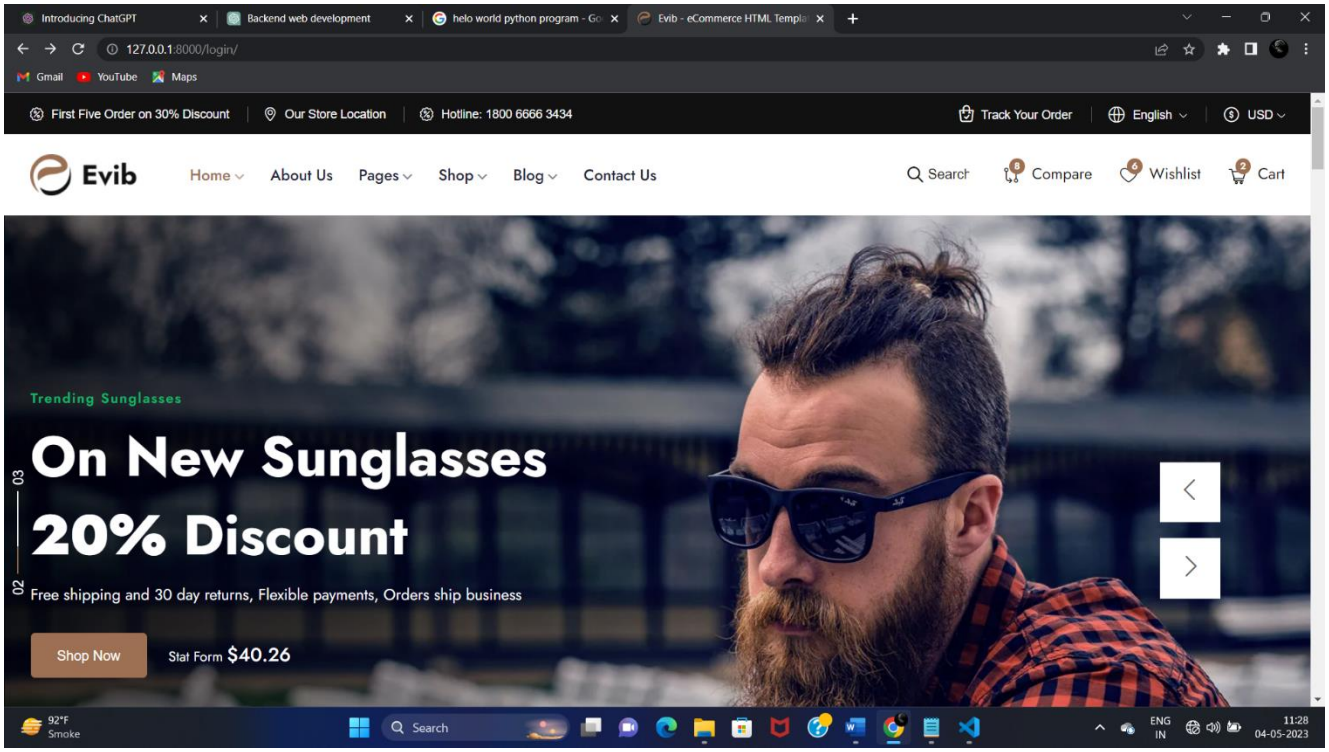


Fig. 7.10 Header

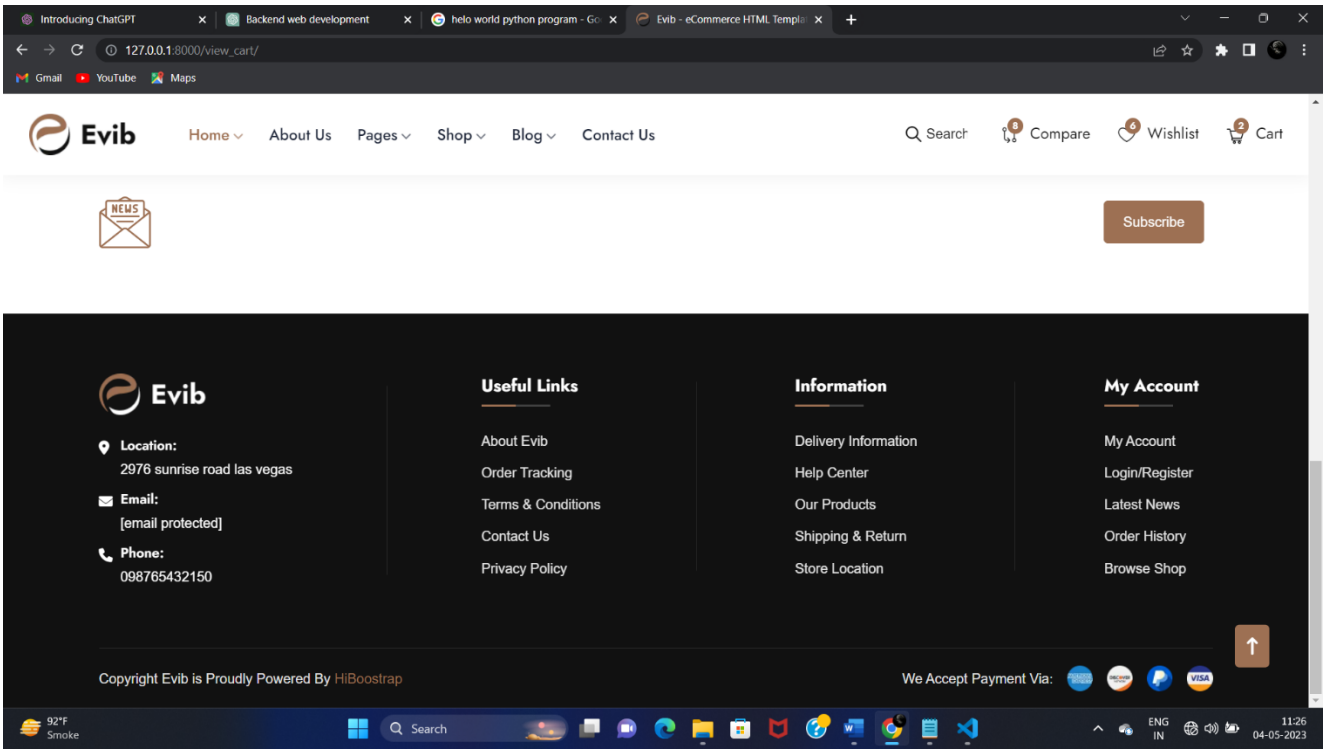


Fig. 7.11 Footer

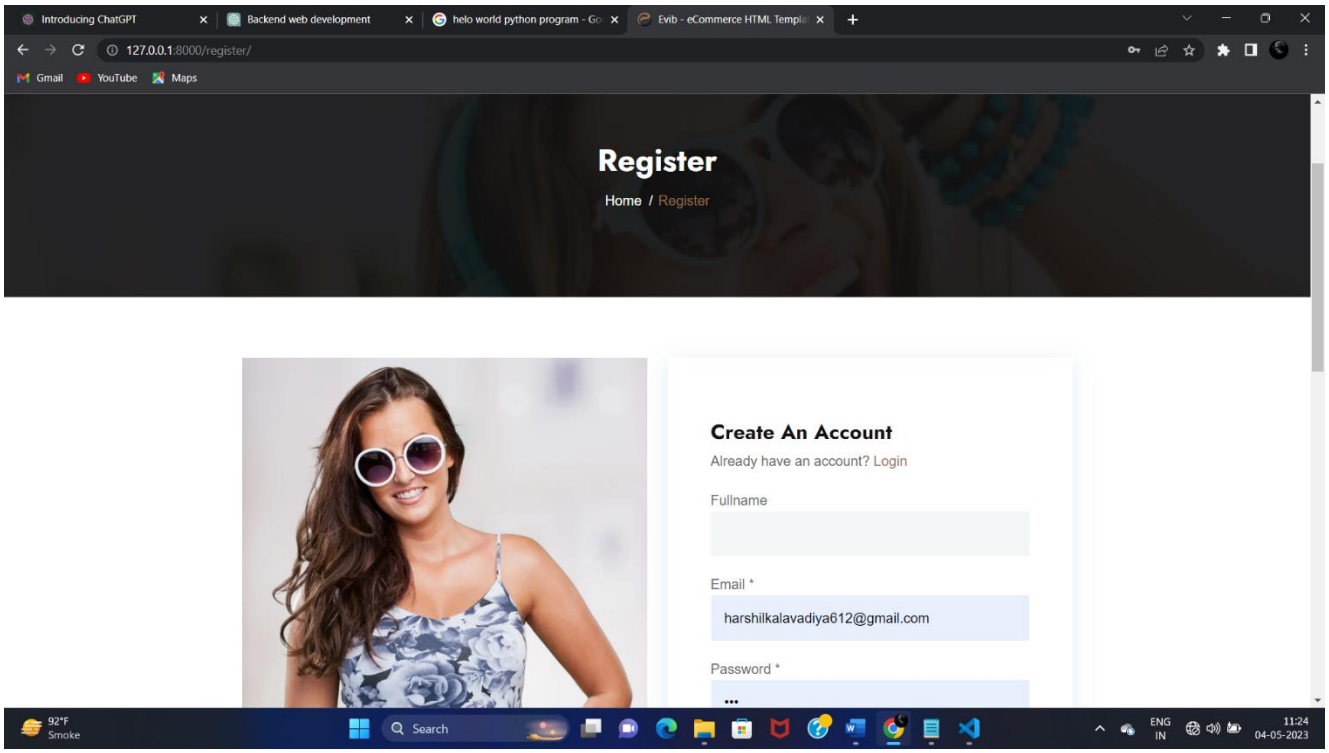


Fig. 7.12 Register page

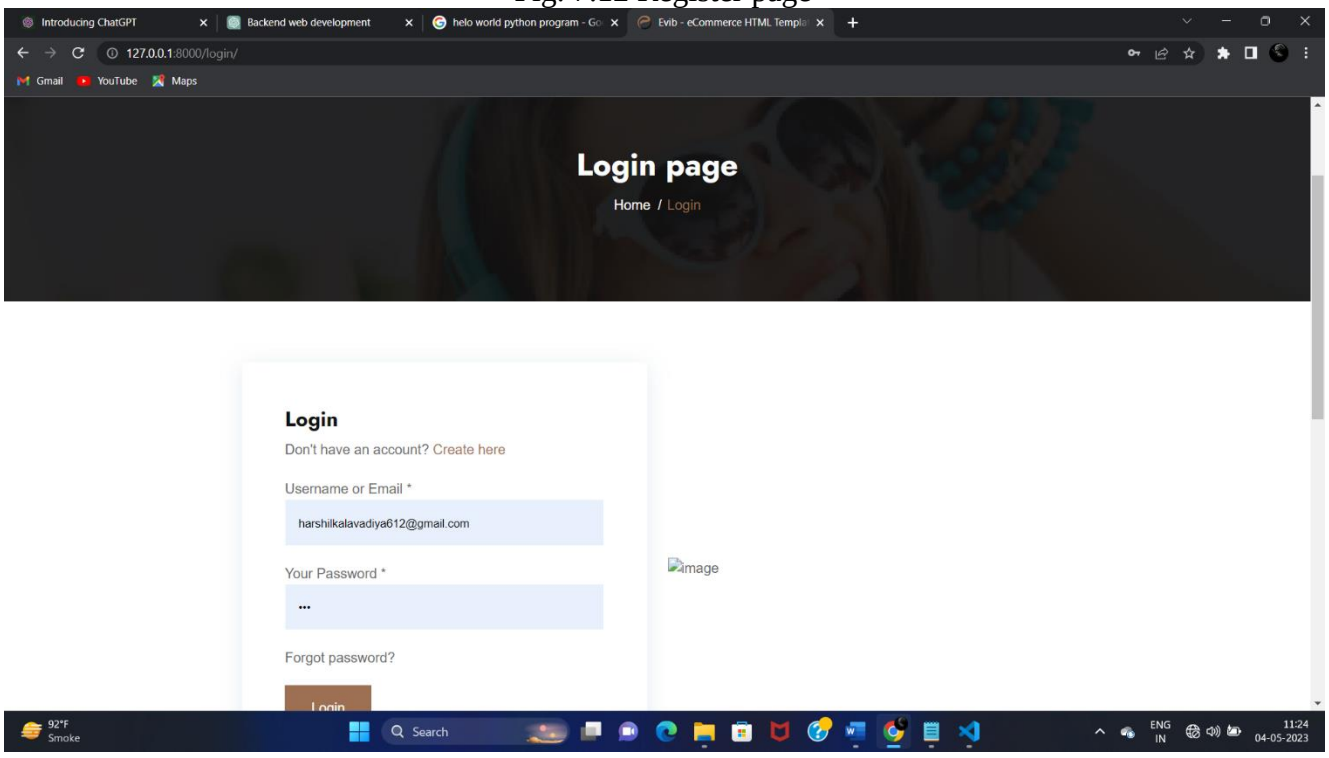


Fig. 7.13 Login

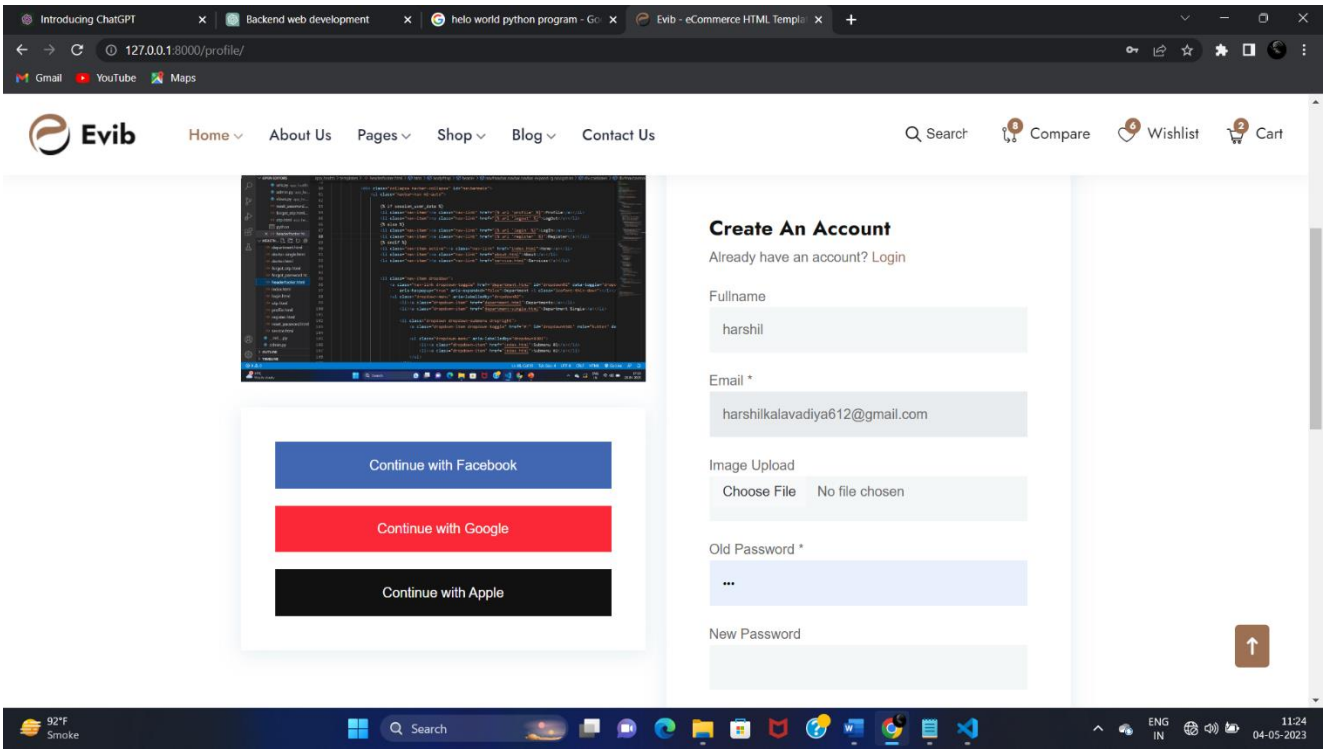


Fig. 7.14 Profile

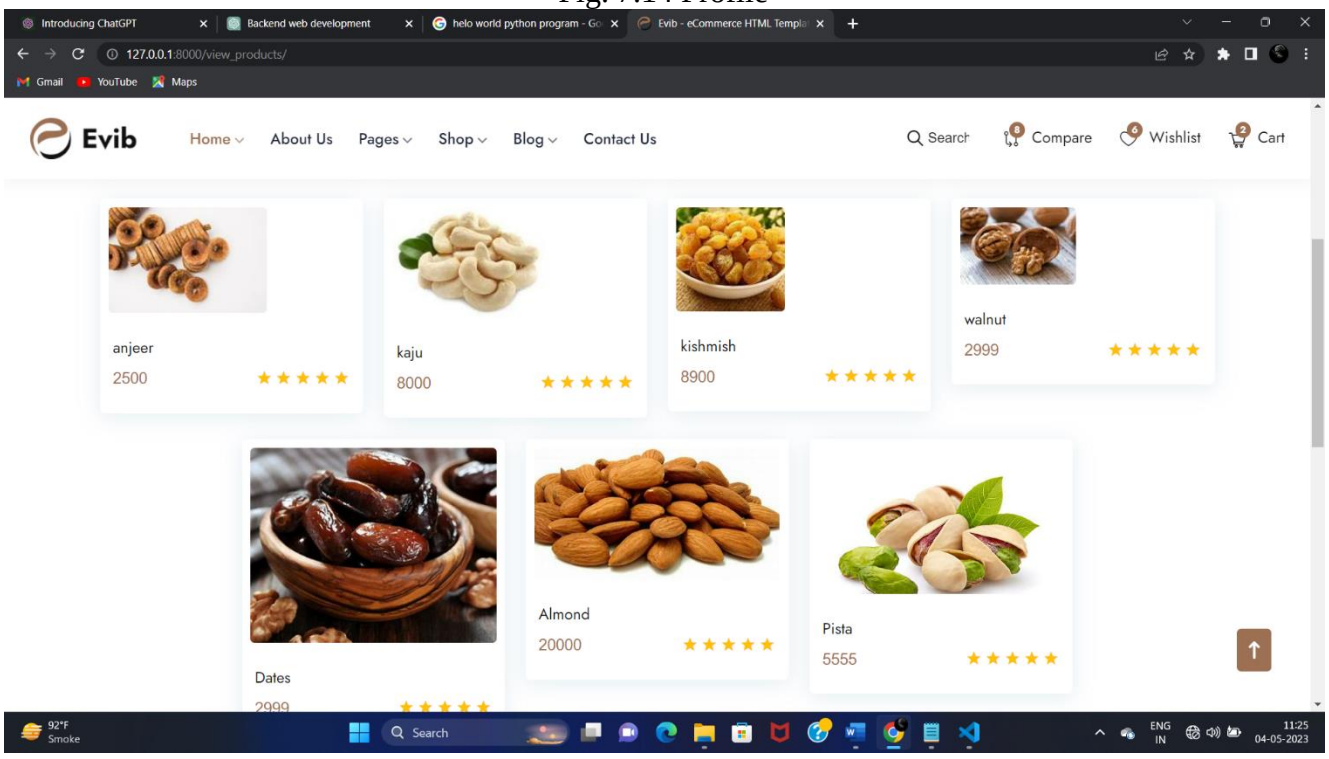


Fig. 7.15 Product Page

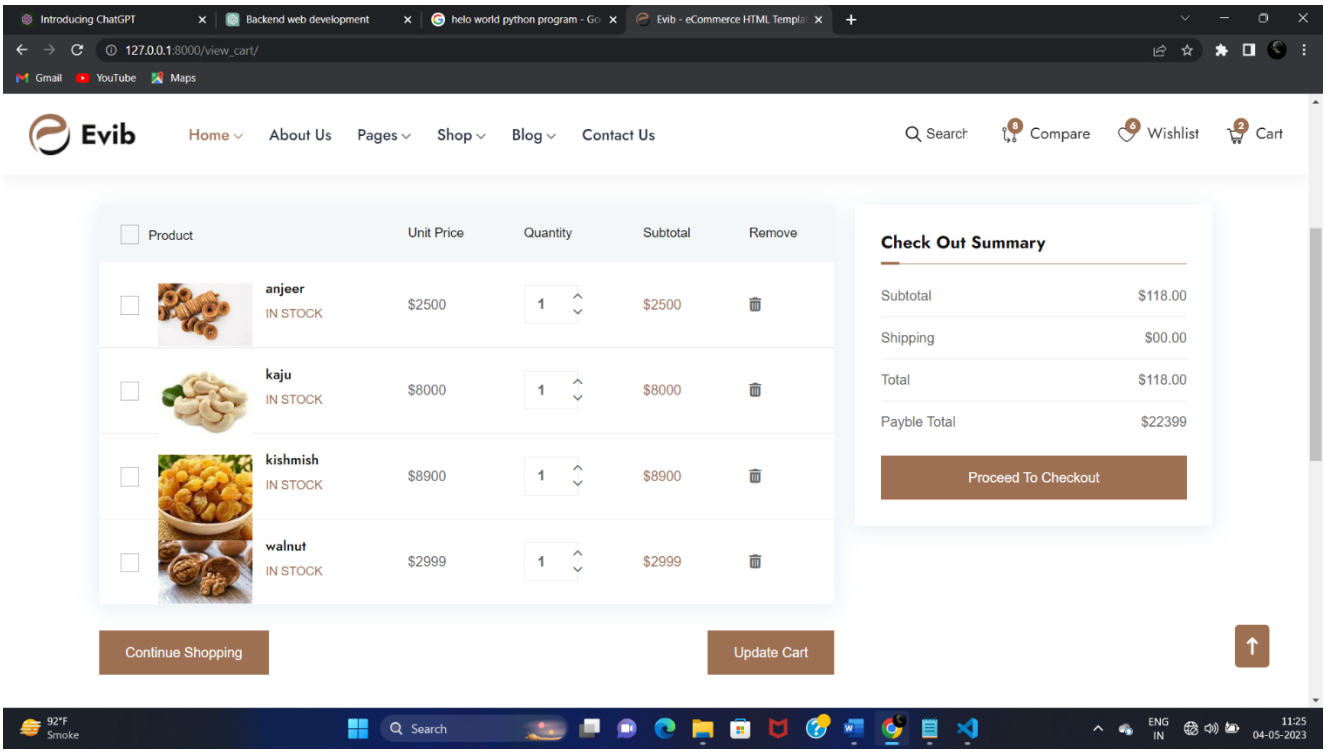


Fig. 7.16 Cart page

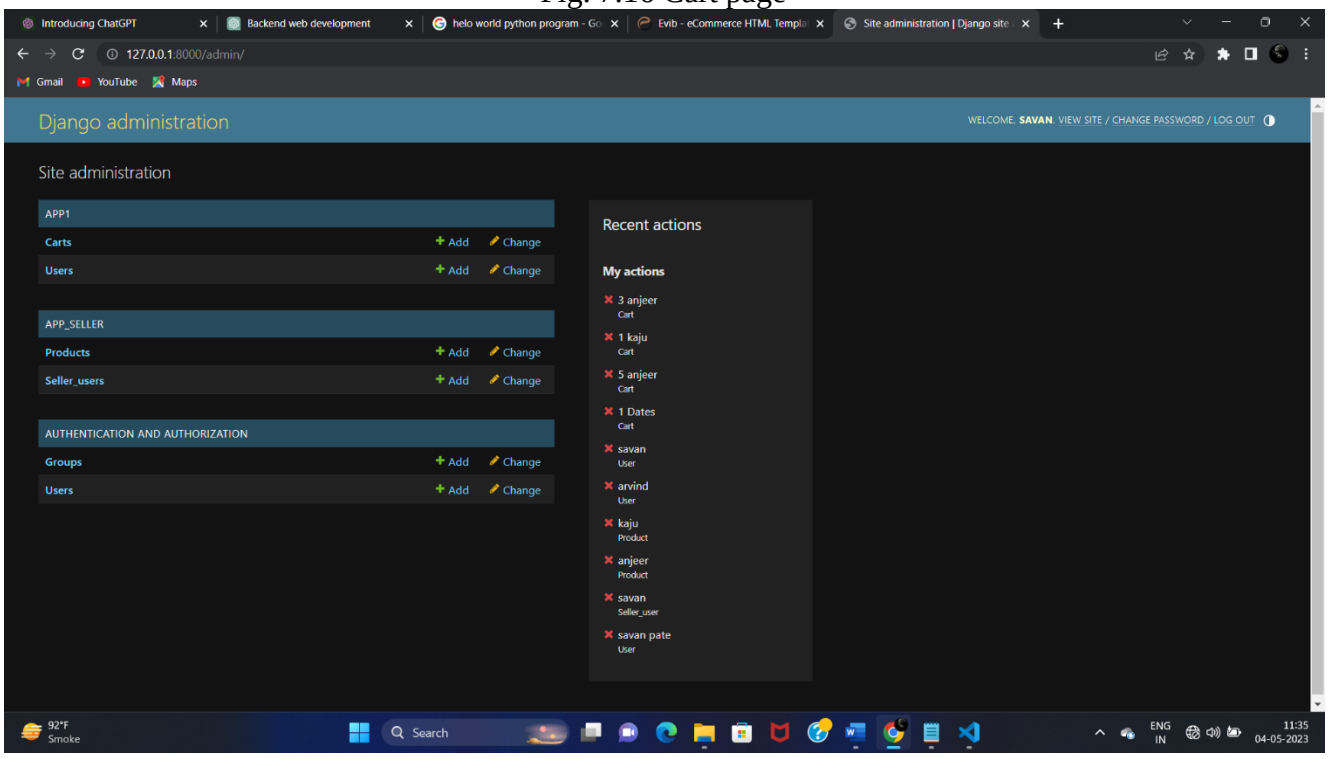


Fig. 7.17 Admin Panel

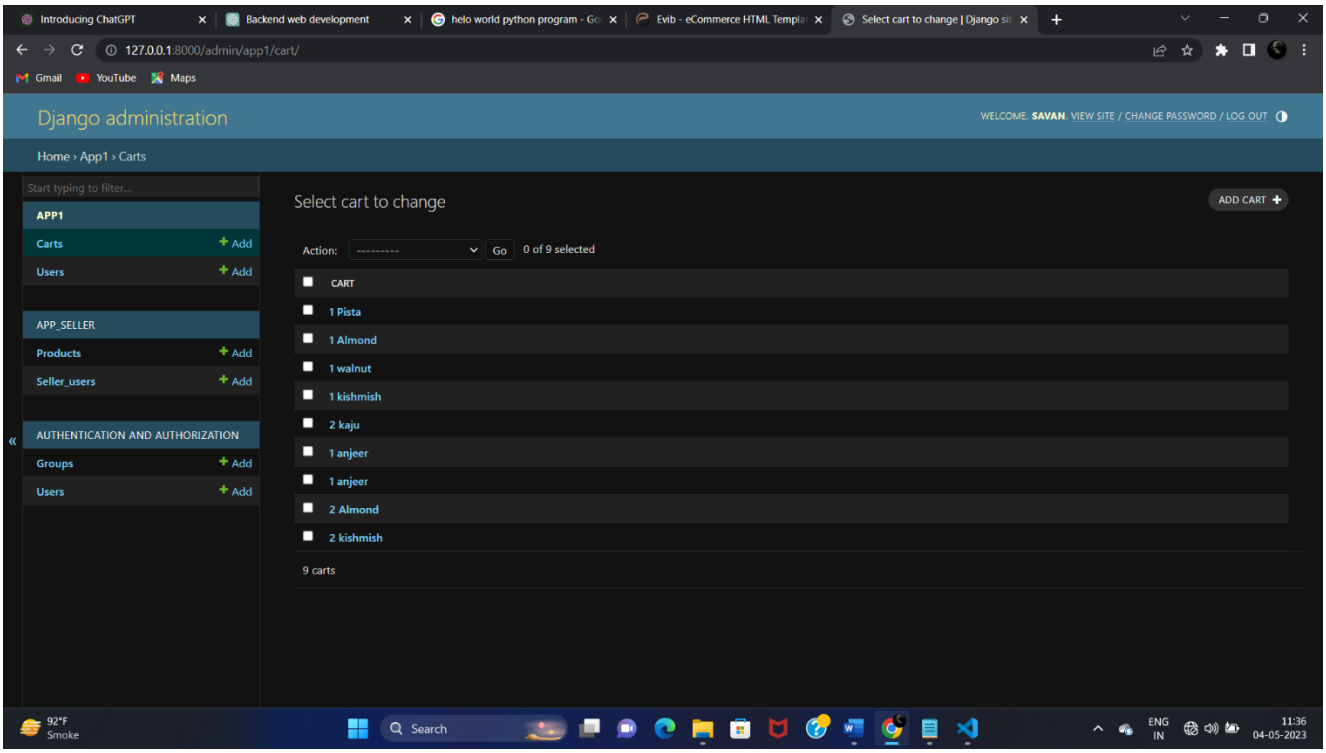


Fig. 7.18 Admin Panel Cart

CHAPTER: 8
Overall Experience

8 Technical Experience:

As a trainee in Back End Development With Python-Django, I had the opportunity to work on a project that required me to use these technologies to build a robust and scalable web application.

In the health system part of the project, I was responsible for designing and implementing the backend architecture of the application. I started by creating a database schema and using Django to generate the data models. Then, I wrote the API controllers that would handle requests from the frontend and return the appropriate data. I also implemented security features such as user authentication and authorization using Django libraries.

In the EVIB E-Commerce, of the project, I was responsible for building the back end user interface. I started by creating the components and services that would interact with the API I also implemented features such as client-side form validation and data binding to provide aseamless user experience.

Overall, my experience as a trainee in with Back End Development With Python-Django R was very rewarding. I gained a deep understanding of how to design, build, and deploy a robustand scalable web application using these popular technologies. I am confident that the skills and knowledge I gained during this internship will prepare me well for a career in Back end Development.

8.1Personal Experience:

During my 3-month internship as a back end developer using Python with Django, I had the privilege of being mentored by Mr. Sugandh Gupta, an experienced developer who played a crucial role in guiding me through the learning process.

My mentor provided me with valuable insights into the latest trends and technologies in web development and helped me understand the nuances of designing and building robust and scalable web applications using Back End Development tools. He was patient in explaining complex concepts and always encouraged me to ask questions, which helped me gain a deeper understanding of the subject matter.

Throughout the internship, my mentor provided me with hands-on guidance and feedback on my work, helping me identify areas where I could improve and providing me with valuable advice on how to tackle complex problems using Back end Development tools. He also challenged me to think outside the box and encouraged me to experiment with new ideas, which helped me expand my horizons as a developer.

Working with my mentor was not only a valuable learning experience, but also a rewarding personal experience. He was always approachable and willing to lend a helping hand, and his passion for web development was infectious. I truly believe that the knowledge and skills that I gained through this internship will be invaluable as I move forward in my career in Back End Development.

Overall, my internship experience was transformative, and I am grateful for the opportunity to have worked with such a knowledgeable and supportive mentor. I believe that this experience has prepared me well for a career in back end Development, and I am excited to continue building on the foundation that I gained during this internship.

CONCLUSION

In conclusion, the internship in Back End Development with python - Django tools has provided me with invaluable practical experience in designing, building, and deploying web applications. With a combination of theoretical and practical learning, I gained hands-on experience in back-end development, preparing me well for a career in Back end Development.

Throughout the internship, I had access to experienced mentors who provided me with valuable guidance and feedback. This helped me to develop a portfolio of work that showcases my skills to potential employers and prepares me for the challengesof working in the industry.

Overall, the internship has been a transformative experience for me as an aspiring Back End Developer, providing me with practical experience that will be invaluable as I launchmy career in this exciting field. I am grateful for the opportunity to have worked with such knowledgeable mentors and to have gained hands-on experience in Back End Development with python -Django tools. I am excited to continue building on the skills and knowledge that I have gained during this internship and to contribute to the dynamic and ever-changing field of Back End Development.

REFERENCE

For HTML, CSS:

https://www.w3schools.com/cs/index.php
https://www.w3schools.com/cs/index.phphttps://getbootstrap.com/docs/5.1/getting-started/introduction
https://stackoverflow.com/
https://www.tutorialspoint.com/javascript/index.html

For Python,Django:-

https://openai.com/blog/chatgpt