VISVESVARAYA TECHNOLOGICAL UNIVERSITY
"Jnana Sangama", Belagavi-590 018, Karnataka

Internship Report
on

E-Commerce Website

Submitted in partial fulfilment of the requirements for the award of the degree of
Bachelor of Engineering
in
Computer Science & Engineering

Submitted by

1BI19CS011   **AKASH JAIN**

Internship Carried Out
at
Exposys Data Labs Pvt. Ltd.

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Certificate

Certified that the Internship (18CSI85) work entitled "**E-COMMERCE WEBSITE**" carried out by Mr. Akash Jain (1BI19CS011), a bonafide student at Bangalore Institute of Technology in partial fulfillment for the award of Bachelor of Engineering in Computer Science & Engineering of the **Visvesvaraya Technological University**, **Belagavi** during the academic year 2022-2023. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library.

The Internship report has been approved as it satisfies the academic requirements in respect of Internship work as prescribed for the said degree.

Dr. Maya B.S

Assistant Professor
Department of CSE, BIT

Dr. Girija J.

Professor and Head
Department of CSE, BIT

External Viva

Name of the examiners, signature with date

1.

2.

Internship Completion Certificate by Exposys Data Labs Pvt. Ltd. :

Exposys Data Labs

Certificate of Internship

TO WHOM IT MAY CONCERN

This is to certify that **Mr. AKASH JAIN** has completed internship programme on **"Full Stack Developer"** from 05.02.2023 to 04.03.2023.

Project Title – **E-Commerce Website**

He took keen interest in the work assigned and successfully completed it. During the period of internship, we found him to be punctual, hardworking and inquisitive.

We wish him luck and success in all his future endeavours.

Y Vishnuvardhan
Chief Director

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DECLARATION

I hereby declare that the Internship work entitled **"E-Commerce Website"** submitted to Visvesvaraya Technological University, Belagavi, during the academic year 2022-2023, is a record of work done by me under the guidance of **Dr. Maya B.S** Assistant Professor, Department of Computer Science & Engineering, BIT and this Internship work is submitted in the partial fulfillment of the requirements for the award of the degree of Bachelor of Engineering in Computer Science & Engineering.

Date: 28-04-2023   Akash Jain

Place: Bengaluru, Karnataka   1BI19CS011

ACKNOWLEDGMENT

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&
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Chapter 1
About the Organization & Department

1.1 About the Organization

Exposys Data Labs founded in 2017 aims to Solve real world business problems like Automation, Big Data and data Science. our core team of experts in various technologies help businesses to identify issues,oppurtunities and prototype solutions using trending technologies like AI, ML, Deep Learning and Data Science. we follow a human-focussed and not technology driven approach to achieve success in our clients endeavours.

Specialized in enabling organizations meet their goals through our customized solutions in:

- Software Development
- Web Application Development
- IT out sources services

1.2 Objectives

Exposys Data Labs builds applications for business and customers with a motto of:

"Our discoveries are beyond belief and if you're with us, you'll discover a newer way to think!"

1.3 Strengths

What Exposys Data Labs does?

- **DELIVER VALUE & QUALITY:** believe in creating value-based solutions with world class quality which can be delivered in flexible timelines.

- **HAVE STRONG CAPABILITIES:** blend cutting edge technologies with the potential business acumen to deliver quality e-business solutions for online enterprises.

- **UNDERSTAND WHAT YOU NEED:** believe in transforming your imagination into reality and are well-equipped brand with an experienced team to deliver your dream.

- **CREATE YOUR DIGITAL IDENTITY:** with the combination of business domain knowledge and technology, we deliver result-oriented solutions in a cost-effective manner to maximize your productivity

1.4 About the Department

<u>Web Application development department</u>:

A Web Application (web app) is an application program that is stored on a remote server and delivered over the internet through a browser interface. Web services are web apps by definition and many, although not all, websites contain web apps.

Web applications do not need to be downloaded since they are accessed through a network. Users can access a web application through a web browser, such as Google Chrome, Mozilla Firefox or Safari.

- Exposys Data Labs is focused on helping brands grow through digital transformation services.
- Their software and hardware, design and development services range from business-critical applications to powerful Augmented and Virtual Reality applications that push the boundaries of consumer, industrial, experiential, and commerce applications for the world's most innovative brands.
- As a recognized global leader in development and design, their proactive growth model empowers their clients to exceed their goals while integrating their team with theirs.
- They combine powerful technologies, stunning visuals, and innovative strategies to tell your organization's story while delivering data-driven results.

Chapter 2

Introduction

Chapter 2

Introduction

2.1 Overview

- Online shopping is a form of electronic commerce which allows consumers to directly buy goods or services from a seller over the Internet using a web browser or a mobile app.

- Consumers find a product of interest by visiting the website of the retailer directly or by searching among alternative vendors using a shopping search engine, which displays the same product's availability and pricing at different e-retailers.

- An online shop evokes the physical analogy of buying products or services at a regular "bricks-and mortar" retailer or shopping center, the process is called business-to-consumer (B2C) online shopping.

- Online customers must have access to the Internet and a valid method of payment in order to complete a transaction, such as a credit card, a debit card, or other means.

2.2 How the website works :

- A user enters a URL into a browser (for example, Google.com), this request is passed to a domain name server.

- The domain name server returns an IP address for the server that hosts the Website (for example, 68.178.157.132).

- The browser requests the page from the Web server using the IP address specified by the domain name server.

- The Web server returns the page to the IP address specified by the browser requesting the page. The page may also contain links to other files on the same server, such as images, which the browser will also request.

- The browser collects all the information and displays to your computer in the form of Web page.

2.3 Problem statement

To Design and develop a E-Commerce website using various frontend and backend technologies and connecting it to the database .

2.4 Objectives

- Make responsiveness in your web
- Give customers a personalized experience
- Improve webmaster

Chapter 3
System Architecture

Chapter 3
System Architecture

Full stack technology refers to the entire depth of a computer system application, and full stack developers straddle two separate web development domains: the front end and the back end.

The front end includes everything that a client, or site viewer, can see and interact with. By contrast, the back end refers to all the servers, databases, and other internal architecture that drives the application; usually, the end-user never interacts with this realm directly.

- HTML, CSS, Javascript are the popular frontend technologies
- MySql is a popular document database
- Flask is a back-end web application framework for Python
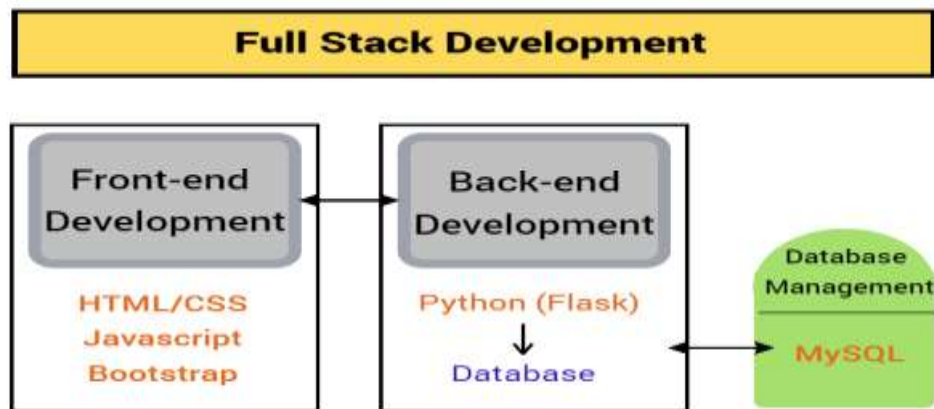
Figure 3.1 Technology
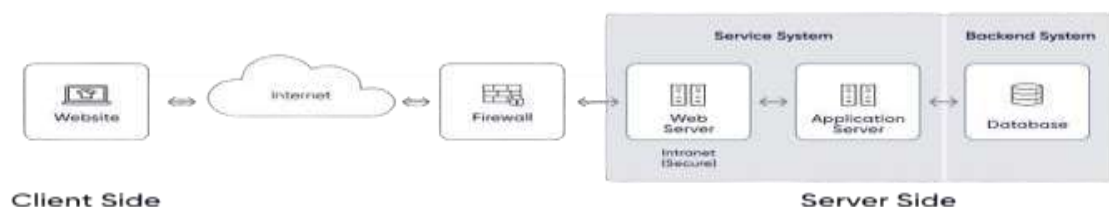
Figure 3.2 System Architecture

The above architecture is the Three-Tier architecture which includes client side, server side and the database.

Fig. 3.1, depicts the technologies which are used in building the E-commerce website.

Frontend, which we will be seeing on the screen as a website layout is made using HTML, CSS where Bootstrap is used to add attractiveness and Javascript is used to make the static website more responsive.

Backend, which is responsible for all the internal working of the website is made using Flask module of Python.

To store the customer's login details and the products information, MySQl as database is used.

Fig. 3.2, depicts the overview of how the website works internally, which consists of two sides – client and server side.

Client side is what user view on the screen, server side is what happens in the backend when a user use any website.

An Internet is required when using a website and firewall is used for the security purpose from viruses.

Application server is activated when an App is launched for a respective website.

Chapter 4
Tasks Performed

Chapter 4
Tasks Performed

During the internship I worked on the frontend part of E-commerce Website.

I worked on the following sections –

- Created the Navigation Bar on the homepage
- Worked on Features & Products section of the website
- Used Bootstrap templates to make design more attractive
- Routing of the different sections on the same page
- Participated in all over overview of the website –
  - ➢ Add to Cart functionality
  - ➢ Login page
  - ➢ Backend functionality (Database connection to the backend)
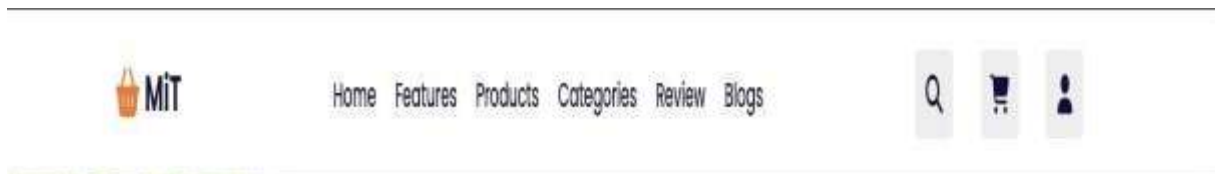
Figure 4.1 Navigation Bar

Figure 4.2 Search Box

Fig. 4.1, depicts the Navigation Bar which is displayed at the top of the website when a user open it in the browser. It contains different options which are rendered on the website when a user clicks it. MiT is the website logo and other 3 icons are Search, Cart and Profile.

Fig. 4.2, depicts the Search Box displayed when the user click the Search icon in the navigation bar as given in fig. 4.1.

4.1 Homepage –

- I created the frontend for Navigation Bar and when user click any of the options, the user is routed to that particular section.
- I used Bootstrap card template to create Features and Products sections
- I used basic javascript to make more responsive Add to Cart & Login functionality.

4.2 Products section –

- Browse products – User can see all the different products. GET request is done from backend to add products to the cart.
- User can all view rating and the cost of the product on the frontend side.

4.3 Backend Process –

The admin can manage their uploaded products using SQL queries maintained in the database.

- Admin can update a product : For updating the product is first retrieved from the database using product id and it is displayed to the admin. Once the admin is done with the update new data is send to the backend with a PUT request.
- Admin can delete a product : Admin can delete a product by clicking on delete button which will send a DELETE request to the backend.

4.4 Features Section –

Information about the items (Delivery & Payment) :

- Users can read the details of the items available on the website • Users can go through the delivery policy and can avail option of their choice. So on order processing, the option is stored on database and the link of the same is send to the backend by POST request.

- User can also learn about different payment policy and related discount offers(if any). Once the user add any item into the cart the status of the order will be pending in the database. Once the user clear the payment, the status will be approved, and it will be shown in the frontend.

4.5 Other Functionalities –

- User login : User credentials are captured and POST request is send to the backend to verify the credentials.

- Add to Cart : Users can view the products added into the cart using GET request in the backend and when the user click on the checkout button, a GET request is sent to the backend for further steps.

- Footer : A wholesome display of the information and the related links of the social media of the company.

Chapter 5

Tools/Technologies

Chapter 5
Tools/Technologies

5.1 HTML

The HyperText Markup Language or HTML is the standard markup languages for documents designed to be displayed in a web browser. It is often assisted by technologies such as Cascading Style Sheets (CSS) and scripting languages such as JavaScript.

5.2 CSS

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language such as HTML or XML (including XML dialects such as SVG, MathML or XHTML). CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.

5.3 Bootstrap

Bootstrap is an HTML, CSS and JS library that focuses on simplifying the development of informative web pages (as opposed to web applications). The primary purpose of adding it to a web project is to apply Bootstrap's choices of color, size, font and layout to that project. Bootstrap provides basic style definitions for all HTML elements.

5.4 MySQL

MySQL is an open-source relational database management system (RDBMS). In addition to relational databases and SQL, an RDBMS like MySQL works with an operating system to implement a relational database in a computer's storage system, manages users, allows for network access and facilitates testing database integrity and creation of backups.

5.5 Python (Flask)

Flask is a micro web framework written in Python. It is classified as a microframework because it does not require particular tools or libraries. It has no database abstraction layer, form validation, or any other components where pre-existing third-party libraries provide common functions. However, Flask supports extensions that can add application features as if they were implemented in Flask itself.

5.6 Javascript

JavaScript, often abbreviated as **JS**, is a programming language that is one of the core technologies of the World Wide Web, alongside HTML and CSS. As of 2022, 98% of websites use JavaScript on the client side for webpage behavior, often incorporating third-party libraries. All major web browsers have a dedicated JavaScript engine to execute the code on user'sdevices.

Chapter 6

Implementation

Chapter 6

Implementation

6.1 Navigation Bar

```html
<header class="header">
    <a href="#" class="logo"><i class="fas fa-shopping-basket"></i> MiT</a>
    <nav class="navbar">
        <a href="#home">Home</a>
        <a href="#features">Features</a>
        <a href="#products">Products</a>
        <a href="#categories">Categories</a>
        <a href="#review">Review</a>
        <a href="#blogs">Blogs</a>
    </nav>

    <div class="icons">
        <div class="fas fa-bars" id="menu-btn"></div>
        <div class="fas fa-search" id="search-btn"></div>
        <div class="fas fa-shopping-cart" id="cart-btn"></div>
        <div class="fas fa-user" id="login-btn"></div>
    </div>

    <form action="" class="search-form">
        <input type="search" id="search-box" placeholder="Search here...">
        <label for="search-box" class="fas fa-search"></label>
    </form>
```

Figure 6.1 HTML code snippet of navigation bar

6.2 Features Section

```
<!--FEATURES SECTION STARTS-->
<section class="features" id="features">
    <h1 class="heading">Our <span>features</span></h1>
    <div class="box-container">
        <div class="box">
            <img src="vegetable1.png" alt="">
            <h3>fresh and organic</h3>
            <p>fresh from farm with great taste</p>
            <p>healthier for you and more nutrient dense</p>
            <p>free from chemicals</p>
            <a href="#" class="btn">read more</a>
        </div>

        <div class="box">
            <img src="delivery.webp" alt="">
            <h3>free delivery</h3>
            <p>free delivery</p>
            <p>we deliver on time</p>
            <p>nationwide delivery</p>
            <a href="#" class="btn">read more</a>
        </div>

        <div class="box">
            <img src="account.jpg" alt="">
            <h3>easy payment</h3>
            <p>cash payment</p>
            <p>card payment</p>
            <p>transfer payment</p>
            <a href="#" class="btn">read more</a>
        </div>

    </div>
</section>
<!--FEATURES SECTION ENDS-->
```

Figure 6.2.1 HTML code snippet for Features section

```css
.features .box-container {
    display: grid;
    grid-template-columns: repeat(auto-fit, minmax(30rem, 1fr));
    gap: 1.5rem;
}

.features .box-container .box {
    padding: 3rem 2rem;
    background: #fff;
    outline: var(--outline);
    outline-offset: -1rem;
    text-align: center;
    box-shadow: var(--box-shadow);
}

.features .box-container .box:hover {
    outline: var(--outline-hover);
    outline-offset: 0rem;
}

.features .box-container .box img {
    margin: 1rem 0;
    height: 15rem;
}

.features .box-container .box h3 {
    font-size: 2.5rem;
    line-height: 1.8;
    color: var(--black);
}

.features .box-container .box p {
    font-size: 1.5rem;
    line-height: 1.8;
    color: var(--light-color);
    padding: 1rem 0;
}
```

Figure 6.2.2 CSS code snippet for Features section

6.3 Products section

```
<!--PRODUCTS SECTION STARTS-->
<section class="products" id="products">
    <h1 class="heading">our <span>products</span></h1>
    <div class="swiper product-slider">
        <div class="swiper-wrapper">
            <div class="swiper-slide box">
                <img src="fresh-tomato.png" alt="">
                <h3>fresh tomato 1kg</h3>
                <div class="price">$6.23/- 10.99/-</div>
                <div class="stars">
                    <i class="fas fa-star"></i>
                    <i class="fas fa-star"></i>
                    <i class="fas fa-star"></i>
                    <i class="fas fa-star"></i>
                    <i class="fas fa-star-half-alt"></i>
                </div>
                <a href="#" class="btn">add to cart</a>
            </div>

            <div class="swiper-slide box">
                <img src="cabbage.jfif" alt="">
                <h3>cabbage</h3>
                <div class="price">$3.05/- 10.99/-</div>
                <div class="stars">
                    <i class="fas fa-star"></i>
                    <i class="fas fa-star"></i>
                    <i class="fas fa-star"></i>
                    <i class="fas fa-star"></i>
                    <i class="fas fa-star-half-alt"></i>
                </div>
                <a href="#" class="btn">add to cart</a>
            </div>
```

Figure 6.3.1 HTML code for products section

```css
.products .product-slider {
    padding: 1rem;
}


.products .product-slider:first-child {
    margin-bottom: 2rem;
}


.products .product-slider .box {
    background: #fff;
    border-radius: .5rem;
    text-align: center;
    padding: 3rem 2rem;
    outline-offset: -1rem;
    outline: var(--outline);
    box-shadow: var(--box-shadow);
    transition: .2s linear;
}


.products .product-slider .box:hover {
    outline: var(--outline-hover);
    outline-offset: 0rem;
}


.products .product-slider .box img {
    height: 20rem;
}


.products .product-slider .box h3 {
    font-size: 2.5rem;
    color: var(--black);
}


.products .product-slider .box .price {
    font-size: 2rem;
    color: var(--light-color);
    padding: .5rem 0;
}
```

Figure 6.3.2 CSS code snippet for Products section

6.4 Add to Cart & Login functionality

```html
<div class="shopping-cart">
    <div class="box">
        <i class="fas fa-trash"></i>
        <img src="complan.jpeg" alt="">
        <div class="content">
            <h3 class="fix">Complan Milk</h3>
            <span class="price">$4.50/-</span>
            <span class="quantity">qty : 1</span>
        </div>
    </div>
    <div class="box">
        <i class="fas fa-trash"></i>
        <img src="jameson wine.png" alt="">
        <div class="content">
            <h3 class="fix">Jameson Wine</h3>
            <span class="price">$8.33/-</span>
            <span class="quantity">qty : 3</span>
        </div>
    </div>
    <div class="box">
        <i class="fas fa-trash"></i>
        <img src="Coke.jpeg" alt="">
        <div class="content">
            <h3 class="fix">Coca Cola</h3>
            <span class="price">$0.5/-</span>
            <span class="quantity">qty : 1</span>
        </div>
    </div>
    <div class="total">Total : $29.99/- </div>
    <a href="#" class="btn">Checkout</a>
</div>

<form action="" class="login-form">
    <h3>Login Now</h3>
    <input type="email" placeholder="your email" class="box">
    <input type="password" placeholder="your password" class="box">
    <p>forget your passward? <a href="#">click here</a></p>
    <p>don't have an account? <a href="#">create account</a></p>
    <input type="submit" value="login now" class="btn">
```

Figure 6.4.1 HTML code snippet for Cart and Login section

```javascript
let searchForm = document.querySelector('.search-form');

document.querySelector('#search-btn').onclick = () =>{
    searchForm.classList.toggle('active');
    shoppingCart.classList.remove('active');
    loginForm.classList.remove('active');
    navbar.classList.remove('active');
}
let shoppingCart = document.querySelector('.shopping-cart');
document.querySelector('#cart-btn').onclick = () =>{
    shoppingCart.classList.toggle('active');
    searchForm.classList.remove('active');
    loginForm.classList.remove('active');
    navbar.classList.remove('active');
}

let loginForm = document.querySelector('.login-form');
document.querySelector('#login-btn').onclick = () =>{
    loginForm.classList.toggle('active');
    searchForm.classList.remove('active');
    shoppingCart.classList.remove('active');
    navbar.classList.remove('active');
}

let navbar = document.querySelector('.navbar');
document.querySelector('#menu-btn').onclick = () =>{
    navbar.classList.toggle('active');
    searchForm.classList.remove('active');
    shoppingCart.classList.remove('active');
    loginForm.classList.remove('active');
}

window.onscroll = () =>{
    searchForm.classList.remove('active');
    shoppingCart.classList.remove('active');
    loginForm.classList.remove('active');
    navbar.classList.remove('active');
}
```

Figure 6.4.2 Javascript code snippet for functionality of Cart and Login page

Chapter 7
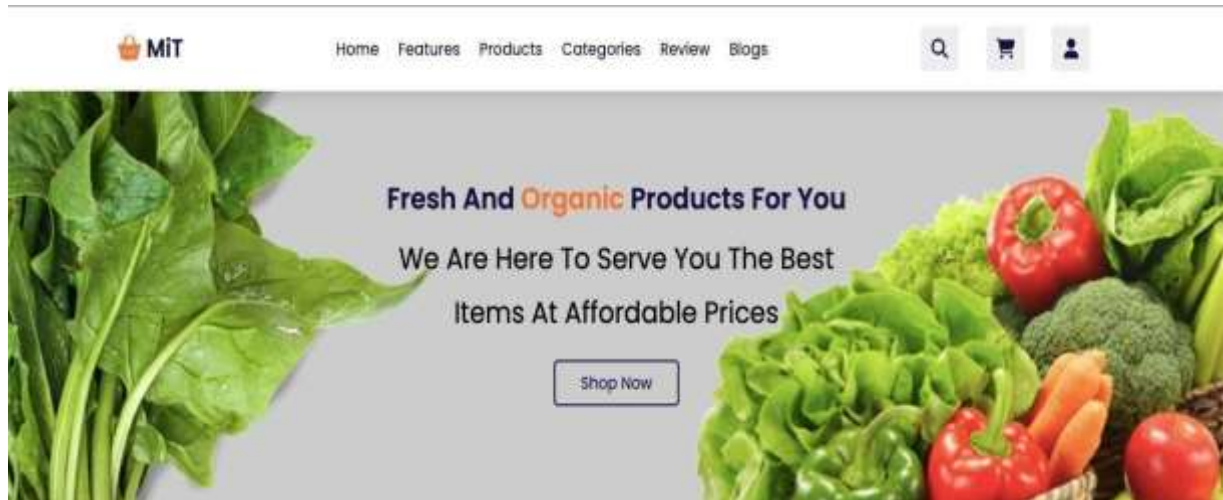# Results

Chapter 7

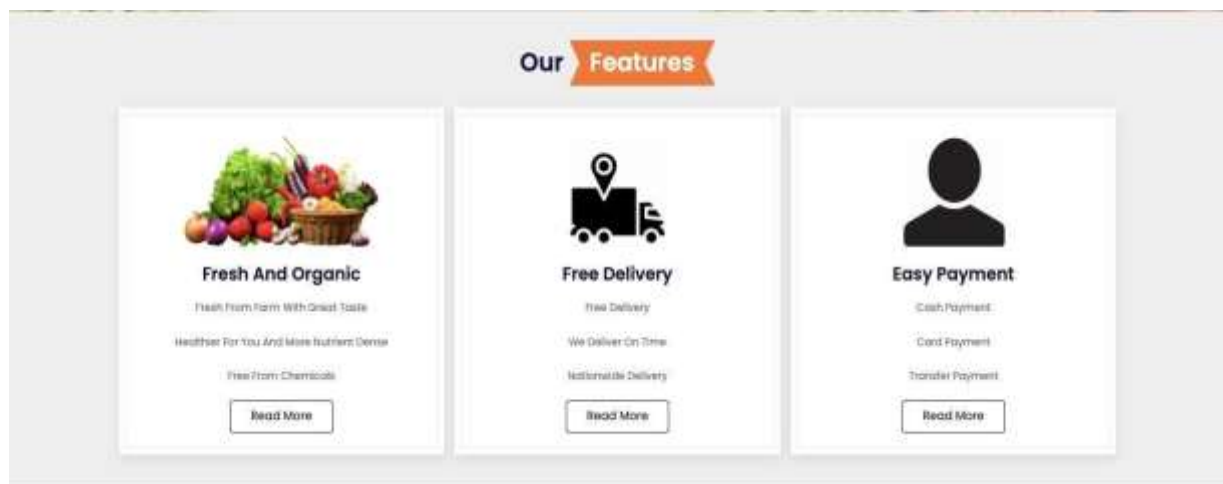## Results

7.1 Snapshots-

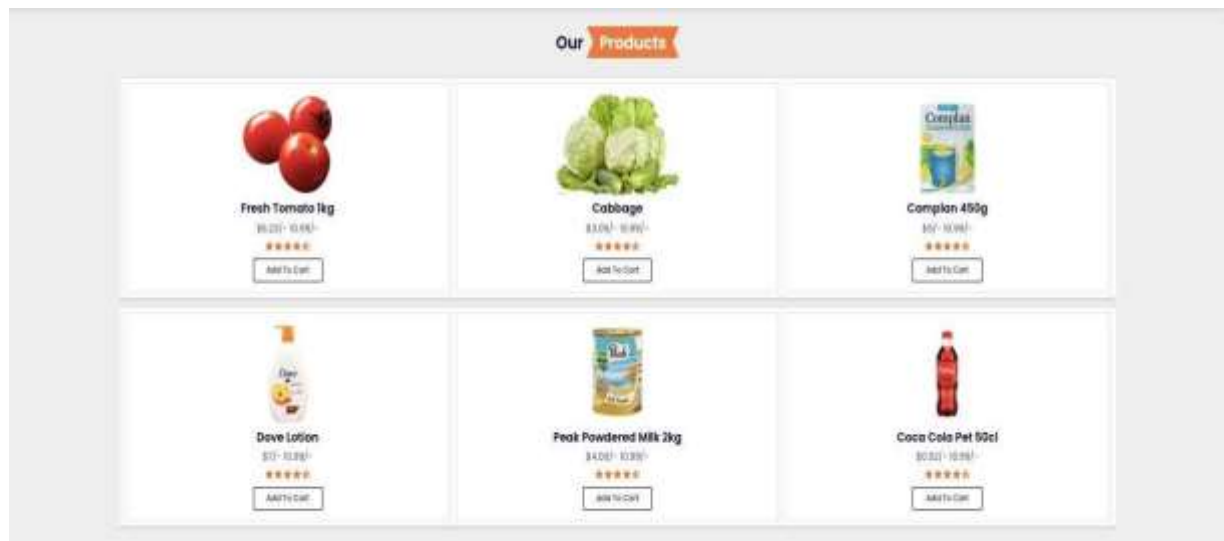**Figure 7.1** Home page

Figure 7.2 Features section

Figure 7.3 Products section

Figure 7.4 Customer's review section

Figure 7.5 Cart section

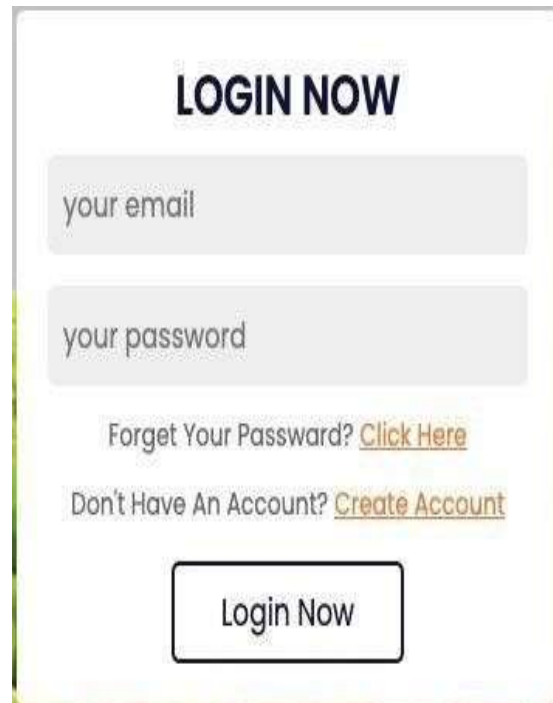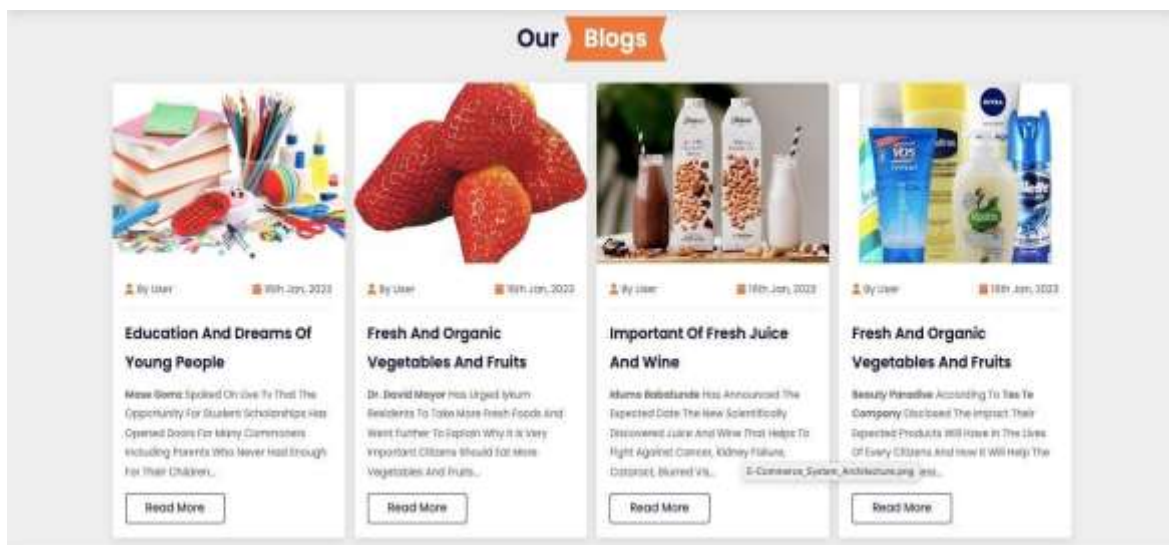**Figure 7.6** Login section

Figure 7.7 Blogs section

Chapter 8

Reflection Notes

Chapter 8
Reflection Notes

- I am thankful to having the opportunity to work with Exposys Data Labs because I discovered a program that I would like to work with and at the same time gained fabulous ideas to develop projects on Web Development.

- The time I spent at Exposys Data Labs as an intern was a memorable one for me as it was rich in experience sharing and helped me discover my potential.

- I had so many experiences and opportunities that I personally believe will forever shape and influence my professional life while fostering personal growth and development.

- To enhance my knowledge and skills, Exposys Data Labs gave me the opportunity to intern with their project for a period of 4 weeks.

- It has been a great pleasure working and getting qualified with colorful grades from Exposys Data Labs as it has provided me a great opportunity to learn leadership skills.

Chapter 9

Conclusion

Chapter 9

Conclusion

A website is a very large platform for a organization to give an overview of its products, services, policies etc. In this regard, E-Commerce website which consists of different products need to visualize those things in a particular way. So the work has been analyzed by using various technologies which are applied to different sections of the website to make them more responsive and more descriptive like product details, prices, rewards etc. Work done on the Navigation Bar, Features & Products section gives the attractive visualization when the website appear on the screen.

I would like to conclude that it has been a great opportunity to work with such a good company with a good team. Firstly, I would also like to thank my Computer Science department for making me capable to grab such amazing opportunities. This internship gave me a confidence to work in a team and gave me industrial exposure. I understood how to deploy a website on a live server using a domain name and I learned ways to use dynamic input.