

# SUNGLASSES WEBSITE

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# **Introduction**

## **1.1 Background:**

Sunglasses have always been a staple accessory, transcending cultures and generations. With the evolution of technology and the rise of e-commerce, the accessibility to fashionable eyewear has never been easier. Today, countless websites offer a myriad of sunglasses options, catering to diverse tastes and preferences. From renowned brands to niche designers, platforms like Ray-Ban, Oakley, and Warby Parker have made it effortless for consumers to shop for sunglasses from the comfort of their homes, anytime, anywhere. The primary objective of these websites is to provide customers with a seamless shopping experience, ensuring convenience and satisfaction.

## **1.2 Objectives:**

Our website aims to revolutionize the way sunglasses are purchased online, with the following objectives in mind:

Automate the purchasing process, offering features akin to those found in traditional brick-and-mortar stores.

Introduce a home trial service, allowing users to schedule appointments for trying on sunglasses in the comfort of their own homes before making a purchase.

Curate a diverse collection of sunglasses for children.

Offer customized sunglasses options to cater to individual preferences and styles.

### **1.3 Purpose, Scope, and Applicability:**

#### **1.3.1 Purpose:**

Our goal is to provide customers and vendors with a user-friendly platform for sunglasses transactions, ensuring a seamless and enjoyable experience for all users.

#### **1.3.2 Scope:**

Our platform seeks to bring together a wide range of sunglasses options in one convenient location, offering customers access to styles that may not be readily available in their local area. While our platform currently offers features such as notifications and messaging, we remain committed to continuous improvement and enhancement.

### **1.3.3 Applicability:**

Our platform aims to streamline the sunglasses retail process, minimizing manual efforts and saving time for both consumers and vendors.

By bridging the gap between consumers and vendors, we aim to foster greater engagement in e-commerce and encourage more businesses to embrace online transactions.

### **1.3.4 Industry:**

Lifestyle

Through our website, we aspire to redefine the sunglasses shopping experience, making it more accessible, enjoyable, and personalized for our valued customers.

# Requirements And Analysis

## 2.1 Background:

In today's fast-paced digital age, sunglasses have become more than just eye protection; they're a fashion statement. With the rise of online shopping, accessing trendy and UV-protected sunglasses at budget-friendly prices has never been easier. Our website aims to cater to the fashion-forward individuals who seek both style and protection for their eyes. We strive to offer customers the convenience of shopping from the comfort of their homes, 24/7. Leveraging Azure services, our platform ensures seamless deployment and integration, providing users with an unparalleled shopping experience.

## 2.2 Objectives:

Our website is designed with the following objectives:

To offer a diverse range of fancy sunglasses that are both stylish and UV protected.

To provide users with a seamless browsing experience, allowing them to explore different categories, book home trials, and request customized items.

To ensure the authenticity and quality of all sunglasses listed on the website.

To enhance user satisfaction through efficient delivery, responsive customer support, and secure transactions.

## **2.3 Requirements Analysis:**

### **2.3.1 Functional Requirements:**

#### **Browsing:**

Users can browse sunglasses by category, price range, and brand.

#### **Authenticity:**

All sunglasses sold on the website must be genuine and of high quality.

#### **Searching:**

Users can search for specific sunglasses by name.

**Invoice:**

Proper invoices containing order details are generated for every purchase.

**Inventory Management:**

Sellers/administrators can manage inventory by adding or removing items.

**Product Description:**

Detailed descriptions and images are provided for each product.

**2.3.2 Non-Functional Requirements:****Satisfaction:**

Ensuring user satisfaction through genuine products, efficient delivery, and responsive customer support.

**Delivery:**

Timely and secure delivery of products without damage.

Customer Feedback: Efficient resolution of customer queries and complaints.

**Security:**

Protection of customer data and payment information.



**Availability:**

Ensuring the website operates smoothly without downtime.

**Quality:**

Providing high-quality sunglasses that meet customer expectations.

**Efficiency:**

Optimizing system capacity, throughput, and response time.

**Portability:**

Ensuring the website functions across different devices and platforms.

**Reliability:**

Ensuring the website operates reliably under specified conditions.

**2.4 System Requirements:****Registration:**

Users must register an account to access full website features.

**Login:**

Registered users can log in with their credentials.

**Cart:**

Users can add sunglasses to their cart for future purchase.

Categories: Sunglasses are categorized for easy navigation.

**Filters:**

Users can apply filters to refine their search.

**Guide:**

A guide section provides information on different types of sunglasses.

**Search Bar:**

Users can search for specific sunglasses.

**Brands:**

Users can explore sunglasses from different brands.

## **2.5 Software and Hardware Requirements:**

**Platform:** Microsoft Azure

**Programming Language:** HTML, CSS, Javascript

**Azure Services:** Virtual machine, Load Balancer, DNS service, Language Services & Chatbot

**Hardware:** Processor with SSE2 instruction set, 4GB RAM, Super VGA display with 1024 x 768 resolution.

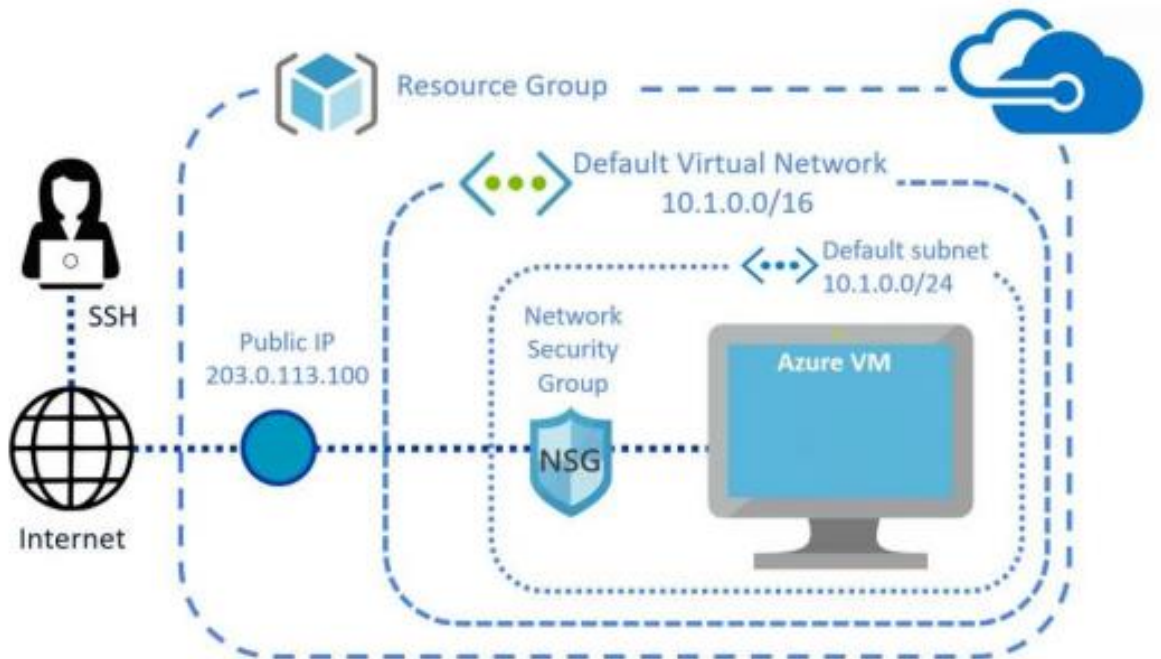
# Azure Services

## Azure Services Used:

### 1 Azure Virtual Machine :

Azure virtual machines are one of several types of on-demand, scalable computing resources that Azure offers. Typically, you choose a virtual machine when you need more control over the computing environment than the other choices offer. This article gives you information about what you should consider before you create a virtual machine, how you create it, and how you manage it.

An Azure virtual machine gives you the flexibility of virtualization without having to buy and maintain the physical hardware that runs it. However, you still need to maintain the virtual machine by performing tasks, such as configuring patching, and installing the software that runs on it.



Azure virtual machines can be used in several ways. Some examples are:

- Development and test – Azure virtual machines offer a quick and effortless way to create a computer with specific configurations required to code and test an application.
- Applications in the cloud – Because demand for your application can fluctuate, it might make economic sense to run it on a virtual machine in Azure. You pay for extra virtual machines when you need them and shut them down when you don't.
- Extended datacentre – virtual machines in an Azure virtual network can easily be connected to your organization's network. The number of virtual machines that your

application uses can scale up and out to whatever is required to meet your needs.

## **2 Load Balancer in Azure:**

Azure Load Balancer is a Layer 4 (TCP, UDP) load balancer that distributes incoming network traffic across multiple virtual machines to ensure high availability and reliability of applications. It offers scalable and highly available load balancing services for Azure virtual machines and cloud services, allowing you to build resilient and performant applications.

### **Key Features and Benefits:**

**High Availability:** Azure Load Balancer distributes incoming traffic across multiple virtual machines within the same Azure Virtual Network, ensuring that your application remains accessible even if one or more virtual machines become unavailable.

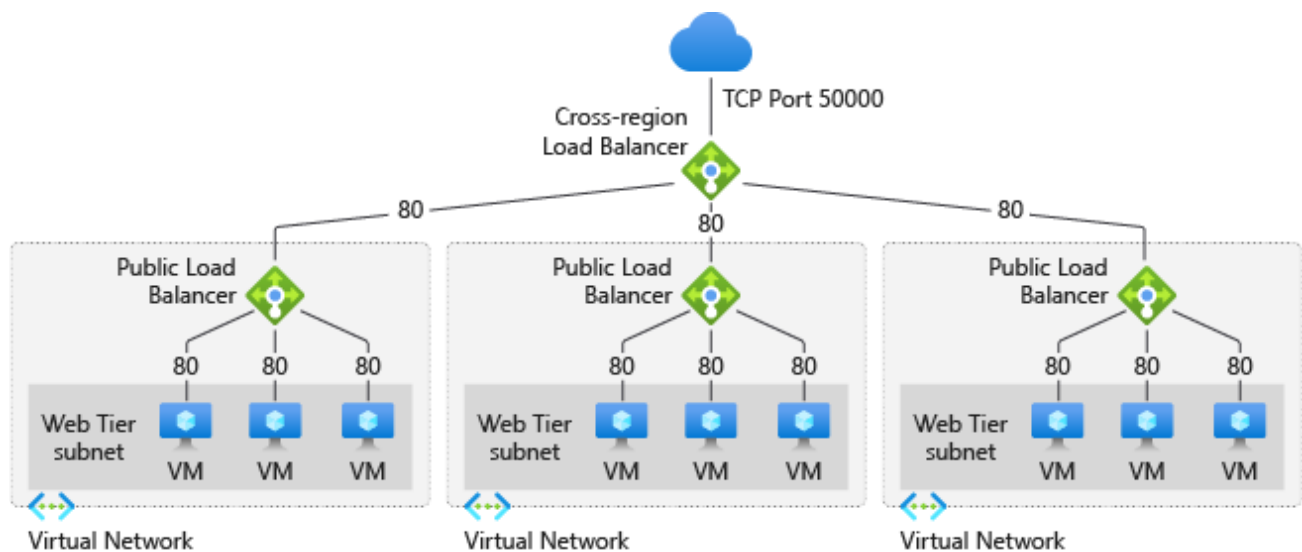
**Scalability:** As your application traffic grows, Azure Load Balancer scales seamlessly to handle increased load by distributing incoming traffic evenly across all available virtual machines.

**Health Monitoring:** Load Balancer continuously monitors the health of virtual machines to ensure that traffic is only routed to healthy instances. It automatically removes unhealthy instances from the load-balanced set and redirects traffic to healthy instances.

**Session Persistence:** Optionally, you can configure session persistence to ensure that subsequent requests from a client are routed to the same virtual machine, maintaining session state for applications that require it.

**Port Forwarding:** Azure Load Balancer supports port forwarding, allowing you to map incoming traffic on specific ports to different sets of virtual machines based on rules you define.

**Integration with Virtual Networks:** Load Balancer seamlessly integrates with Azure Virtual Networks, allowing you to deploy load balancers within the same network as your virtual machines, ensuring optimal performance and security.



## Use Cases:

**Highly Available Web Applications:** Load Balancer can distribute incoming web traffic across multiple virtual machines hosting your web application, ensuring high availability and fault tolerance

**Scalable Backend Services:** Backend services such as databases or application servers can leverage Load Balancer to handle increased load and ensure responsiveness to client requests.

**Internal Load Balancing:** Load Balancer can be used for internal load balancing within a Virtual Network, enabling seamless communication between virtual machines and services deployed within the same network.



Hybrid Cloud Deployments: Load Balancer facilitates hybrid cloud deployments by allowing virtual machines in Azure to be seamlessly connected to on-premises networks, extending the reach of your applications and services.

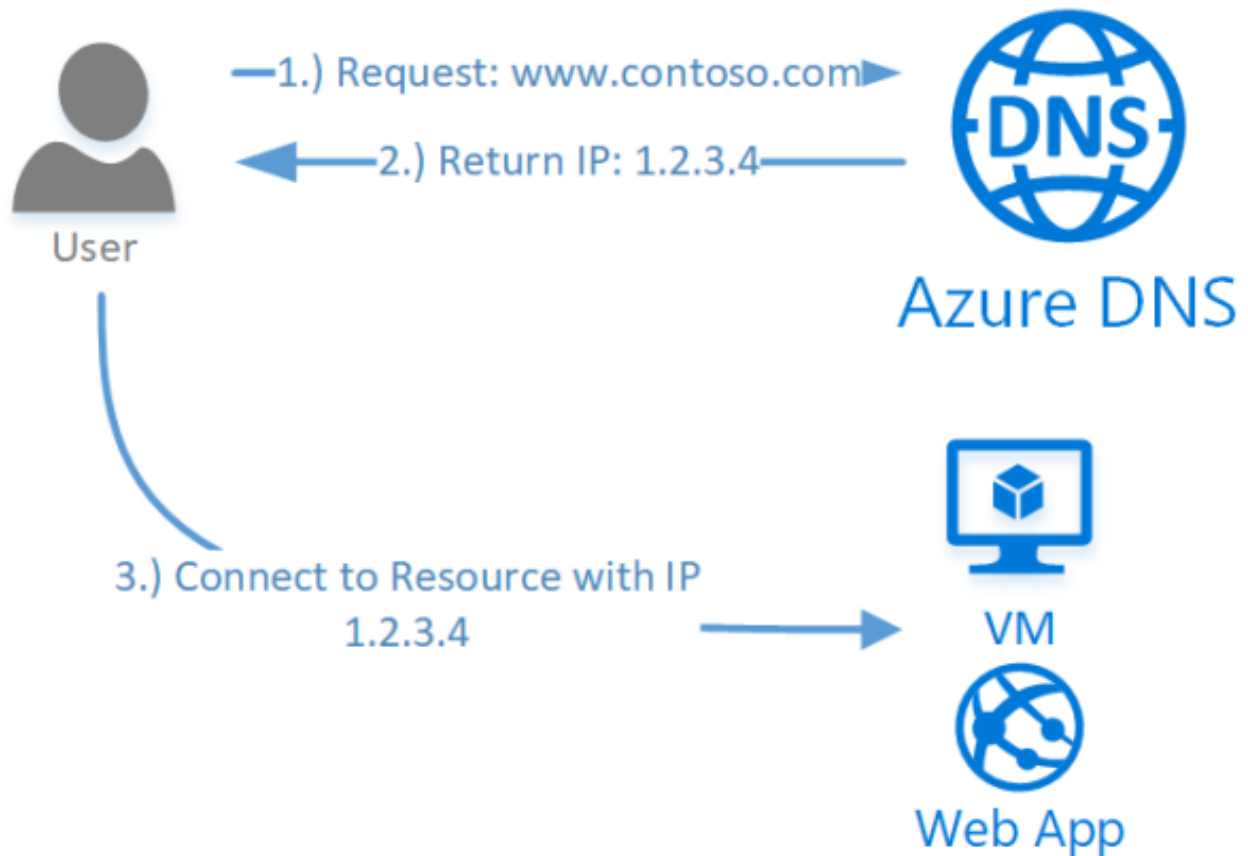
In summary, Azure Load Balancer is a critical component for building resilient, scalable, and highly available applications in the Azure cloud environment. By intelligently distributing incoming traffic across multiple virtual machines, Load Balancer helps optimize performance and ensure uninterrupted service delivery for your applications.

### **3. Domain Name System (DNS):**

Domain Name System (DNS) is one of the industry-standard suites of protocols that comprise TCP/IP, and together the DNS Client and DNS Server provide computer name-to-IP address mapping name resolution services to computers and users.

In Windows Server 2016, DNS is a server role that you can install by using Server Manager or Windows PowerShell commands. If you are installing a new Active Directory Forest and domain, DNS is automatically installed with Active Directory as the Global Catalogue server for the forest and domain.

Active Directory Domain Services (AD DS) uses DNS as its domain controller location mechanism. When any of the principal Active Directory operations is performed, such as authentication, updating, or searching, computers use DNS to locate Active Directory domain controllers. In addition, domain controllers use DNS to locate each other.

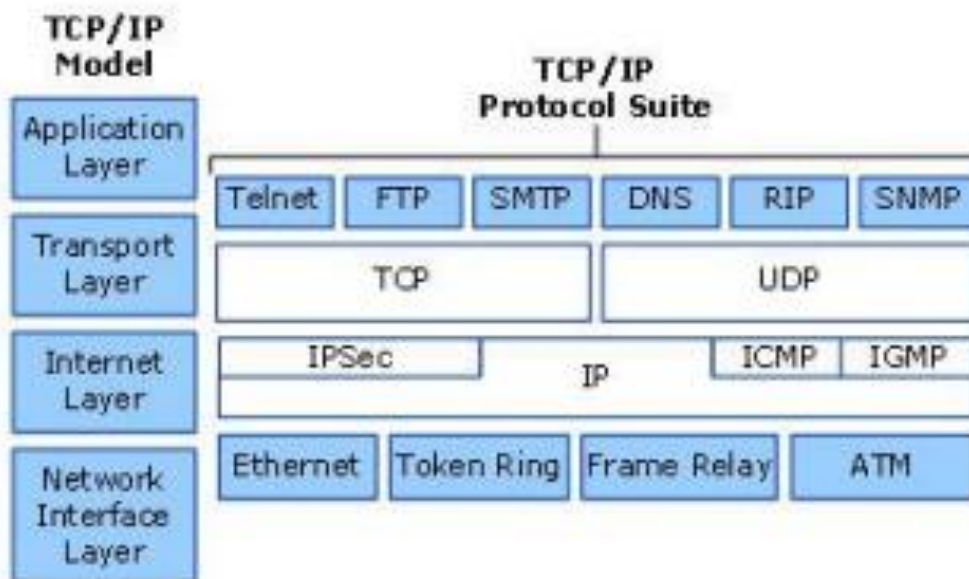


The DNS Client service is included in all client and server versions of the Windows operating system and is running by default upon operating system installation. When you configure a TCP/IP network connection with the IP address of a DNS server, the DNS Client queries the DNS server to discover domain controllers, and to resolve computer names to IP addresses. For example, when a network user with an Active Directory user account logs in to an Active Directory domain, the DNS Client service queries the DNS server to locate a domain controller for the Active Directory domain. When the DNS server responds to the query and provides the domain controller's IP address to the client, the client

contacts the domain controller, and the authentication process can begin.

The Windows Server 2016 DNS Server and DNS Client services use the DNS protocol that is included in the TCP/IP protocol suite. DNS is part of the application layer of the TCP/IP reference model, as shown in the following illustration.

### DNS in TCP/IP



## **Azure Language Studio:**

Azure Language Studio is a comprehensive suite of AI-powered language services offered by Microsoft Azure. It enables developers to build natural language processing (NLP) capabilities into their applications, allowing them to understand and generate human-like text in multiple languages. Language Studio provides a wide range of tools and APIs that facilitate tasks such as text analysis, translation, sentiment analysis, and language understanding.

### **Key Features and Benefits:**

**Natural Language Understanding (NLU):** Language Studio offers advanced NLU capabilities, allowing applications to interpret and understand human language input, extract meaning, and derive actionable insights. This enables developers to build intelligent chatbots, virtual assistants, and other conversational interfaces.

**Text Analytics:** With Language Studio's text analytics capabilities, developers can analyze large volumes of text data to extract key information, identify trends, and gain valuable insights. Text analytics features include entity recognition, key phrase extraction, sentiment analysis, and language detection.

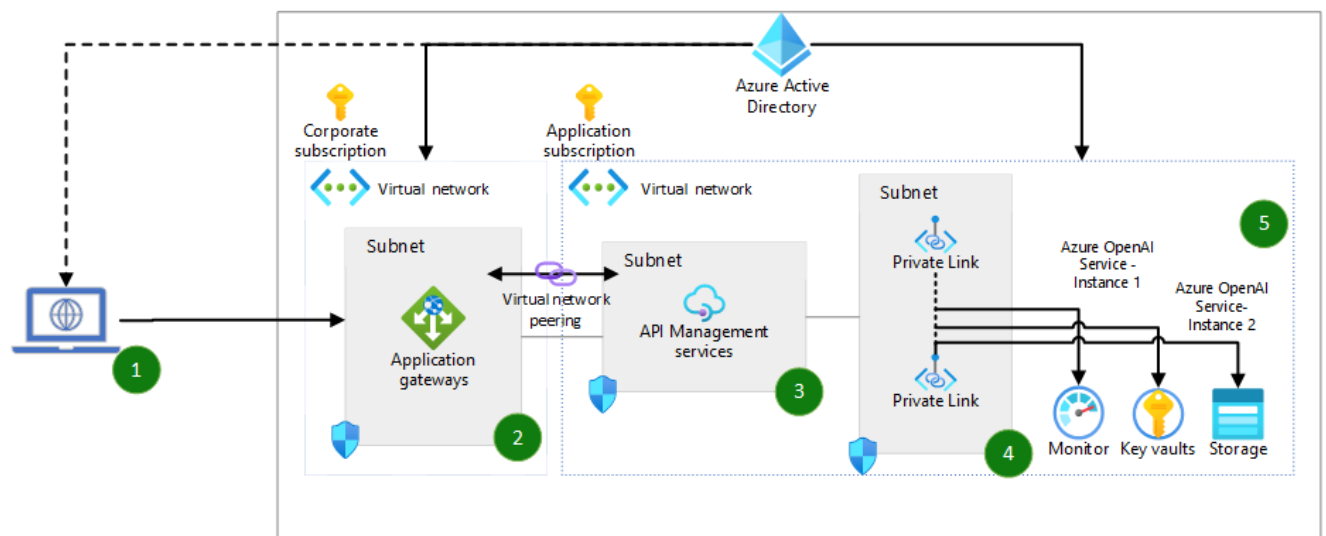
**Translation Services:** Language Studio provides powerful translation services that enable applications to translate text between multiple languages with high accuracy. Developers can integrate translation capabilities into their applications to support multilingual communication and localization.

**Language Generation:** Language Studio includes language generation capabilities that allow applications to generate human-like text based on predefined templates, rules, or machine learning models. This enables developers to automate content generation, personalize communication, and enhance user experiences.

**Customization and Training:** Language Studio offers tools and APIs for customizing and training language models to better suit specific domains, industries, or use cases. Developers can fine-tune pre-built models or create custom models using their own data to improve accuracy and performance.

**Scalability and Performance:** Azure Language Studio is built on Azure's robust and scalable infrastructure, ensuring

high performance and reliability. Applications can seamlessly scale to handle large volumes of text data and user requests, ensuring optimal performance under varying workloads.



## Use Cases:

**Conversational AI:** Language Studio enables developers to build intelligent chatbots, virtual assistants, and conversational interfaces that can understand and respond to natural language input from users.

**Text Analytics:** Organizations can use Language Studio's text analytics capabilities to analyze customer feedback, social media posts, survey responses, and other text data to

gain insights into customer sentiment, trends, and preferences.

**Multilingual Applications:** Language Studio's translation services enable developers to create multilingual applications that can support communication and interaction in multiple languages, catering to a global audience.

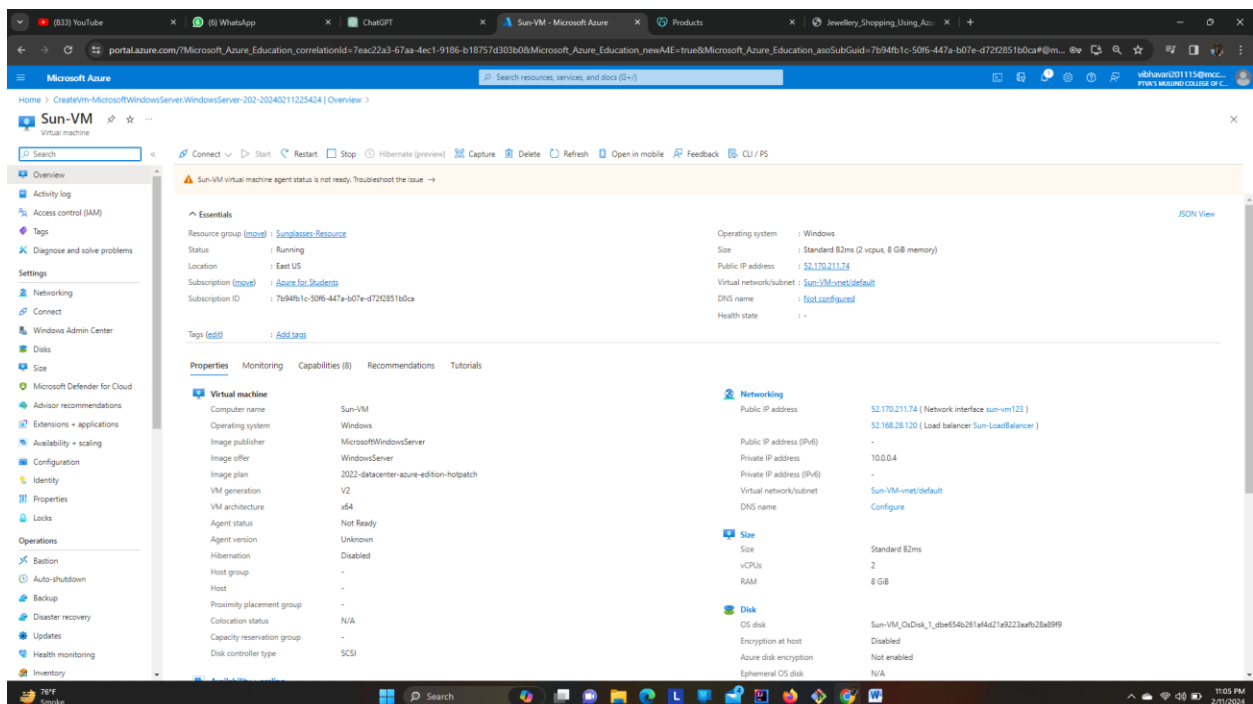
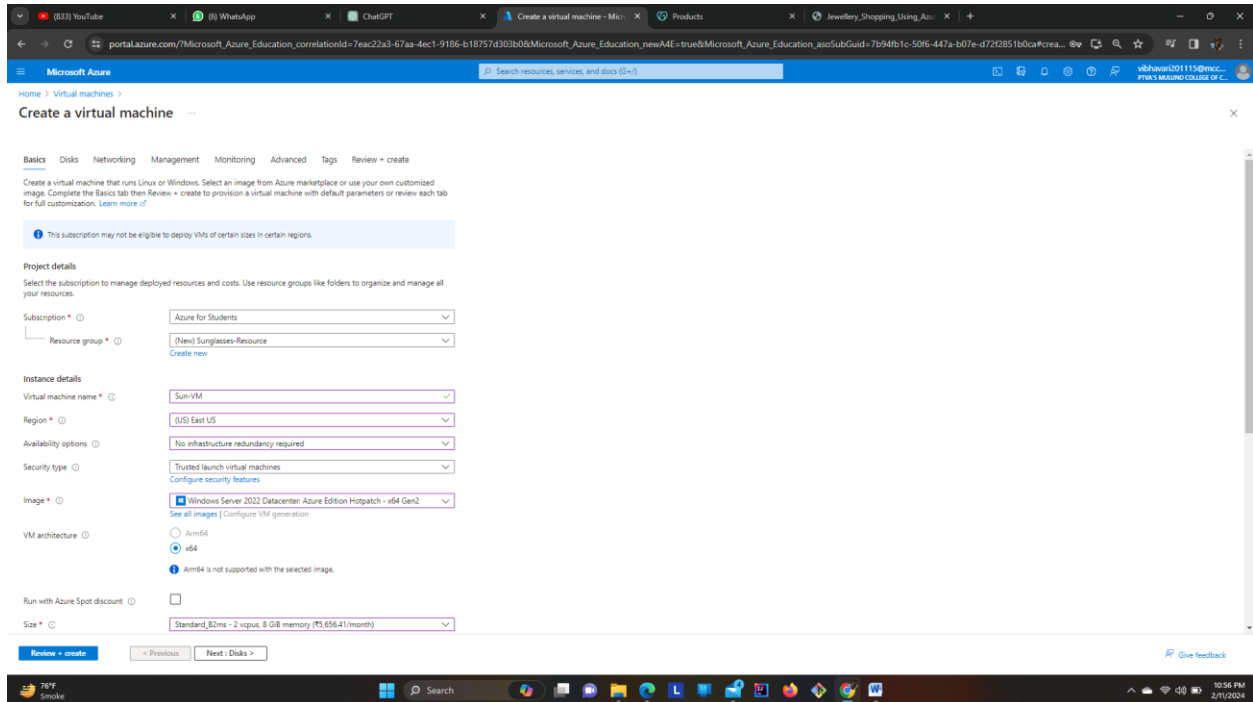
**Content Generation:** Language Studio's language generation capabilities empower developers to automate content creation, generate personalized messages, and dynamically generate text content based on user input or contextual information.

In summary, Azure Language Studio provides developers with powerful AI-driven language services that enable them to build intelligent, natural language processing capabilities into their applications. From understanding and analyzing text to translating and generating human-like responses, Language Studio offers a comprehensive suite of tools and APIs for building sophisticated language-driven applications.

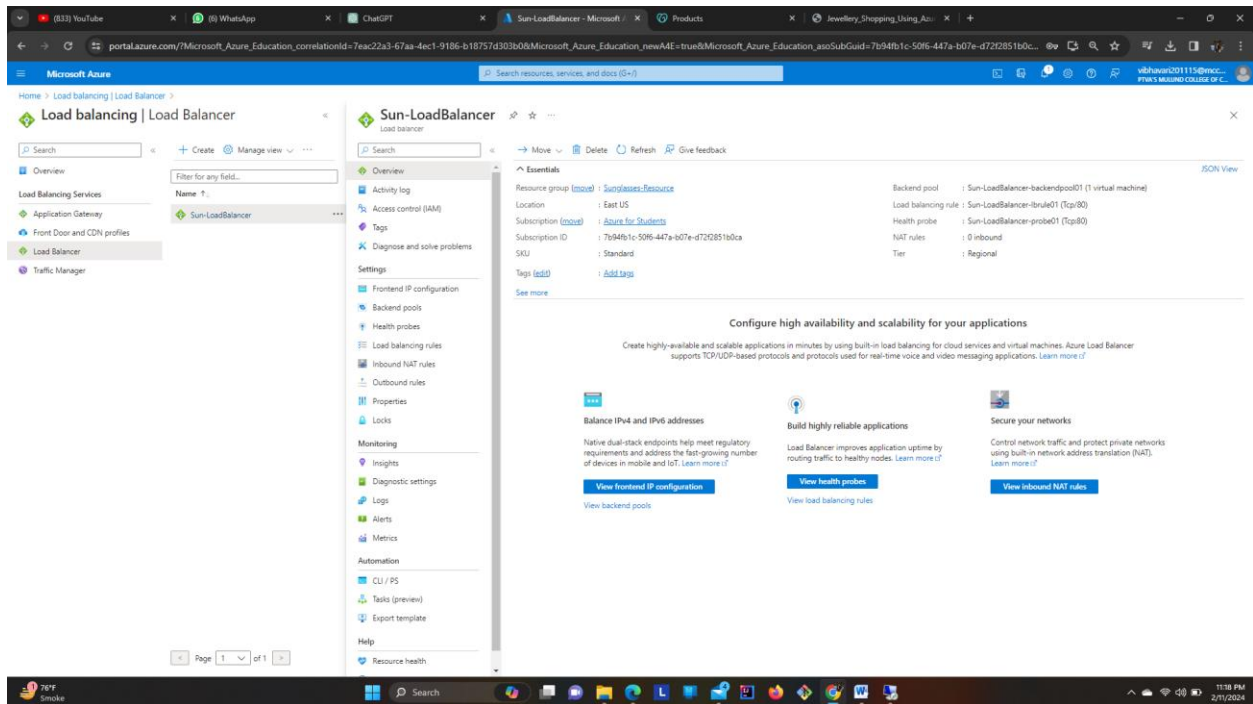


# Implementation

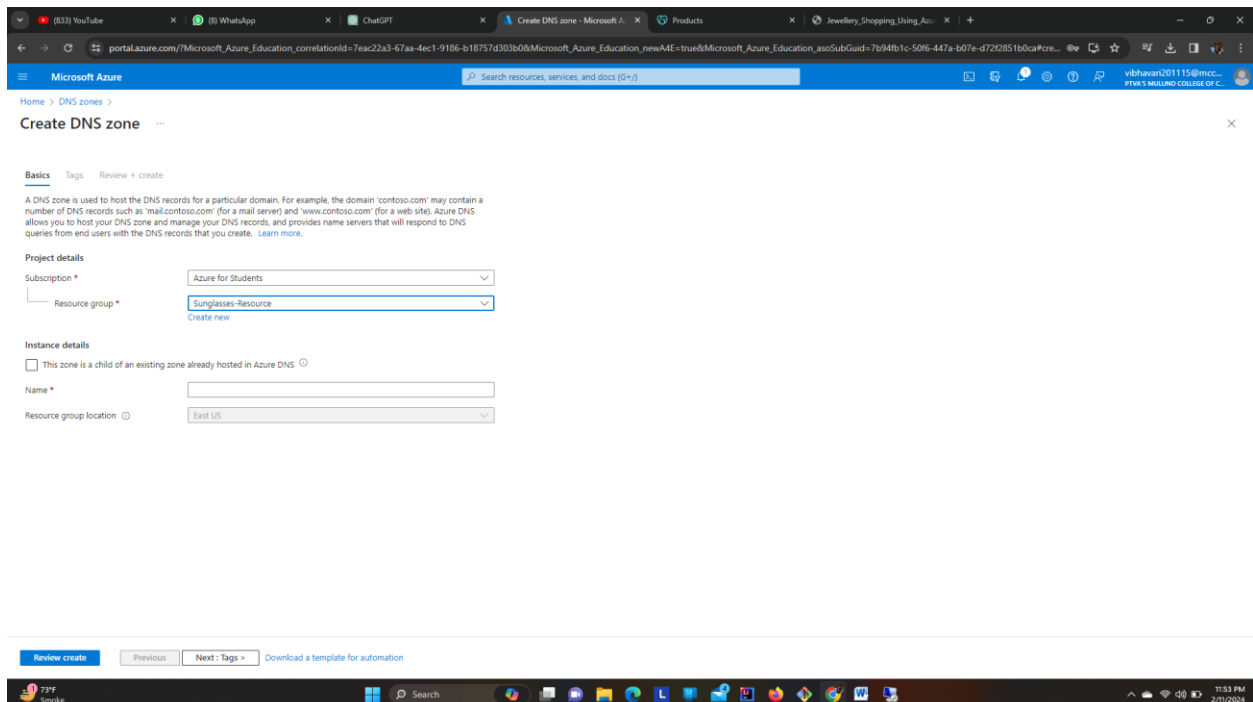
## 1) We first create a virtual machine



## 2) Then we create a load balancer



## 3) And we create dns zone for bind ip address with domain name



## 4) And bind ip address with domain name

The screenshot shows the Microsoft Azure portal interface for a DNS zone named 'lenzii.xyz'. The left sidebar contains navigation options like Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Settings, Properties, Locks, Monitoring, Alerts, Metrics, Automation, CLI / PS, Tasks (preview), Export template, and Help. The main content area displays the 'Essentials' section with details about the resource group 'Sunglasses-Resource', subscription 'Azure for Students', and subscription ID '7b94fb1c-50f6-447a-b07e-d72f2851b0ca'. It also lists four name servers: ns1-38.azure-dns.com, ns2-38.azure-dns.net, ns3-38.azure-dns.org, and ns4-38.azure-dns.info. Below this, a table shows the DNS records:

Name	Type	TTL	Value	Alias resource type	Alias target
@	NS	172800	ns1-38.azure-dns.com, ns2-38.azure-dns.net, ns3-38.azure-dns.org, ns4-38.azure-dns.info		
@	SOA	3600	Email: azure-dns-hostmaster.microsoft.com, Host: ns1-38.azure-dns.com, Refresh: 3600, Retry: 300, Expire: 2419200, Minimum TTL: 300, Serial number: 1		
lenzii.xyz	A	3600	52.170.211.74		

A notification at the top right states 'Create record set' and 'Successfully created record set "lenzii.xyz"'. The bottom of the screen shows the Windows taskbar with the time 12:00 AM on 2/12/2024.

## 5) Then we create language studio for creating a bot

The screenshot shows the Microsoft Azure portal interface for a Language service named 'Sun-lang'. The left sidebar contains navigation options like Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Resource Management, Features, Keys and Endpoint, Encryption, Pricing tier, Networking, Identity, Cost analysis, Properties, Locks, Monitoring, Alerts, Metrics, Diagnostic settings, Logs, Automation, Tasks (preview), and Export template. The main content area displays the 'Essentials' section with details about the resource group 'Sunglasses-Resource', status 'Active', location 'East US', subscription 'Azure for Students', and subscription ID '7b94fb1c-50f6-447a-b07e-d72f2851b0ca'. It also lists the API kind 'TextAnalytics', pricing tier 'Free', endpoint 'https://sun-lang.cognitiveservices.azure.com/', and manage keys link. Below this, a 'Get Started' section provides instructions on how to build apps with industry-leading natural language understanding capabilities without machine learning expertise. It includes three main steps: Discover, Develop, and Deploy, each with a brief description and a button to learn more or get started.

**Discover**  
Whether running our service in the cloud or on your own servers see what Language service can do in a variety of scenarios.  
[Discover](#)

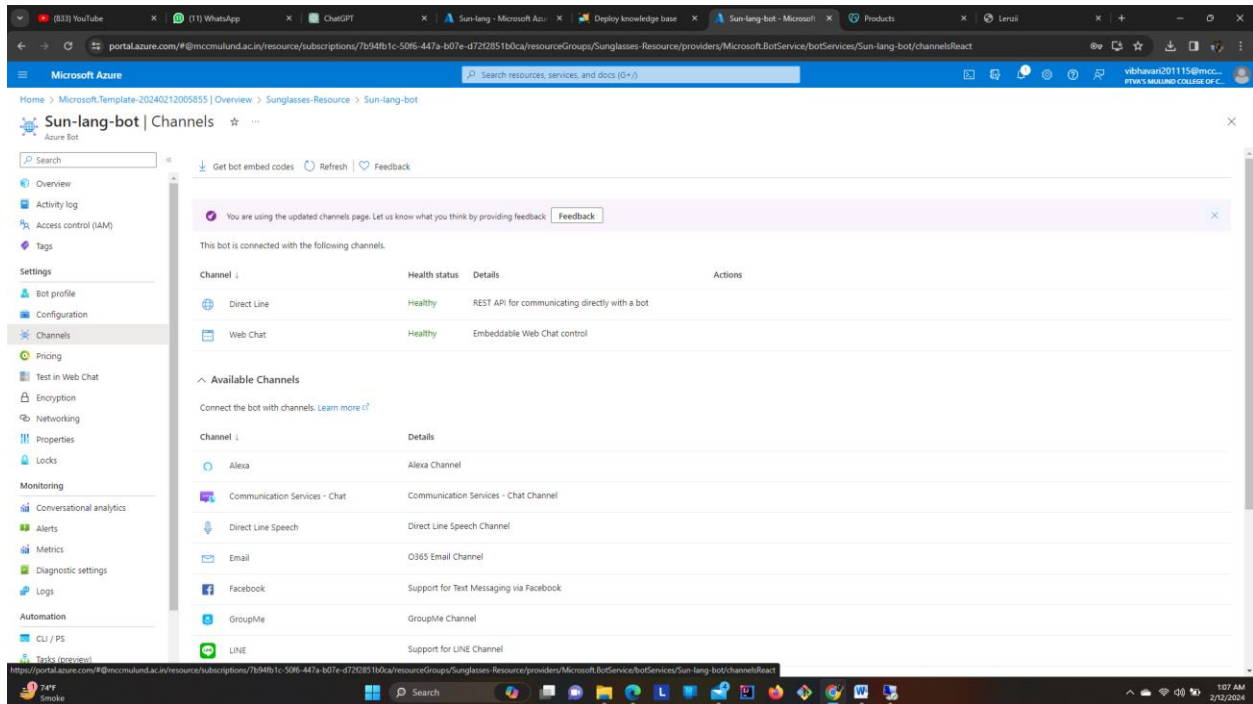
**Develop**  
Learn the basics, check out our sample code and implement and customize your solution with Language Studio, no coding required.  
[Develop](#)

**Deploy**  
Decide on hosting options, monitor your usage and check out your support options.  
[Deploy](#)

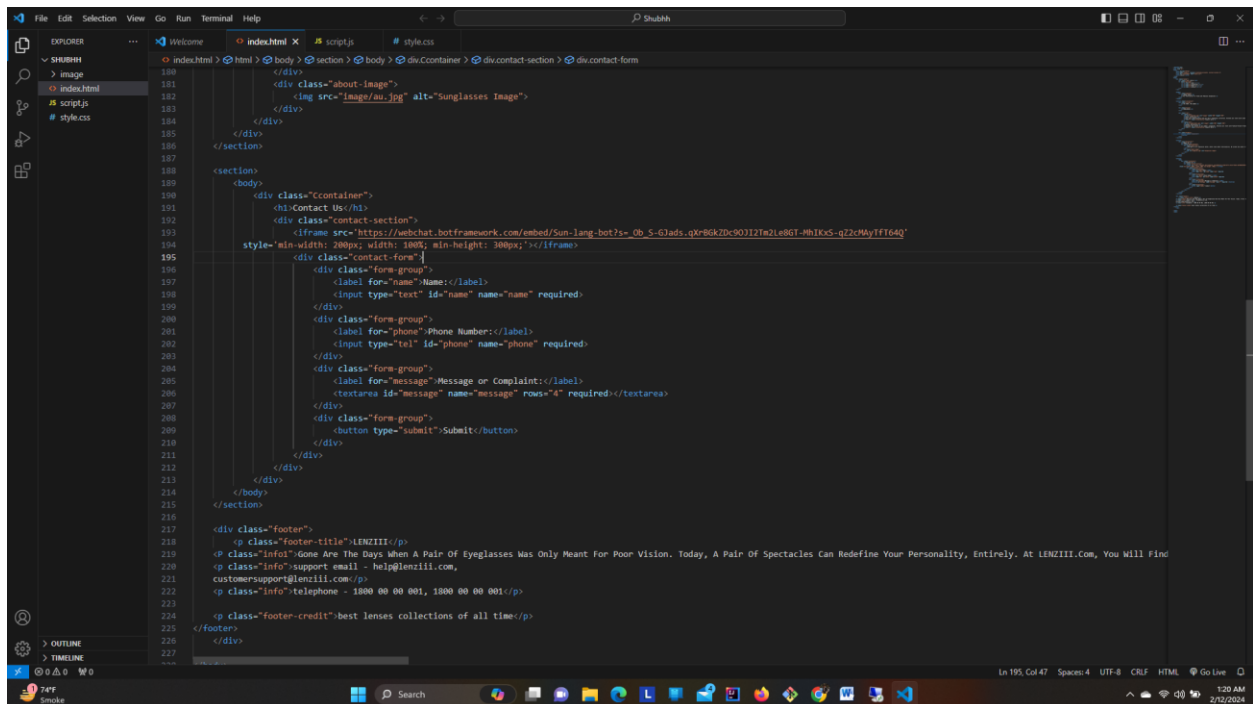
**Language Studio**  
Language Studio is a set of UI-based tools that lets you explore, build, and integrate features from Azure AI service for Language into your applications.  
[Get started with Language Studio](#)

The bottom of the screen shows the Windows taskbar with the time 1:01 AM on 2/12/2024.

## 6) We create a bot-service and use key and endpoint in code for creating chatbot

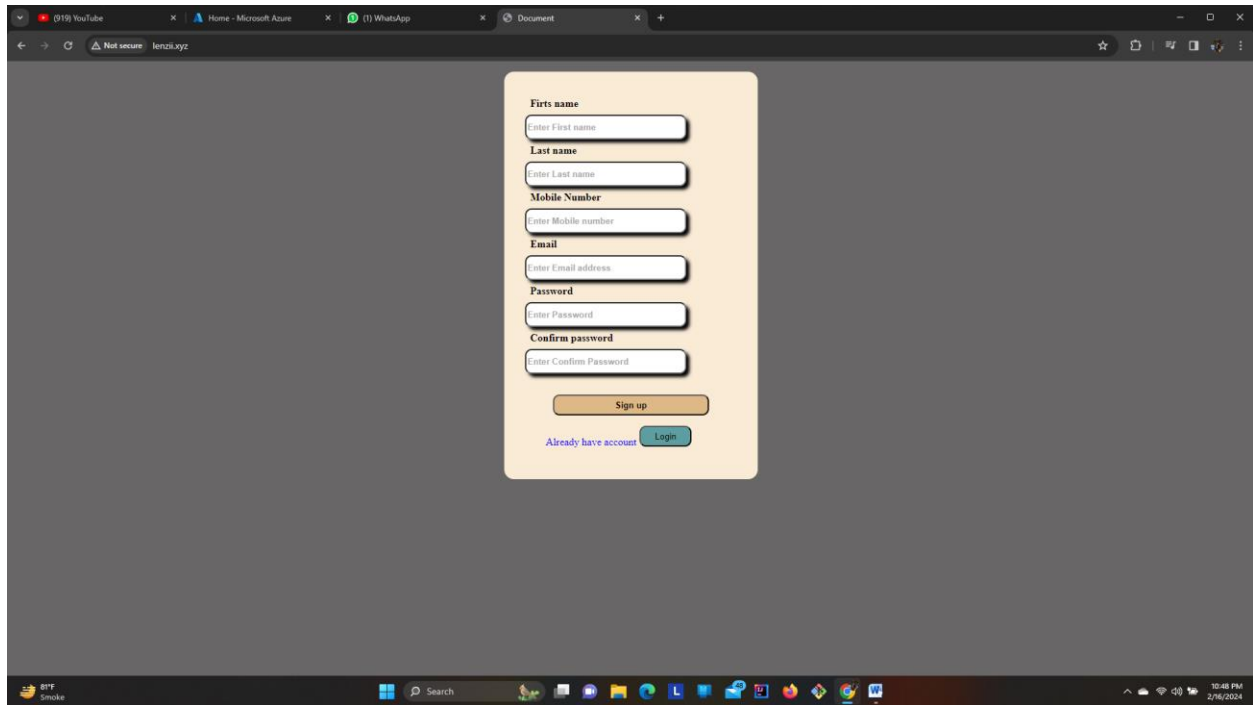


## 7) Implement key and endpoint in our code



# Website overview

1) User are first taken to the signup page



A screenshot of a web browser showing the signup page for lenzi.xyz. The page has a dark gray background. In the center, there is a light orange rectangular box containing the signup form. The form fields are labeled: First name, Last name, Mobile Number, Email, Password, and Confirm password. Each label is followed by a text input field. Below the input fields, there is a 'Sign up' button and a 'Login' button. A link 'Already have account' is also present. The browser's address bar shows 'lenzi.xyz' and the status bar shows 'Not secure'. The Windows taskbar is visible at the bottom.

First name  
Enter First name

Last name  
Enter Last name

Mobile Number  
Enter Mobile number

Email  
Enter Email address

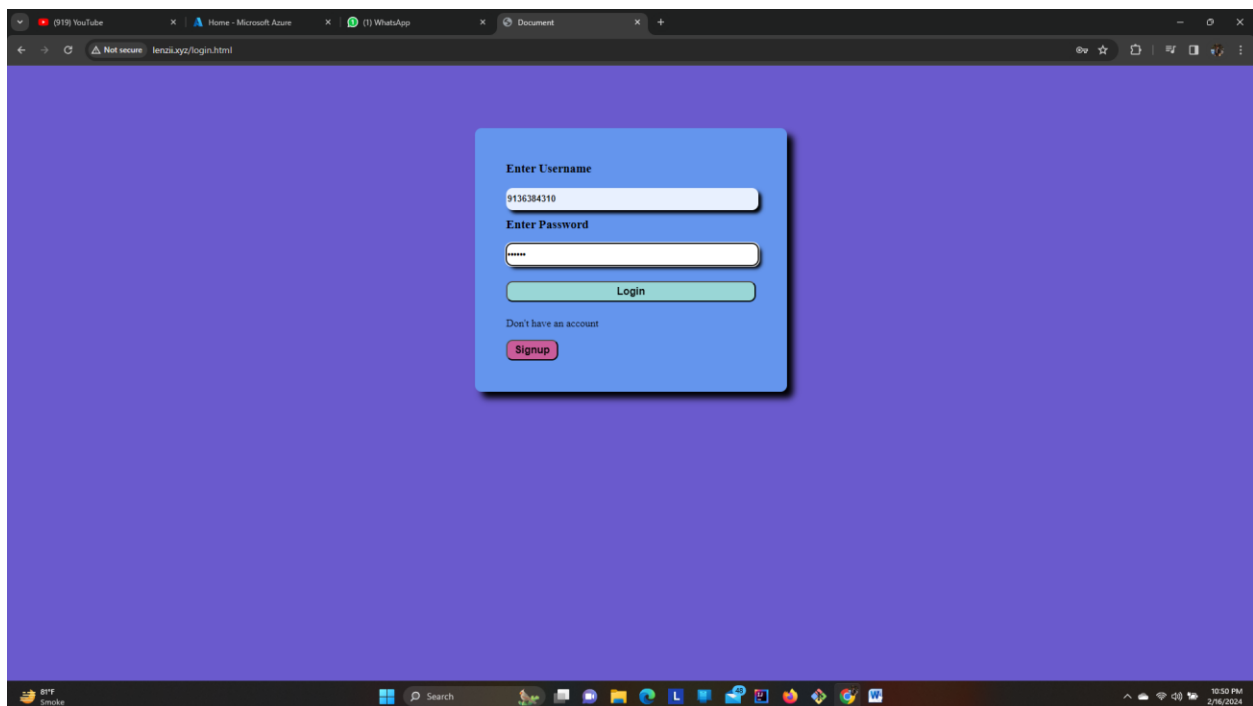
Password  
Enter Password

Confirm password  
Enter Confirm Password

Sign up

[Already have account](#) Login

2) After signing up user redirect to the login page



A screenshot of a web browser showing the login page for lenzi.xyz. The page has a solid blue background. In the center, there is a light blue rectangular box containing the login form. The form fields are labeled: Enter Username and Enter Password. Each label is followed by a text input field. Below the input fields, there is a 'Login' button and a 'Signup' button. A link 'Don't have an account' is also present. The browser's address bar shows 'lenzi.xyz/login.html' and the status bar shows 'Not secure'. The Windows taskbar is visible at the bottom.

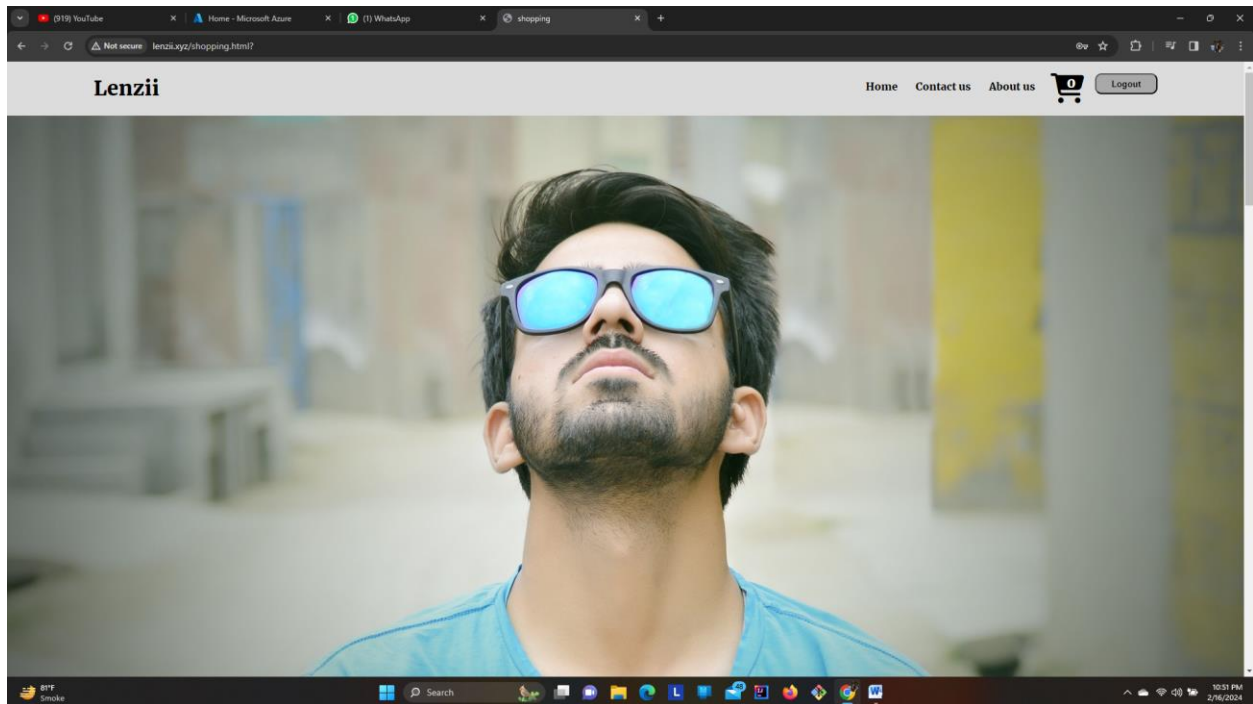
Enter Username  
9136384310

Enter Password  
\*\*\*\*\*

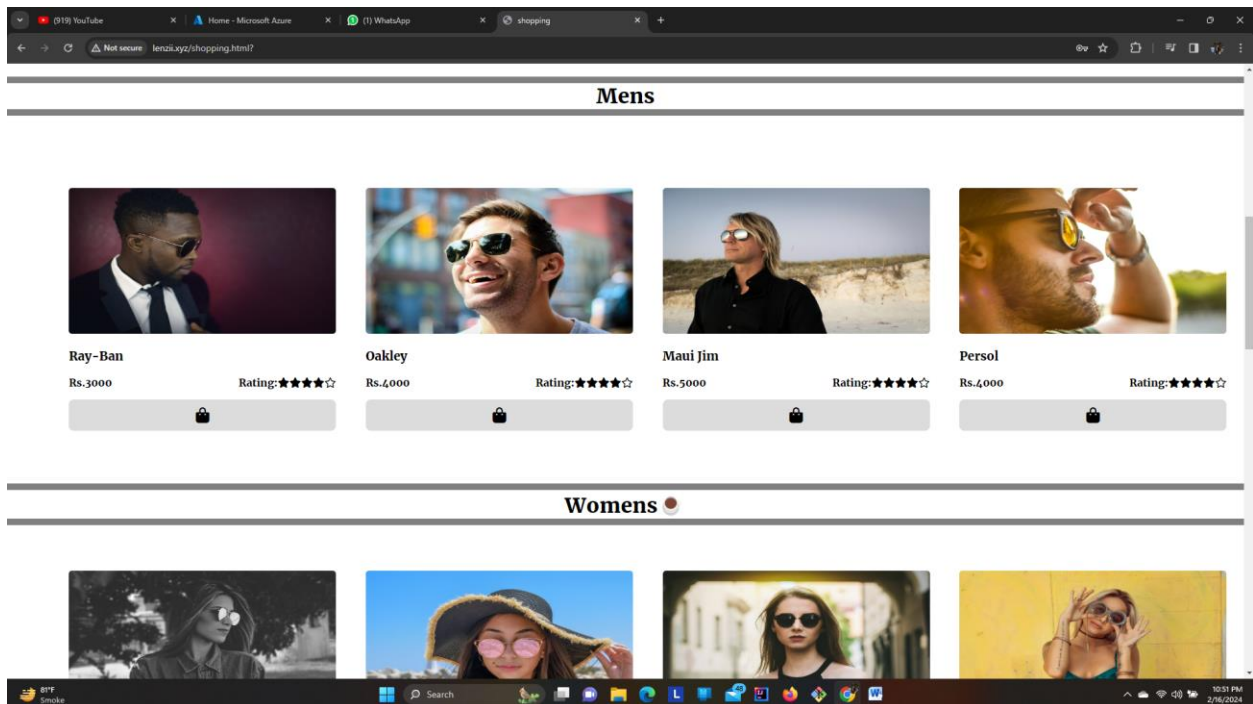
Login

Don't have an account  
Signup

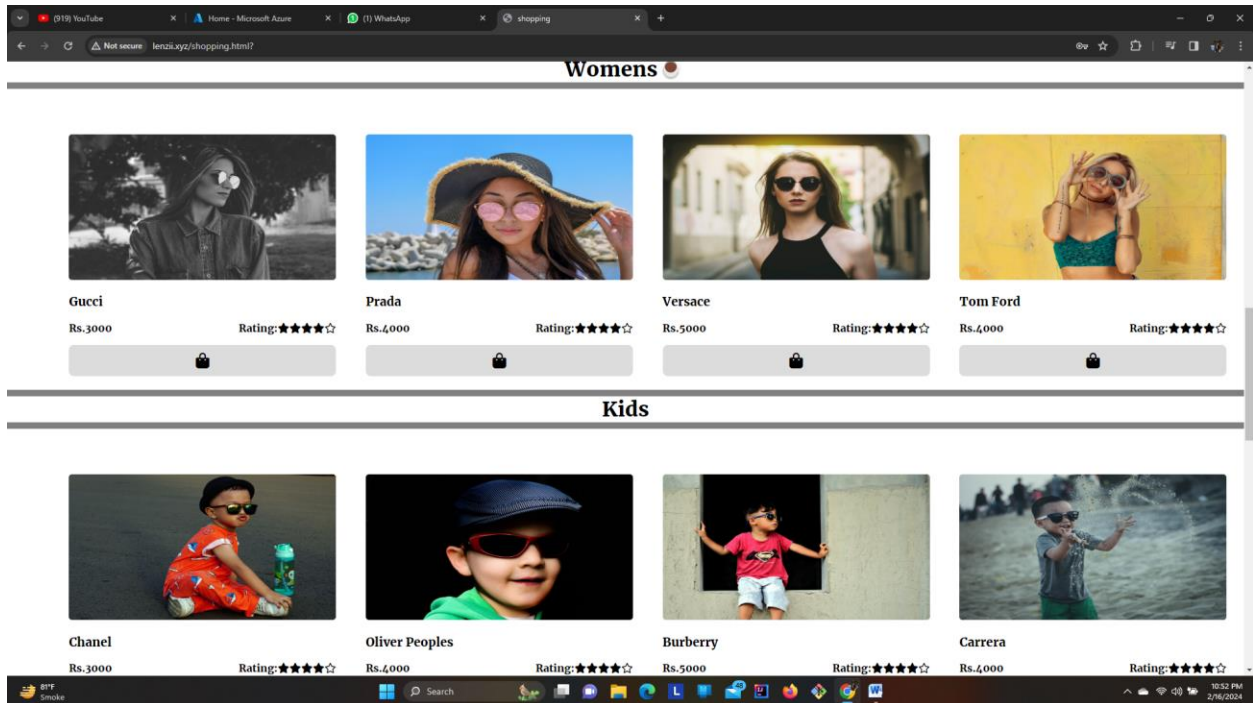
3) After successful login user redirect to the home page



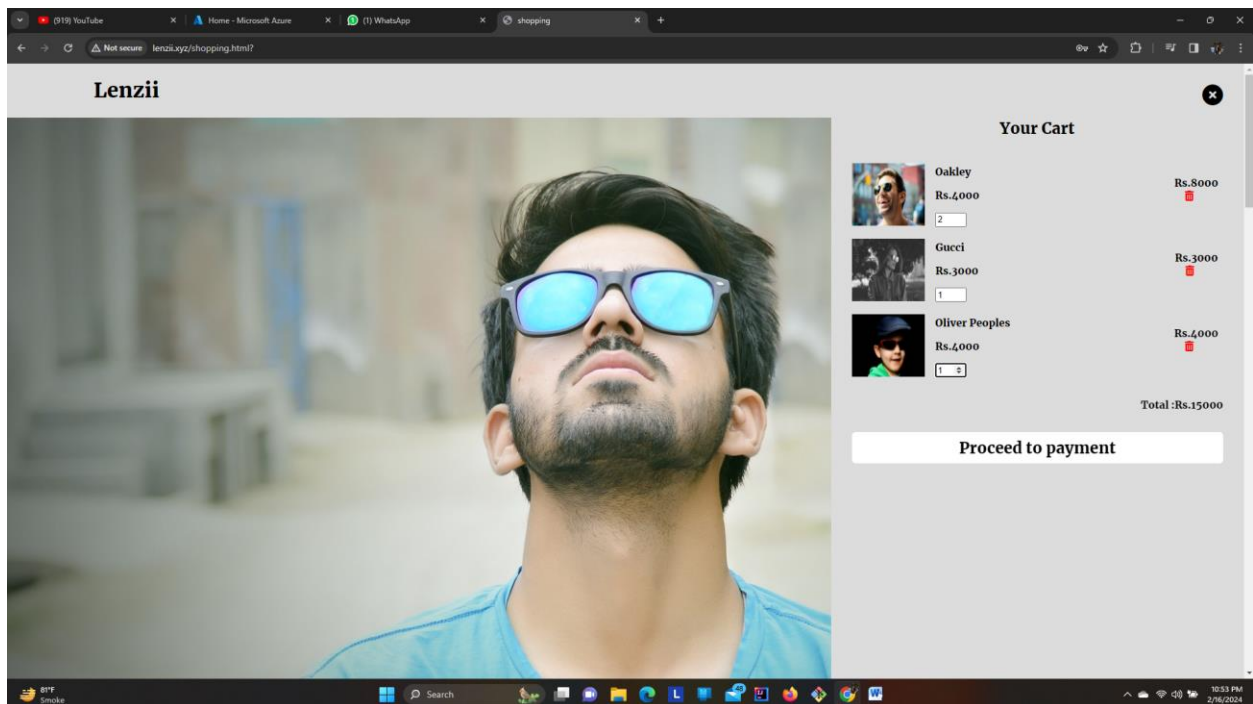
4) In website you will see the different section for mens, womens and kids



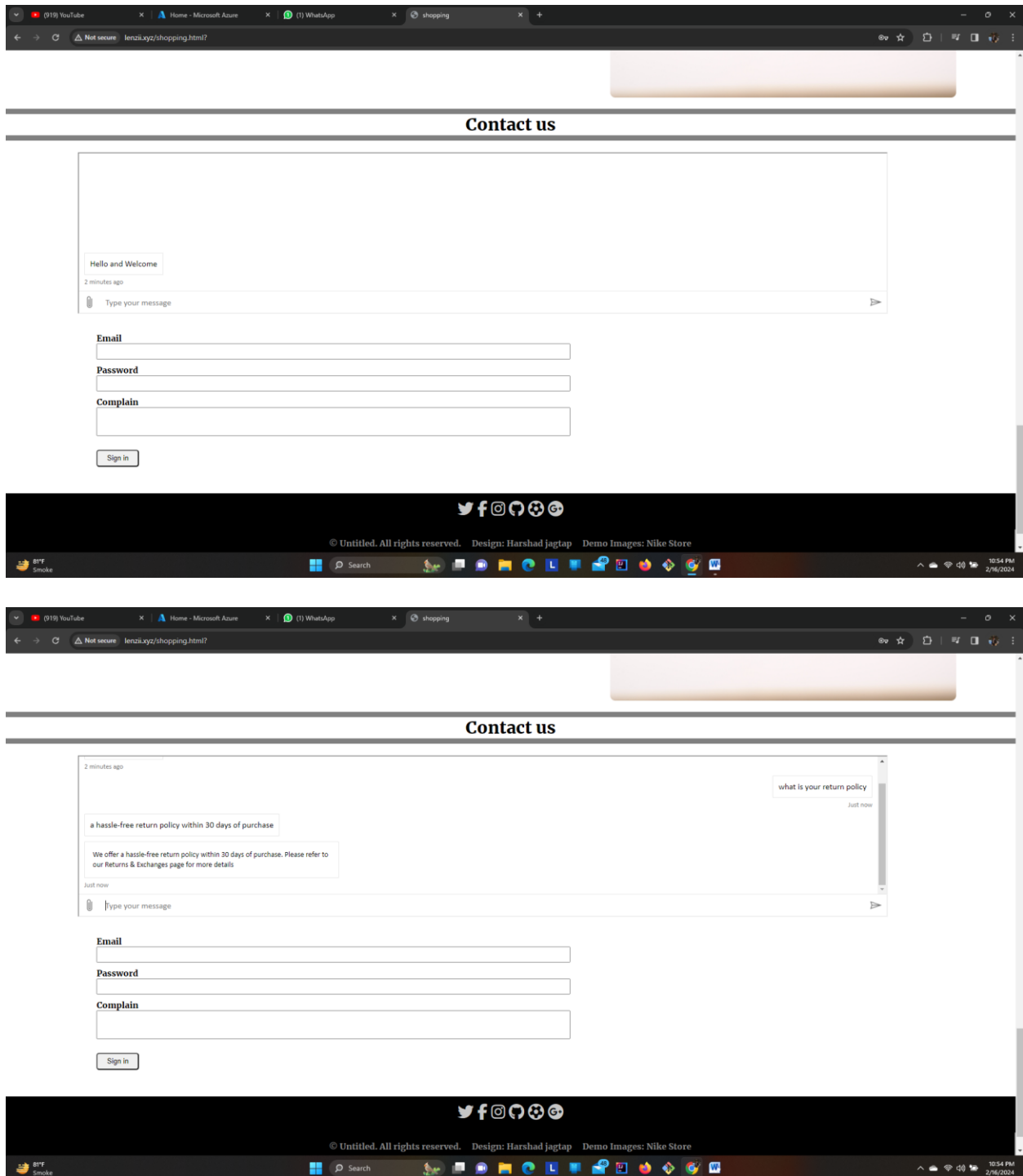




5) After clicking on add to card button user order will show on add to cart option where you can directly increase a quantity of product



## 6) Here we use chatbot for solving customer queries





## **Benefits**

- Available 24/7 so the user can access it any time they want
- Using Azure App Services it provides high scalability
- User can browse for anywhere and any time
- Saves Time of Users
- User Friendly wen application

## **Conclusion**

Lenzii is your ultimate destination for stylish and protective sunglasses. Our collection features fancy designs that elevate your look while providing UV protection for your eyes. With a commitment to quality, each pair is crafted with care to ensure durability and comfort. Explore our range and find the perfect shades to complement your style. Step out confidently knowing you're shielded from harmful UV rays with Lenzii sunglasses. Experience the blend of fashion and function with Lenzii today!