

ABSTRACT

This project focuses on creating a comprehensive, responsive website for ASP Sealing Products Limited, a leading manufacturer of polymer-based sealing products in the automotive sector. The website will feature a detailed product showcase with rich descriptions and high-quality images to enhance user engagement. The "About Us" section will highlight the company's history and values, fostering trust among visitors. Customer interaction tools, such as contact forms and live chat options, will be included. SEO optimization and analytics will boost visibility and track user behavior, while a blog will keep users informed about industry trends and events. The site will prioritize fast loading times, mobile responsiveness, and robust security measures, including SSL certification. Future scalability will be considered, allowing the business to expand website functionalities as operations grow. Overall, this project aims to create an attractive platform that enhances the digital presence of ASP Sealing Products Limited and drives growth in a competitive market.

1. INTRODUCTION

1.1 ORGANIZATION PROFILE

ASP Sealing Products, founded in 1989 and headquartered in Gajraula, Uttar Pradesh, is a prominent manufacturer in the automotive rubber products industry, specializing in high-quality EPDM rubber weatherstrips and custom sealing solutions. With over three decades of expertise, the company has built a solid reputation as a trusted supplier to major Original Equipment Manufacturers (OEMs) in the Heavy, Medium, and Light Commercial Vehicle sectors. The company serves over 300 customers and exports to more than 40 countries, reflecting its strong global presence. Dedicated to upholding the highest standards of quality, integrity, and innovation, ASP Sealing Products focuses on enhancing customer satisfaction through tailored solutions and technical support. The organization's mission is to deliver reliable rubber sealing solutions that adapt to the dynamic needs of the automotive industry, while its vision is to be recognized as a global leader in manufacturing rubber products. The newly launched website serves as a key platform for showcasing products, engaging with customers, and providing insights on industry trends, further solidifying the company's commitment to growth and excellence.

1.2 PROBLEM STATEMENT

ASP Group, a prominent automobile manufacturer, lacks a modern website to showcase its products and services, hindering customer engagement and brand visibility. This project aims to develop an attractive, user-friendly website to enhance ASP Group's online presence.

CHALLENGES

1. **User Experience Design:** Creating an intuitive navigation structure.
2. **Content Management:** Developing relevant and accurate content.
3. **Responsive Design:** Ensuring compatibility across devices.
4. **SEO Optimization:** Increasing visibility in search engines.
5. **Feature Integration:** Adding features like contact forms and product catalogs.

OBJECTIVES

1. **Visually Appealing UI:** Design a modern interface that reflects the brand.
2. **Information Accessibility:** Provide easy access to company information.
3. **Responsive Design:** Ensure optimal viewing on all devices.
4. **SEO Best Practices:** Optimize content and structure for search engines.
5. **User-Friendly CMS:** Implement a system for easy content updates.

2. LITERATURE SURVEY

[1] **"The integration of e-commerce features in engineering websites"** (2019) facilitates a seamless purchasing process, enhancing customer satisfaction and engagement. Studies have shown that providing an online platform for customers to explore products and services improves accessibility and convenience, which are critical factors in today's competitive market.

[2] **"User experience (UX) design plays a significant role in the effectiveness of engineering websites"** (2020). Research emphasizes the importance of intuitive navigation and responsive design, which contribute to user retention and satisfaction. Websites that prioritize UX design not only attract more visitors but also convert them into loyal customers.

[3] **"Implementing an effective content management system (CMS)"** (2019) is crucial for managing product information and updates on engineering websites. Literature indicates that a well-structured CMS allows for efficient content creation, editing, and publishing, enabling companies to keep their offerings current and relevant to customer needs.

[4] **"The importance of search engine optimization (SEO) in driving traffic to engineering websites"** (2020) cannot be overstated. Studies reveal that optimizing content for search engines significantly increases visibility and reach, making it easier for potential customers to discover products and services.

[5] **"Inventory management systems integrated into engineering websites"** (2021) enhance operational efficiency. Research shows that real-time inventory tracking and automated stock management reduce the risk of stockouts and

overstocking, ultimately leading to improved customer satisfaction and reduced operational costs.

[6] **"The use of data analytics in monitoring user behavior on engineering websites"** (2021) provides valuable insights into customer preferences and trends. By analyzing this data, companies can make informed decisions regarding product offerings, marketing strategies, and overall website performance.

[7] **"Security and data privacy are critical considerations for engineering websites"** (2020), especially those dealing with sensitive customer information. Studies emphasize the need for robust security measures, such as encryption and secure payment gateways, to build trust and ensure compliance with regulations.

[8] **"The integration of interactive features, such as virtual tours or product configurators"** (2021) enhances user engagement on engineering websites. Literature suggests that these features provide customers with a more immersive experience, allowing them to visualize products in real-world applications.

[9] **"The role of mobile responsiveness in web applications"** (2020) is increasingly vital as more users access websites through mobile devices. Research indicates that optimizing websites for mobile use significantly improves user experience and engagement, catering to the growing demand for on-the-go access.

[10] **"Customer relationship management (CRM) integration with engineering websites"** (2020) allows for personalized communication and targeted marketing. Literature highlights that CRM systems can help businesses manage interactions with customers effectively, leading to improved customer relationships and higher retention rates.

[11] "The trend of adopting artificial intelligence (AI) in web applications" (2021) is transforming how engineering companies interact with customers. AI-driven chatbots and virtual assistants provide immediate responses to customer inquiries, enhancing user satisfaction and operational efficiency.

[12] "The concept of sustainability is becoming increasingly relevant in engineering and manufacturing" (2021). Research shows that showcasing sustainable practices on websites can attract environmentally conscious consumers and improve brand image.

[13] "Social media integration on engineering websites" (2021) allows companies to engage with their audience and promote products effectively. Studies indicate that leveraging social media platforms for marketing enhances visibility and fosters a community around the brand.

3. SYSTEM ANALYSIS

3.1 EXISTING SYSTEM

The current website for **ASP Sealing Products Limited** faces several usability and design challenges, affecting its ability to engage clients effectively. It may have outdated content and lacks a comprehensive product showcase, leaving visitors unsure of the company's services. Poor navigation further complicates user experience, making it hard to find important sections. The absence of dynamic communication tools and Google Maps integration limits interaction with potential customers. Additionally, the site lacks proper analytics, making it hard to track user activity and improve services.

CHALLENGES OF THE EXISTING SYSTEM

The existing website of **ASP Sealing Products Limited** faces several major issues:

- **Outdated Content:** Essential information about products and services is either missing or minimal, leading to visitor confusion and high bounce rates.
- **Poor Navigation:** Users struggle to locate critical sections, such as product offerings and certifications.
- **Limited Product Showcase:** The absence of visual appeal diminishes credibility and potential customer interest.
- **Lack of Analytics:** No tools for tracking user behavior, reducing insights into performance and necessary improvements.

3.2 PROPOSED SYSTEM

The proposed system for ASP Sealing Products Limited aims to create a modern, user-friendly website that effectively communicates the company's products, services, and expertise. The website will include a Home Page with a company overview, a Products & Services Page featuring detailed product descriptions, and a Contact Us Page with an integrated form and map. The site will use HTML, CSS, JavaScript, and Web3Forms for backend form handling, ensuring security, responsiveness, and ease of navigation across devices.

ADVANTAGES

- **Enhanced User Experience:** Modern design and intuitive navigation will improve user engagement and reduce bounce rates.
- **Detailed Product Showcase:** Organized product descriptions and images will boost credibility and help clients better understand offerings.
- **Improved Communication:** Integrated contact forms and interactive maps will facilitate smoother client interactions and inquiries.
- **Responsive and Scalable:** Designed to adapt across all devices, ensuring optimal performance and a consistent user experience.
- **Maintenance and Security:** Regular updates, content management, and secure form submissions will ensure the platform's reliability and longevity.

3.3. FEASIBILITY STUDY

The feasibility of implementing a spare parts management system in the automobile industry will vary depending on the size and complexity of the company's operations. However, there are some general factors that companies should consider when assessing the feasibility of implementing such a system:

1.Cost: The cost of creating the website will vary based on the desired features and functionalities, such as responsive design, e-commerce capabilities, and content management systems. Utilizing open-source frameworks and tools can help reduce implementation costs.

2.Resources:It is essential to ensure that there are sufficient resources available for the project, including skilled IT staff for development, content creators for website updates, and training resources for ongoing maintenance and management..

3.Data quality:The effectiveness of the website will heavily rely on the quality of the content presented. Ensuring that the information about products, services, and company history is accurate and well-organized is crucial before launching the website..

4.Scalability: The website should be designed to be scalable to accommodate future growth. This includes the ability to add new features, expand content, and handle increased traffic without compromising performance

5. Security:

The website must incorporate robust security measures to protect sensitive data from unauthorized access and cyber threats. This includes using secure hosting, SSL certificates, and regular security updates.

3.4 SOFTWARE ENVIRONMENT

Operating System

- **Windows OS:** Offers a reliable and familiar platform for website development and management.

Development Environment

- **Visual Studio Code (VS Code):** A lightweight, powerful code editor for writing and managing HTML, CSS, and JavaScript effectively.

Programming Languages and Frameworks

- **HTML, CSS, JavaScript:** The core front-end technologies used for structuring, styling, and adding interactivity to the website.

Backend Service for Form Handling

- **Web3Forms:** A no-backend solution that integrates with HTML forms to handle customer inquiries and submissions, securely transmitting data via email or APIs without the need for a traditional backend server.

Email Configuration

- **Web3Forms Email Integration:** Automatically processes form submissions and sends email notifications securely, using CAPTCHA to prevent spam.

Security Measures

- **HTTPS:** Encrypts communications between the website and users, protecting sensitive information.
- **JavaScript Input Validation:** Ensures proper data validation before submission, reducing the risk of SQL injection and XSS vulnerabilities.

This setup focuses on front-end development and simple backend form processing using Web3Forms, ensuring secure and efficient handling of inquiries.

4.SYSTEM DESIGN

4.1 DATA DICTIONARY

The **Data Dictionary** defines the fields used in the website's forms, ensuring efficient data collection. Each field is designed to capture essential information while adhering to validation rules for consistent data entry. This structure enhances user experience by simplifying the inquiry process for visitors.

Form Structure Dictionary for ASP Sealing Products Website

1. Inquiry Form

Attribute	Data Type	Description
name	Text Field	Customer Name: Please enter your full name for identification purposes.
email	Email Field	Email Address: Provide your email address so we can respond to your inquiry.
message	Text Area	Your Message: Share your questions or feedback with us. We value your input!
captcha	CAPTCHA	Verification: Complete the CAPTCHA to confirm you are a human and not a bot.

3. Contact Form

Attribute	Data Type	Description
name	Text Field	Your Name: Please enter your full name so we know who to address in our reply.
email	Email Field	Contact Email: Enter your email address for our response.
phone	Phone Field	Phone Number (Optional): If you prefer a phone response, please provide your number.
message	Text Area	Message: Let us know your questions, comments, or concerns. We're here to help!
captcha	CAPTCHA	Anti-Spam Verification: Please complete the CAPTCHA to ensure you're a real person.

The **Form Structure Dictionary** outlines the key components of our inquiry and contact forms, designed to streamline communication between ASP Sealing Products and our valued clients. Each field is crafted to gather essential information efficiently while ensuring a user-friendly experience.

4.2 UML DIAGRAMS

4.2.1 USE CASE DIAGRAM

A Use Case Diagram for a **website creation project in the automotive industry** visually represents the interactions between various actors and the system's functionalities, such as browsing products and managing inventory. It helps clarify user requirements and facilitates communication among stakeholders.

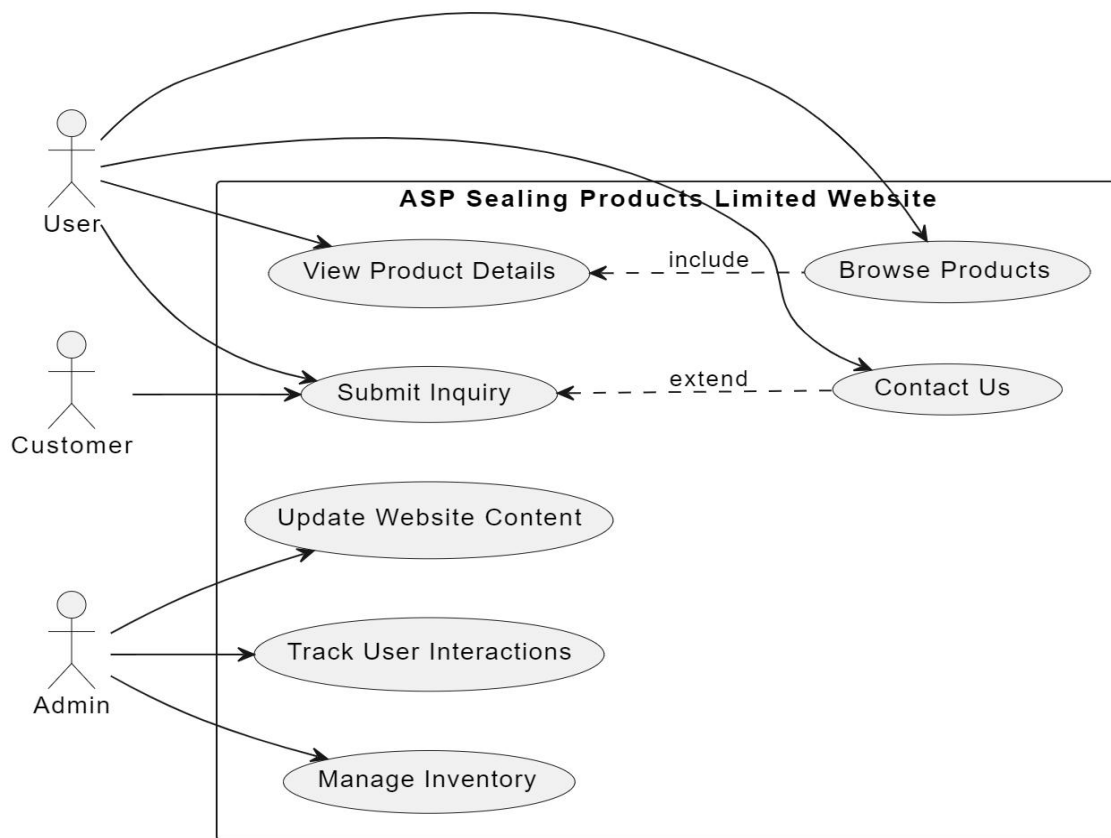


Fig 4.2.1 Use Case Diagram

4.2.2 CLASS DIAGRAM

The class diagram for the website project includes four main classes: Product for product details, User for browsing and inquiries, Admin for managing content and inquiries, and Inquiry for capturing user questions. Relationships indicate user interactions with multiple products and inquiries, while admins manage product details and user communications.

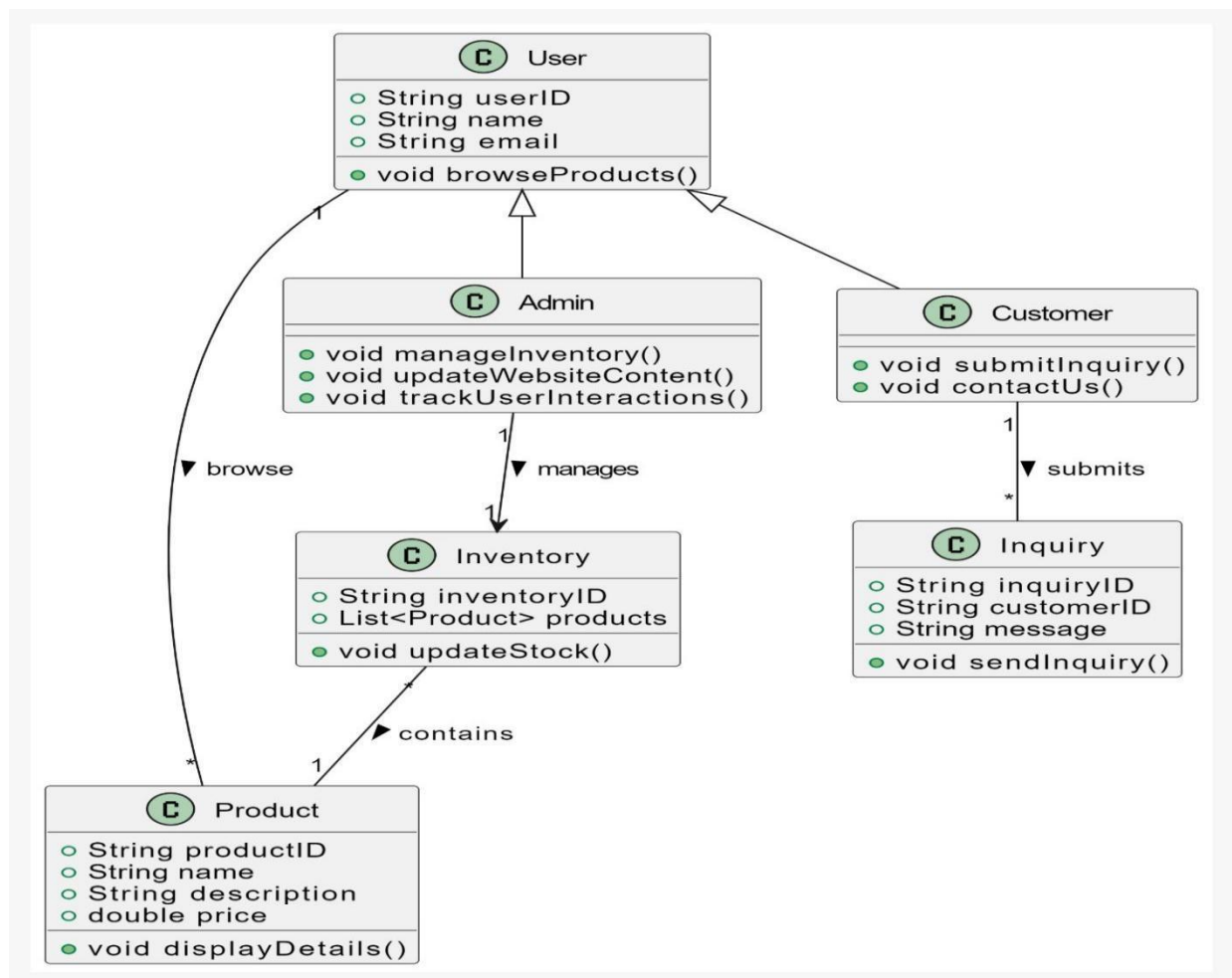


Fig 4.2.2 Class Diagram

4.2.3 SEQUENCE DIAGRAM

This sequence diagram outlines interactions between users, admins, the website, and the database, illustrating processes like browsing products, viewing details, contacting support, and updating inventory.

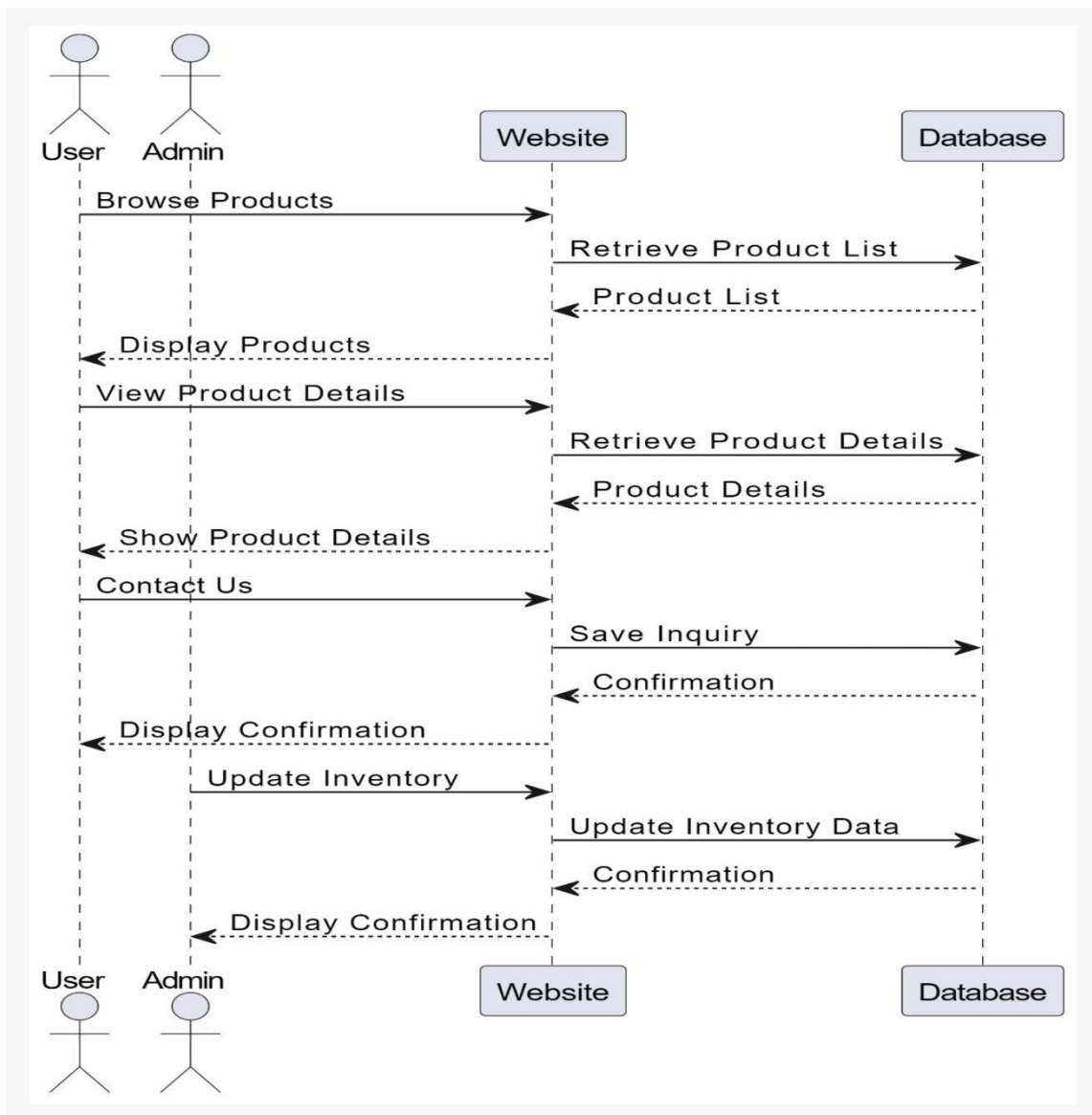


Fig 4.2.3 Sequence Diagram

4.2.4 DOMAIN MODEL

This domain model diagram represents the key entities of the website: Product, Customer, Admin, and Inquiry. Customers submit inquiries about products, while admins manage product details. Each inquiry links to a specific product, and admins handle product management.

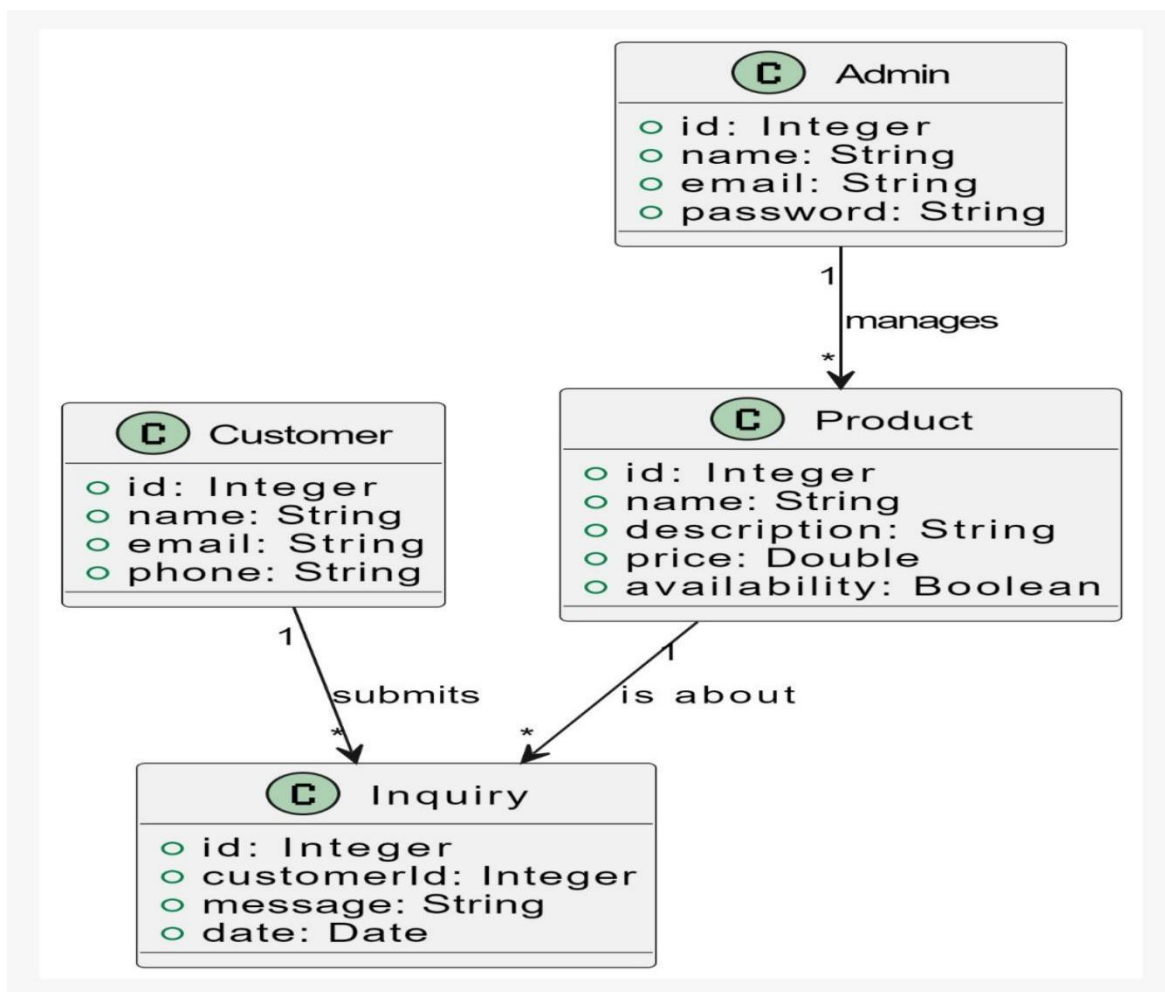


Fig 4.2.4 Domain Model

4.2.5 ACTIVITY DIAGRAM

The activity diagram outlines key actions within the website: users can browse products, view details, or submit inquiries, while administrators manage inventory and update content. The system tracks user interactions to ensure efficient workflows.

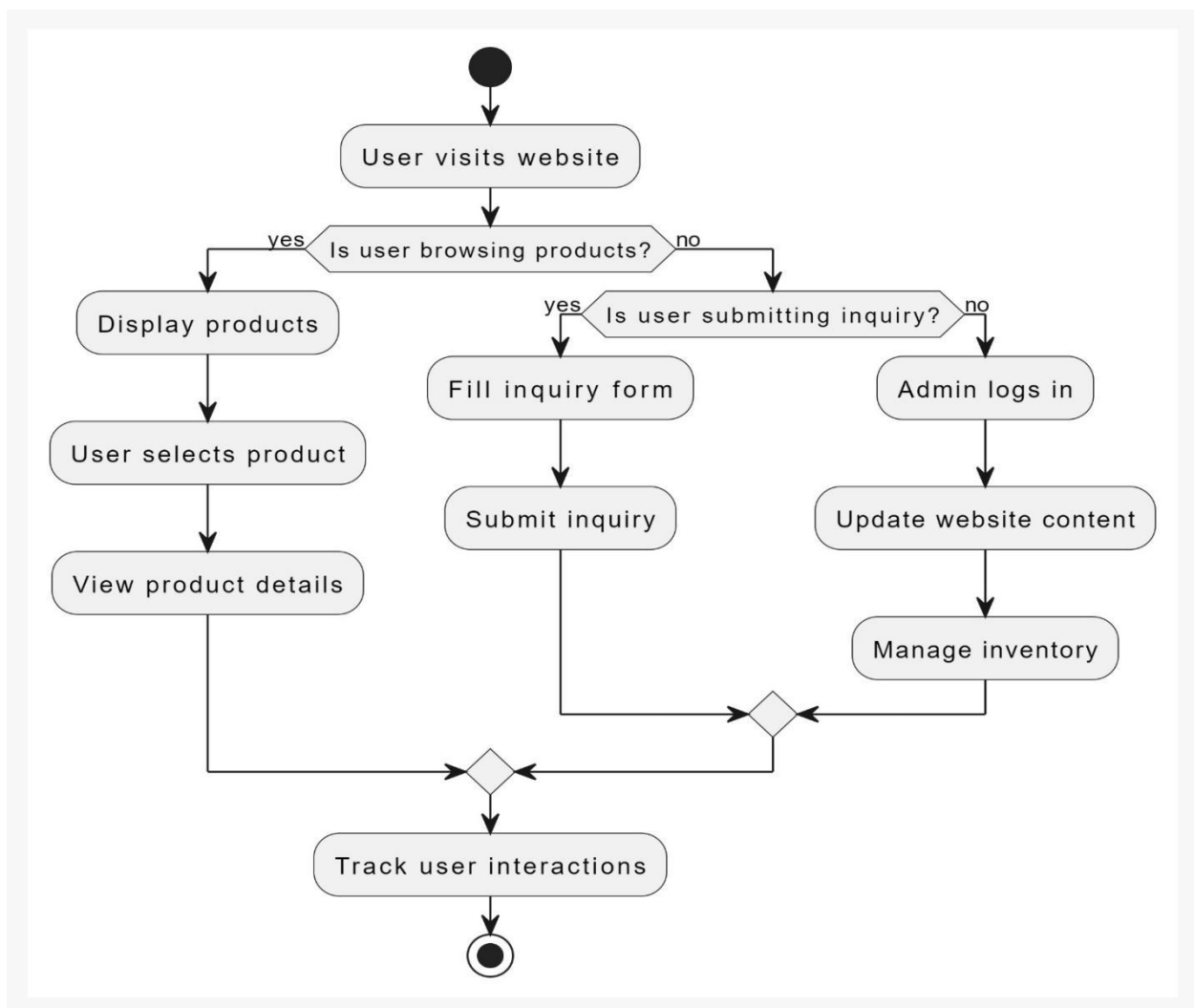


Fig 4.2.5 Activity Diagram

4.2.6 STATE DIAGRAM

This diagram represents the website's states from browsing products to admin actions like managing inventory and updating content. Users transition through various actions depending on their role.

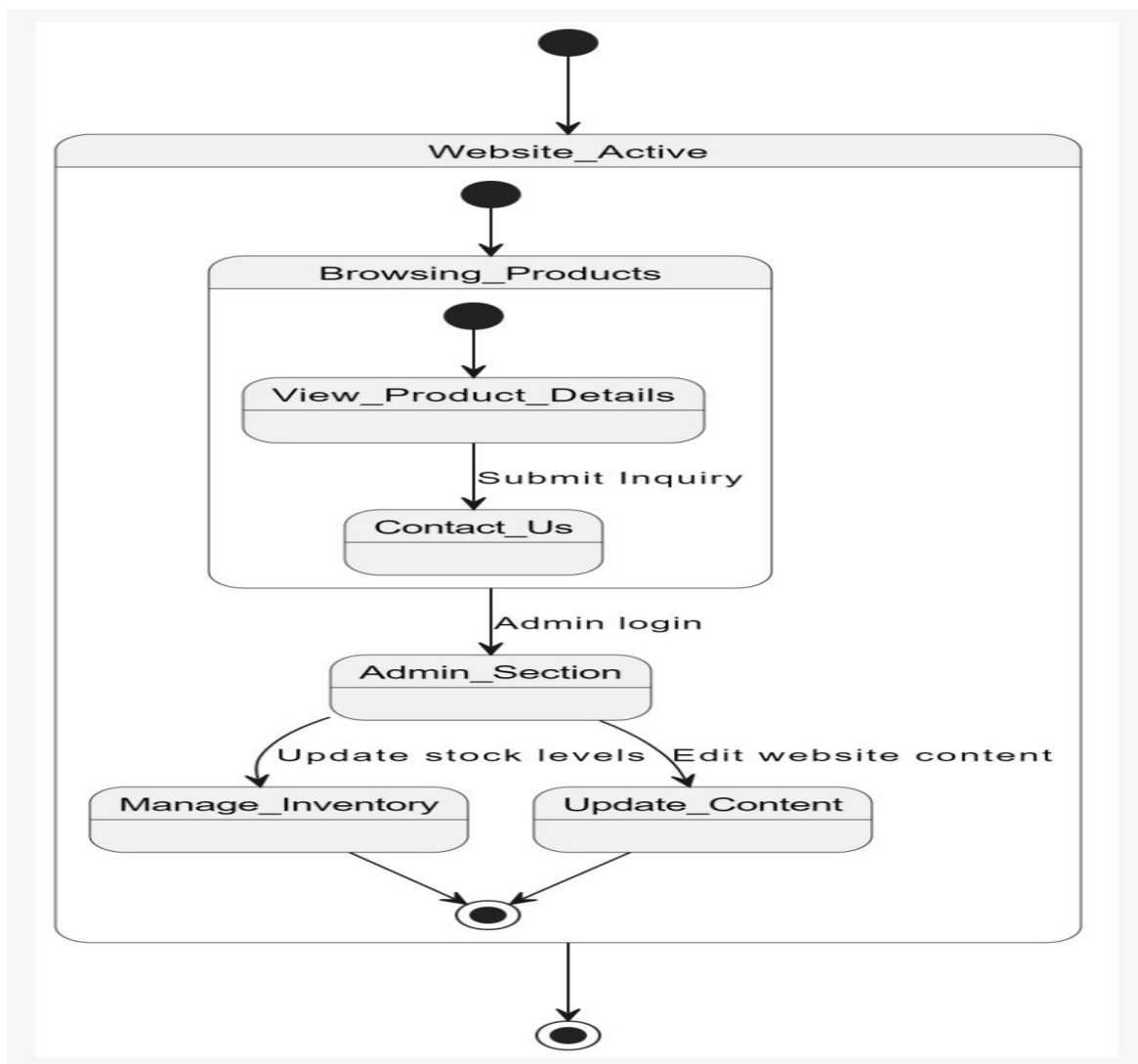


Fig 4.2.6 State Diagram

5. SYSTEM ARCHITECTURE

5.1. ARCHITECTURE OVERVIEW

The system architecture for the website integrates a front-end built with HTML, CSS, and JavaScript for a responsive user interface. Web3Forms handles form submissions securely without requiring a traditional backend. This simple, efficient structure ensures smooth user experience while maintaining security through HTTPS and input validation

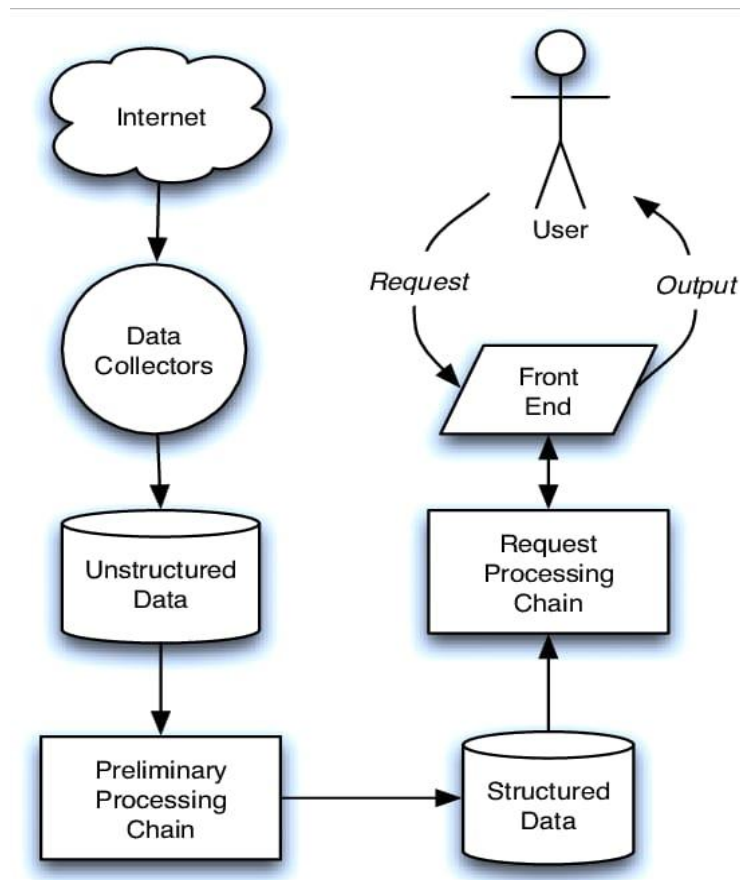


Fig 5.1 Architecture Overview

KEY COMPONENTS:

CLIENT-SIDE (FRONTEND):

Technologies: HTML, CSS, JavaScript

Description: HTML is used to structure web pages, while CSS styles the layout for a visually appealing design. JavaScript manages dynamic content and interactivity, enhancing the user experience.

Users can submit inquiries, interact with dynamic elements, and navigate seamlessly across different modules.

Responsive Design: The website adjusts to various screen sizes, offering a mobile-friendly interface.

Interactive Forms: Forms use JavaScript for real-time validation before submission, ensuring users fill out fields correctly, reducing errors.

User Engagement: JavaScript adds dynamic content loading, animations, and interactive features to improve usability and navigation.

SERVER-SIDE (BACKEND):

Technologies: Web3Forms

Description: The backend utilizes Web3Forms to handle form submissions, validate data, and send secure email notifications to both users and the site administrators without needing traditional server infrastructure.

Key Features: Form Submission: User data from forms is securely transferred via Web3Forms, eliminating the need for direct database interaction and reducing server-side complexity.

Security: Server-side input validation helps prevent malicious attacks, such as SQL injection or cross-site scripting (XSS).

Automated Notifications: Upon form submission, Web3Forms sends an email to the administrator, ensuring timely responses and efficient management of user inquiries.

Hosting: The website is deployed using a web hosting service supporting Web3Forms, HTML, CSS, and JavaScript. The system is tested locally before going live to ensure proper functioning.

This modular architecture balances client-side interactivity with server-side simplicity, ensuring a secure, scalable, and user-friendly solution.

5.2 MODULE DESIGN SPECIFICATION

The ASP Sealing Products website is structured into several distinct modules, each serving specific functionalities that contribute to the overall system. Below is an elaborated breakdown of each module:

HOME MODULE

- **Description:** The entry point of the website, offering an overview of ASP Sealing Products and directing users to other sections.
- **Functionality:**
 - **Header:** Displays the company logo and a navigation menu for easy access to different modules.
 - **Hero Section:** Features an engaging image of the products with a brief introduction to the company.
 - **Quick Links:** Directs users to key sections (About Us, Products, Contact) for seamless navigation.

ABOUT US MODULE

- **Description:** Provides comprehensive information about ASP Sealing Products.
- **Functionality:**
 - **Company Overview:** Displays the history, mission, and vision of the company.
 - **Infrastructure Details:** Highlights the facilities and equipment used in production.

PRODUCTS MODULE

- **Description:** Lists the sealing products manufactured by the company.
- **Functionality:**
 - **Product Showcase:** Displays details of each product, including specifications, images, and pricing information.
 - **Product Categories:** Allows users to filter products by categories (e.g., EPDM Weatherstrips, Gaskets) for easier navigation.

MANUFACTURING PROCESS MODULE

- **Description:** Showcases the manufacturing processes and materials used.
- **Functionality:**
 - **Materials List:** Displays a comprehensive list of materials utilized in production with descriptions and images.
 - **Manufacturing Steps:** Provides insights into the processes involved in creating the sealing products.

CERTIFICATIONS MODULE

- **Description:** Displays certifications acquired by the company, emphasizing its commitment to quality.
- **Functionality:**
 - **Certification Gallery:** Presents images or PDFs of certifications (e.g., ISO, quality standards) along with descriptions.
 - **Quality Assurance Information:** Explains the significance of each certification concerning the company's operations.

TRUSTED PARTNERS MODULE

- **Description:** Lists the companies with which ASP Sealing Products collaborates.
- **Functionality:**
 - **Partner Profiles:** Displays logos and brief descriptions of partner companies (e.g., automotive OEMs).
 - **Collaboration Benefits:** Outlines the reasons for partnerships and the mutual benefits gained.

CONTACT US MODULE

- **Description:** Provides a form for users to submit inquiries or messages to the company.
- **Functionality:**
 - **Form Fields:** Collects user information (name, email, message) with validation checks.
 - **Email Notification:** Sends user messages to the company's email address upon submission.
 - **Feedback Confirmation:** Displays a confirmation message to users after successful form submission

6. SYSTEM IMPLEMENTATION

6.1 CLIENT-SIDE CODING

about.html

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>About Us - ASP Group</title>
<style>
body, h1, ul {
margin: 0;
padding: 0;
}
body {
font-family: Arial, Helvetica, sans-serif;
line-height: 1.6;
color: black;
}
.header {
background-color: black;
padding: 10px 20px;
margin-bottom: 20px;
}
nav {
display: flex;
```

```

align-items: center;
justify-content: space-between;
}
.logo {
height: 50px;
}
.nav-links a:hover {
color: #a41b1b; /* Slight hover effect */
}
/* About Section Styles */
.about-new {
background-color: #fff;
padding: 50px 0;
}
.content-container {
flex: 0 0 60%; /* Prevents it from shrinking and ensures a minimum width */
padding: 20px;
opacity: 0; /* Start hidden */
transform: translateY(20px); /* Start off slightly lower */
transition: opacity 0.5s ease, transform 0.5s ease; /* Smooth transition */
}
.content-container h2:hover, .content-container h3:hover {
text-decoration: underline;
text-decoration-color: #8a022b;
}
/* Certificates Section Styles */
.certification-section{

```

```

padding-bottom: 75px;
}
.certification-section h2 {
font-size: 2rem;
color: #333;
.certification-section h2:hover {
text-decoration: underline;
text-decoration-color: #8a022b;
}
html {
scroll-behavior: smooth;
}
</style>
</head>
<body>
<!-- Header Section -->
<div class="header">
<nav>

<ul class="nav-links">
<li><a href="index.html">Home</a></li>
<li><a href="about.html">About</a></li>
<li><a href="Product.html">Product</a></li>
<li><a href="Contact.html">Contact Us</a></li>
</ul>
</nav>
</div>

```

```

<section class="about-new">
<div class="container">
<div class="image-container">

</div>
<div class="content-container" id="about-section-1">
<h2>About ASP Group</h2>
<h3>Our Vision</h3>
<p>To be at the forefront of the industry by delivering excellence in innovation,
technology, and sustainability.</p>
</div>
</div>
</section>
<script>
window.addEventListener('load', handleScroll);
window.addEventListener('scroll', handleScroll);
</script>
</div>
<div class="certificate">

<P>ISO/TS 16949 : Automotive Quality</P>
</div>
<div class="certification">

<p>ISO 14001 : Environmental Management</p>
</div>
<!-- Footer Section -->

```

```

<footer>
<div class="white-space"></div>
<div class="footer-container">
<div class="footer-left">
<h3>ASP Group</h3>
<p>Since 1989, ASP Group has been committed to providing the highest quality
rubber products to the automotive industry, continuously expanding our
capabilities worldwide.</p>
</div>
<div class="footer-middle">
<h3>Contact Us</h3>
<p><strong>Address:</strong> ASP Group, Industrial Area, Gajraula, Uttar
Pradesh, India</p>
<p><strong>Email:</strong> contact@aspgroup.com</p>
<p><strong>Phone:</strong> +91 123 456 7890</p>
</div>
<div class="footer-right">
<h3>Follow Us</h3>
<div class="social-icons">
<a href="https://x.com/aspsealing"><i class="fa-brands fa-x-twitter"></i></a>
<i class="fa fa-youtube-play"></i>
<i class="fa fa-youtube-play" style="font-size:48px;color:red"></i>
<a href="#"></a>
<a href="#"></a>
</div>
</footer>
<style>
/* Footer Section Styles */

```

```

footer {
padding: 50px;
background-color: black;
}}
.footer-right .social-icons a:hover img {
filter: invert(0.7); /* Slight hover effect */
}
.footer-left, .footer-middle, .footer-right {
padding: 10px 0;
}}
</style>

```

design&development.html

```

<!DOCTYPE html>
<html lang="en">
<head>
<title>Asp</title>
<link rel="stylesheet" href="style.css">
<link
href="https://fonts.googleapis.com/css2?family=Merriweather:wght@400;700&dis
play=swap" rel="stylesheet">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/6.6.0/css/all.min.css" integrity="sha512-
Kc323vGBEqzTmouAECnVceyQqyqdsSiqLQISBL29aUW4U/M7pSPA/gEUZQq
v1cwx4OnYxTxve5UMg5GT6L4JJg==" crossorigin="anonymous"
referrerpolicy="no-referrer" />
</head>
<body>

```

```

<!-- Header Section -->
<div class="header">
<nav>

<ul class="nav-links">
<li><a href="index.html">Home</a></li>
<li><a href="about.html">About</a></li>
<li><a href="product.html">Product</a></li>
<li><a href="design & tools.html">Design & Development</a></li>
<li><a href="contact.html">Contact us</a></li>
<i class="fa-solid fa-circle-xmark" onclick="closemenu()"></i>
</ul>
<i class="fa-solid fa-bars" onclick="openmenu()"></i>
</nav>
</div>

```

```

<!-- Design & Development Section -->
<section class="design-development">
<h1 class="three-d-heading">Design & Development</h1>
<div class="development-items">
<div class="development-card">

<h2>Innovative Designs</h2>
<p>Our design team utilizes cutting-edge technology to develop sealing products
tailored to automotive requirements.</p>
</div>
<div class="development-card">

```

```


<h2>3D Modeling & Prototyping</h2>
<p>We use advanced 3D modeling software and prototyping tools to bring ideas
from concept to reality with precision.</p>
</div>
<div class="development-card">

<h2>Testing & Validation</h2>
<p>All designs undergo rigorous testing in our labs to ensure durability, flexibility,
and resistance to various elements.</p>
</div>
</div>
</section>
<!-- Quality Policy & Product Range Section -->
<section class="quality-product">
<h1 class="three-d-heading">Our Commitment to Excellence</h1>
<!-- Quality Policy Section -->
<div class="quality-section">
<div class="quality-image">

</div>
<div class="quality-content">
<h2>Quality Policy</h2>
<p>At ASP, we are committed to delivering products that meet the highest
standards of quality, ensuring satisfaction and reliability.</p>
</div>
</div>
<!-- Product Range Section -->

```



```

<div class="product-section">
<div class="product-image">

</div>
<div class="product-content">
<h2>Comprehensive Product Range</h2>
<p>We offer a wide array of products, each designed to fulfill the diverse needs of
the automotive sector with precision and durability.</p>
</div>
</div>
</section>
<!-- Sustainability Section -->
<section class="sustainability-section">
<h1 class="three-d-heading">Sustainability</h1>
<div class="sustainability-content">
<div class="sustainability-item left-image">

</div>
<div class="sustainability-item content">
<h2>Our Commitment to Sustainability</h2>
</div>
<div class="sustainability-item right-image">

</div>
</div>
</div>
</section>
<!-- Design & Development Section -->

```

```

<section class="design-development">
<h1 class="three-d-heading">Design & Development</h1>
<div class="development-description">

<p>The ASP Group's cutting-edge Research and Development (R&D)
departments provide exceptional design and development skills.
.</p>
</div>
</section>
<style>
/* Design & Development Section */
.design-development {
padding: 50px 20px;
background-color: #ffffff;
text-align: center;
}
.design-development h1 {
font-size: 36px;
margin-bottom: 30px;
color: #2c3e50;
}
.development-items {
display: flex;
justify-content: space-around;
flex-wrap: wrap;
gap: 20px;
}

```

```

.development-card {
background-color: #fff;
padding: 20px;
width: 300px;
border-radius: 10px;
box-shadow: 0 8px 16px rgba(0, 0, 0, 0.2);
transition: transform 0.4s ease, box-shadow 0.4s ease;
text-align: left; /* Ensures text aligns to the left */
}

.development-card:hover {
transform: translateY(-10px) rotateX(5deg) rotateY(5deg);
box-shadow: 0 15px 30px rgba(0, 0, 0, 0.3);
}

font-size: 24px;
color: #333;
}

.development-card p {
font-size: 16px;
color: #666;
}

/* 3D Underlined Heading */
.three-d-heading {
font-size: 36px;
color: #2c3e50;
text-align: center;

```

```

text-shadow: 2px 2px 4px rgba(0, 0, 0, 0.5); /* Adds 3D effect */
position: relative;
margin-bottom: 40px;
}

/* Quality Policy & Product Range Section */
.quality-product {
padding: 50px 20px;
background-color: #f9f9f9;
}

.quality-image, .product-image {
flex: 1;
}

.quality-image img, .product-image img {
width: 100%;
border-radius: 10px;
box-shadow: 0 8px 16px rgba(0, 0, 0, 0.2);
}

/* Sustainability Section */
.sustainability-section {
padding: 50px 20px;
background-color: #eaeaea;
}

/* Flexbox layout for the images and content */
.sustainability-content {
display: flex;
justify-content: space-around;
align-items: center;

```

```

gap: 20px;
}
.sustainability-item {
flex: 1;
}
.sustainability-item img {
width: 100%;
height: auto;
border-radius: 10px;
box-shadow: 0 8px 16px rgba(0, 0, 0, 0.2);
}
.sustainability-item.content {
text-align: center;
padding: 20px;
}
.sustainability-item.content h2 {
/* Development Description Section */
.development-description {
display: flex;
align-items: center;
justify-content: center;
gap: 20px;
margin-top: 30px;
}
.development-description img {
width: 40%; /* Adjust the size as necessary */
border-radius: 10px;

```

```
box-shadow: 0 8px 16px rgba(0, 0, 0, 0.2);
}
```

```
/* Media Query for Responsive Design */
@media (max-width: 768px) {
.quality-section, .product-section {
flex-direction: column;
text-align: center;
}
.quality-content, .product-content {
padding: 20px 0;
}
.quality-image, .product-image {
margin-bottom: 20px;
}
}
</style>
</body>
</html>
```

Contact.html

```
<!DOCTYPE html>
<html lang="en">
<head><title>Asp</title>
<link rel="stylesheet" href="style.css">
```

```

<link
href="https://fonts.googleapis.com/css2?family=Merriweather:wght@400;700&dis
play=swap" rel="stylesheet">

</head><body>

<!-- Header Section -->

<div class="header"><nav>



<ul class="nav-links">

<li><a href="index.html">Home</a>

<li><a href="About.html">About</a></li>

<li><a href="Product.html">Product</a></li>

<li><a href="Contact.html">Contact us</a></li>

</ul></nav></div>

```

Contact.html

```

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Contact Form</title>

<style>

body {

font-family: Arial, sans-serif;

background-color: #f4f4f4;

} if (name.length < 2) {

document.getElementById("nameError").innerHTML = "Name must be at least 2
characters long.";

valid = false;

```

```

}
if (!email.match(emailPattern)) {
    document.getElementById("emailError").innerHTML = "Enter a valid email
    address.";
    valid = false;
}
if (!phone.match(phonePattern)) {
    document.getElementById("phoneError").innerHTML = "Phone number must be
    10 digits.";
    valid = false;
}
if (message.length < 5) {
    document.getElementById("messageError").innerHTML = "Message must be at
    least 5 characters long.";
    valid = false;
}
// If the form is valid
if (valid) {
    document.getElementById("successMessage").innerHTML = "Your enquiry has
    been submitted successfully!";
}
return false; // Prevent form submission for demo purposes
}
</script>
</body>
</html>

```


7. SYSTEM TESTING

Testing ensures that the website functions correctly and meets client expectations. It checks the functionality of components, assemblies, and the overall system. Multiple types of tests are conducted to cover all requirements.

7.1 TEST CASES

UNIT TESTING:

Unit testing focuses on individual components of the website. Each page (e.g., Home, Products, Contact Us) is tested to ensure that inputs produce the correct outputs and navigation works as intended. Tests check whether each unique function, such as form submissions and menu links, operates correctly.

The main objectives include:

- All fields function correctly.
- Navigation links open the correct pages.
- Forms accept valid entries only, and duplicate inputs are prevented.

Test Results: All unit tests passed, with no errors.

INTEGRATION TESTING:

Integration testing examines how different components work together. For example, the product catalog, inquiry form, and contact page must function seamlessly as a combined system. Integration ensures that data flows correctly between pages and that forms submit to the server without error.

TEST RESULTS: No integration errors were found, and all functionalities worked cohesively.

FUNCTIONAL TESTING:

Functional testing evaluates whether all user-facing features (e.g., form submissions, navigation, and page content) work as expected. The website's core functions, such as viewing product descriptions, sending inquiries, and navigating through the site, were tested to ensure that valid inputs are processed correctly and invalid inputs are rejected.

Test Results: All functional tests were successful, with the site responding to both valid and invalid inputs appropriately.

SYSTEM TESTING:

System testing ensures that the entire integrated system meets ASP Sealing Products' requirements. All elements, including pages, forms, and interlinking functions, were tested for consistency and reliability.

Test Results: All system tests passed, with no configuration or integration errors detected.

TYPES OF TESTING

White Box Testing:

White box testing was used to validate the internal logic of the site, ensuring that the website's code functions correctly behind the scenes. Code paths, logic branches, and decision points were checked.

Black Box Testing:

Black box testing was performed without considering the internal structure of the website. This testing approach focused on input-output interactions, such as submitting forms, clicking links, and navigating the site.

Acceptance Testing:

User acceptance testing (UAT) confirmed that the website met all functional requirements from ASP Sealing Products Limited. The client's end users tested the site to ensure that it met business needs and was user-friendly.

TEST RESULTS: The website passed UAT successfully, with no defects identified.

7.2 PERFORMANCE ANALYSIS

The ASP Sealing Products Limited website was evaluated for its functionality, user experience, performance, and security. It features an intuitive layout with responsive design and fast load times, offering seamless navigation across all devices. Product information is easily accessible, enhancing the user experience.

Key performance metrics such as scalability and response time were tested to ensure the website can handle increased traffic and transactions efficiently. Security protocols like encryption and secure data handling were also assessed, ensuring the protection of sensitive customer information.

In terms of future improvements, SEO optimizations and the implementation of a live chatbot are recommended to boost visibility and user engagement. The addition of a content management system (CMS) ensures easy updates and ongoing content relevance, allowing non-technical users to manage the website effectively.

Overall, the website not only supports business growth by enhancing customer engagement but also positions ASP Sealing Products as a reliable industry leader. It is built to be adaptable, scalable, and secure, ensuring longevity and continued relevance in the digital space.

8. CONCLUSION

The ASP Sealing Products Limited website effectively enhances the company's online presence with a modern, responsive design that caters to a broad audience. The user-friendly interface allows seamless navigation, enabling users to explore products, check specifications, and learn about the company's offerings. With mobile optimization and secure communication tools like Web3Forms, the platform ensures accessibility across all devices and fosters stronger client relationships. Additionally, the website's structure supports future growth through the use of modern technologies, making it adaptable for updates and new features. Overall, the project successfully establishes a robust digital platform, aligning with ASP's commitment to innovation and customer engagement.

It also modernizes the company's digital presence with a clean, user-friendly design and mobile compatibility, allowing easy access to product details and inquiries. Features like secure Web3Forms and future scalability ensure it meets customer needs while supporting the company's growth in the sealing products industry.

8.1 FUTURE ENHANCEMENT

The ASP Sealing Products Limited website offers a robust platform, but several future enhancements can further improve its functionality, user experience, and business outreach. These enhancements will focus on expanding digital engagement, optimizing system capabilities, and ensuring sustained customer interaction.

1. AI Chatbots

- Implement AI-driven chatbots for real-time customer support and assistance with product queries.

2. Search Engine Optimization (SEO)

- Enhance SEO strategies to improve search engine rankings, driving more organic traffic and potential leads.

3. E-Commerce Integration

- Add e-commerce features for online transactions, allowing clients to purchase products directly from the website.

4. Mobile Optimization

- Further optimize the website for mobile devices to ensure a seamless user experience across all platforms.

5. Client Portals

- Develop secure, personalized client portals where customers can track orders and access exclusive content.

APPENDICES

A.1. SAMPLE SCREENSHOTS

A.1.1 HOME PAGE

The homepage of ASP Sealing Products Limited highlights its position as a leading tier-1 supplier to major OEMs in the Heavy Commercial Vehicle (HCV) sector, focusing on high-quality EPDM rubber weatherstrips and sealing solutions. It reflects the company's dedication to innovation and customer satisfaction while inviting visitors to explore its diverse product range and rich automotive legacy.

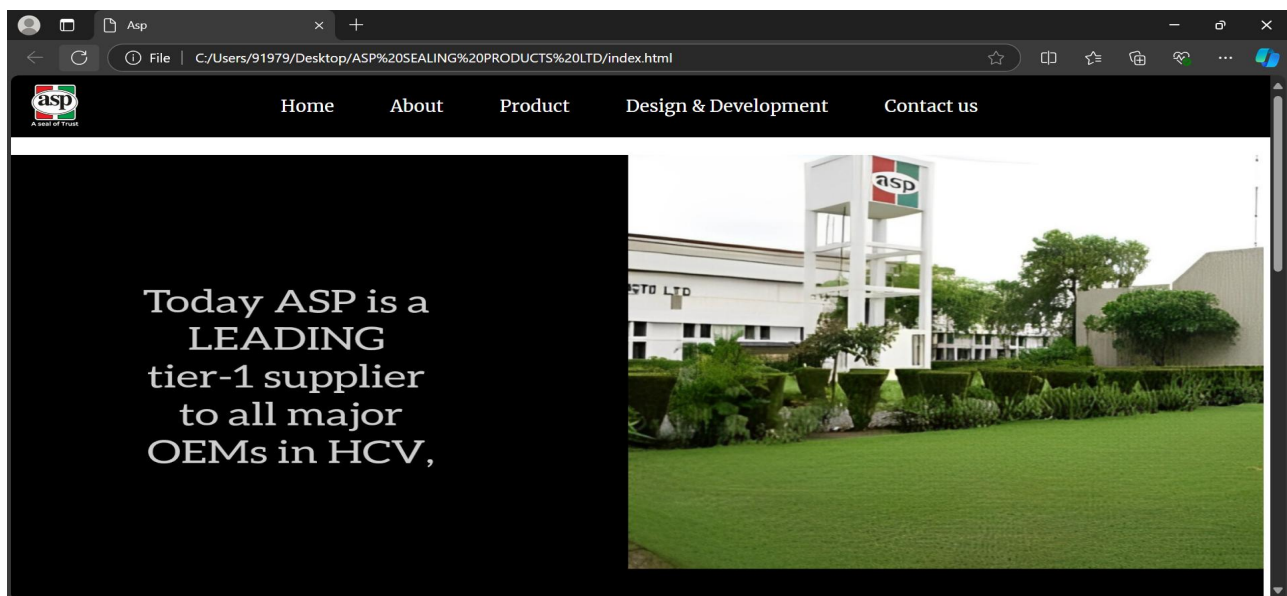


Fig A.1.1 Home page

A.1.2 ABOUT PAGE

The "About Us" page of ASP Sealing Products Limited highlights the company's extensive history and expertise in manufacturing EPDM rubber weatherstrips and sealing solutions. It emphasizes ASP's position as a leading tier-1 supplier to major OEMs in the Heavy Commercial Vehicle (HCV) sector and showcases the company's commitment to quality, innovation, and customer satisfaction..

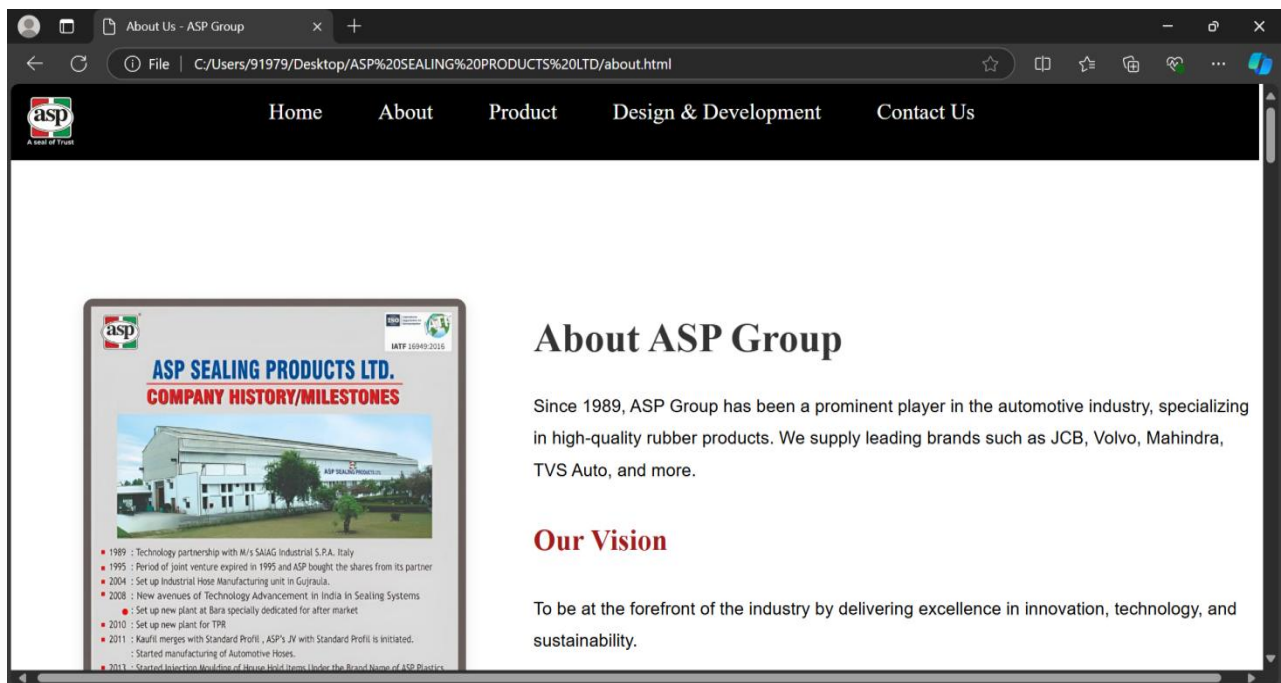


Fig A.1.2 About Page

A.1.3 PRODUCT PAGE

The "Products" page of ASP Sealing Products Limited highlights the company's extensive range of high-quality EPDM rubber weatherstrips and sealing solutions. It features detailed descriptions, technical specifications, and application information for each product, showcasing the company's commitment to innovation and quality. This page enables customers to easily navigate the catalog, ensuring informed decision-making for both technical professionals and new clients in the Heavy Commercial Vehicle (HCV) sector.

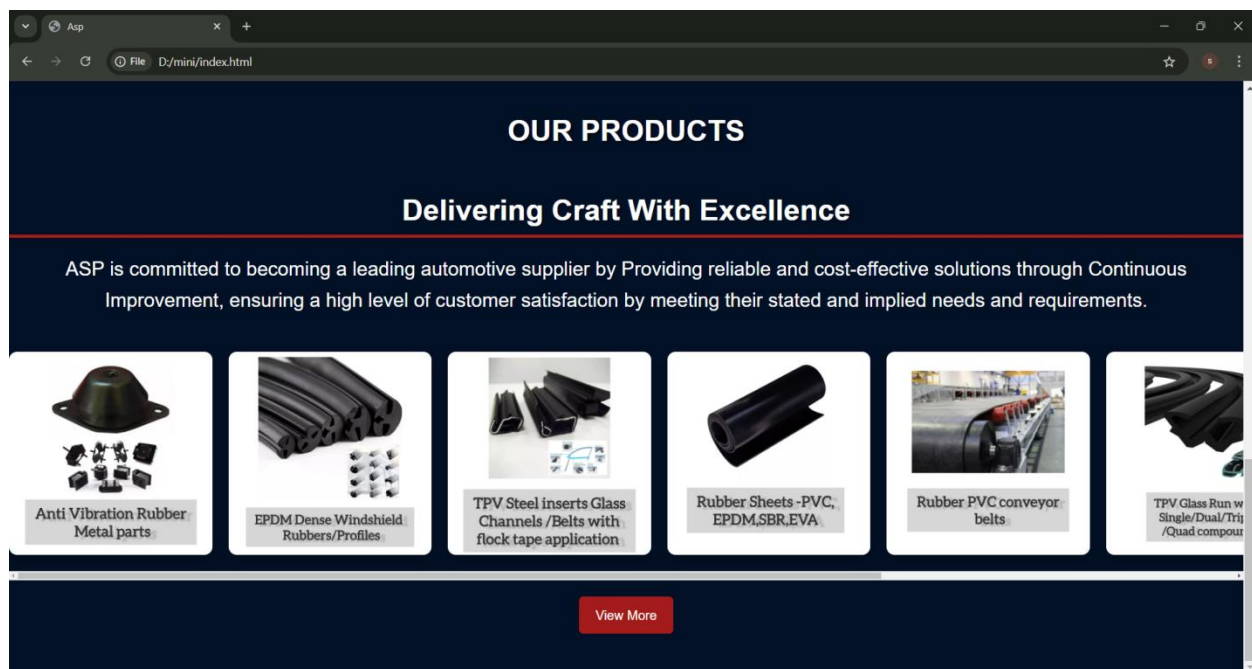


Fig A.1.3 Product page

A.1.4 DESIGN & DEVELOPMENT

The "Design and Development" section of ASP Sealing Products Limited highlights the innovative processes used to create high-quality EPDM rubber weatherstrips and sealing solutions. It emphasizes the company's commitment to research and development, showcasing advanced technologies and collaboration between engineers and industry experts to ensure products meet rigorous standards for performance and durability in the Heavy Commercial Vehicle (HCV) sector.

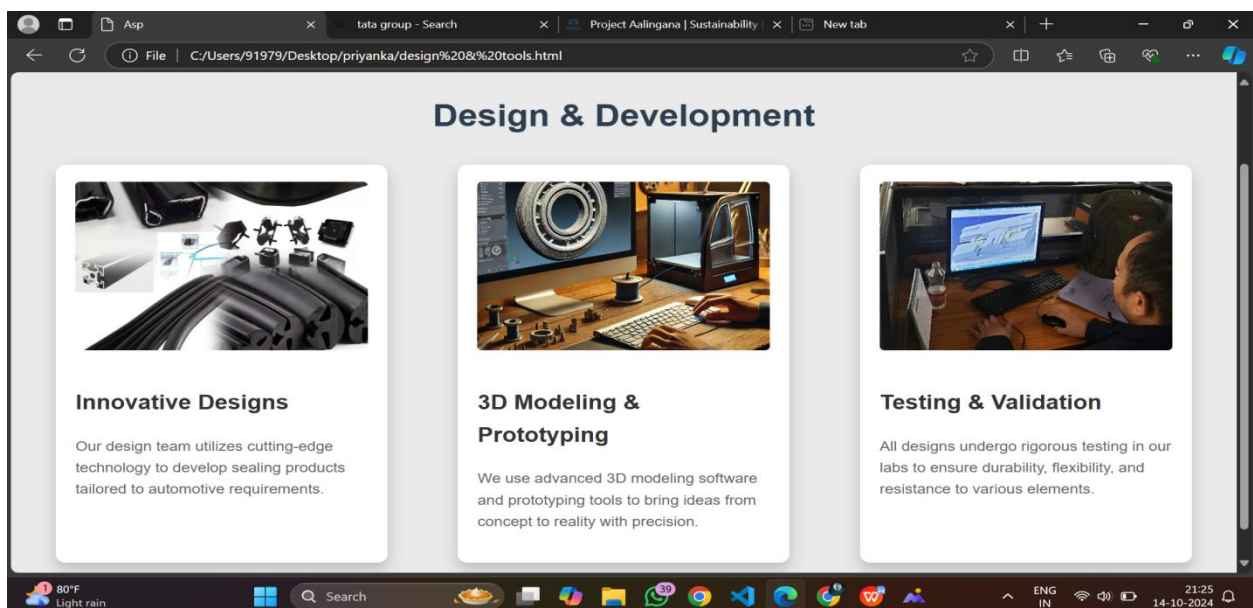
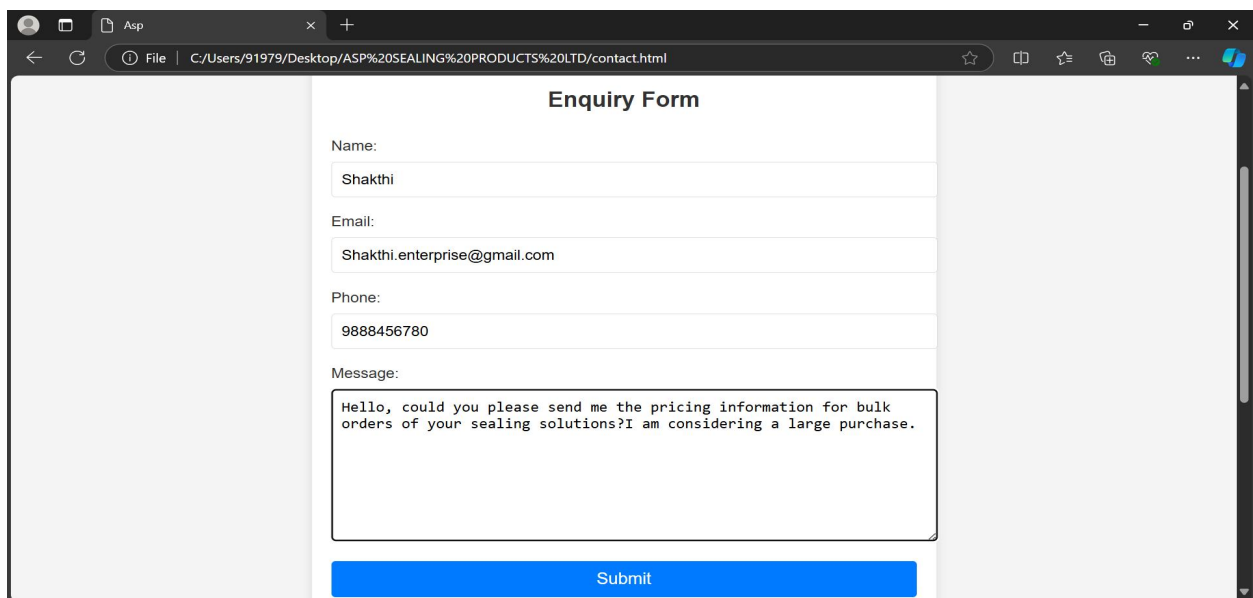


Fig A.1.4 Design and Development

A.1.5 CONTACT PAGE

The "Contact" page of ASP Sealing Products Limited offers essential communication options, including a contact form, phone numbers, and email addresses. It encourages customer inquiries and feedback, reflecting the company's commitment to prompt assistance and excellent service.



The screenshot displays a web browser window with the address bar showing the file path: C:/Users/91979/Desktop/ASP%20SEALING%20PRODUCTS%20LTD/contact.html. The page features a central "Enquiry Form" with the following fields:

- Name:** A text input field containing "Shakthi".
- Email:** A text input field containing "Shakthi.enterprise@gmail.com".
- Phone:** A text input field containing "9888456780".
- Message:** A text area containing the text: "Hello, could you please send me the pricing information for bulk orders of your sealing solutions?I am considering a large purchase."

Below the message field is a blue "Submit" button.

Fig A.1.5 Contact Page

A.1.6 MAIL SENT

The "Mail Sent" page of ASP Sealing Products Limited confirms successful submission of inquiries or feedback from visitors. It assures users that their messages have been received and emphasizes the company's dedication to addressing their requests promptly.

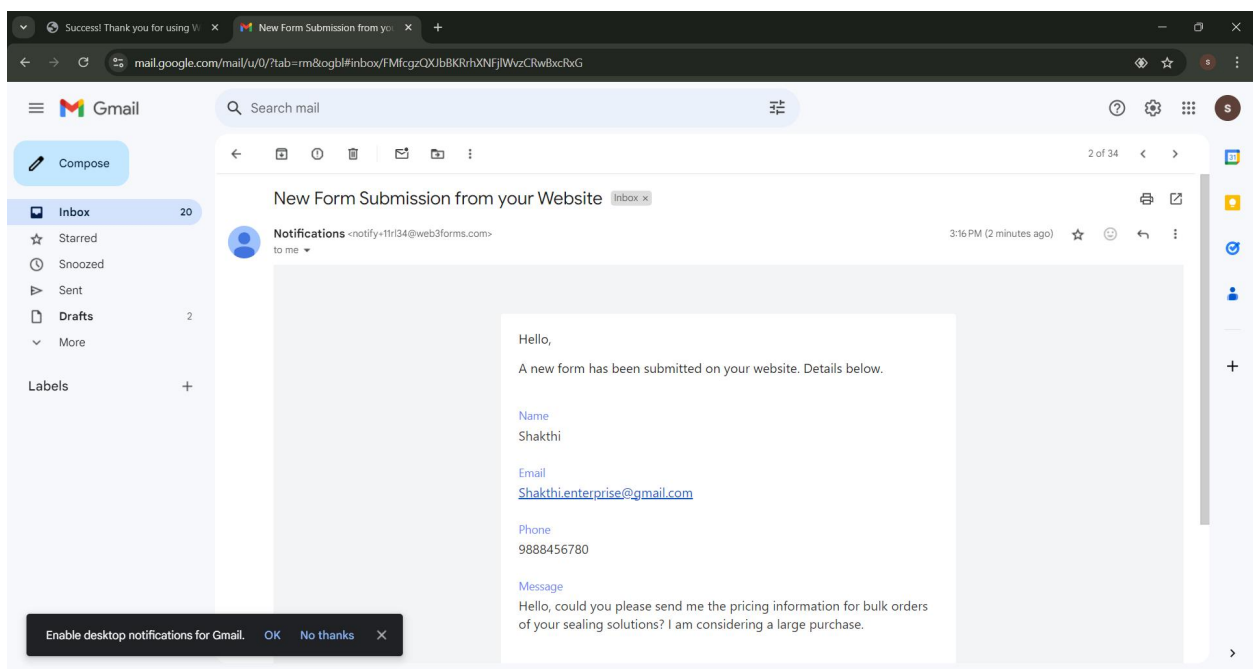


Fig A.1.6 Mail Sent

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