Saheli Digital Website Using Azure Services

Project Documentation

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Abstract

The "Saheli Digital Studio" project aims to revolutionize the way photography studios interact with clients by developing an online platform that streamlines studio management and enhances the client experience. Through the integration of modern technologies such as HTML, CSS, JavaScript,PHP and MySQL, the website offers a comprehensive suite of features including Appointment Booking, Our Services, Contact Us, Client Review and Chatbot modules.

The Appointment Booking module allows clients to schedule photo-shoot sessions conveniently, while the Our Services module provides detailed information about available services and pricing packages. The Contact Us module facilitates communication between clients and the studio, and the Client Review module showcases testimonials from previous clients.

The project follows a systematic approach, including requirements analysis, planning, development, testing, and refinement to ensure the website meets the needs and expectations of its users. Test cases have been designed to validate functionality, usability, and reliability, with continuous monitoring and improvement.

Overall, the "Saheli Digital Studio" project represents a significant advancement in studio management technology, offering a user-friendly and efficient platform that enhances operational efficiency, client satisfaction, and business growth for photography studios in the digital age

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1. Introduction

1.1 Background:

In recent years, the demand for professional photography services has been on the rise, fueled by social media, events, and the growing importance of visual content in various industries. However, managing a photography studio efficiently while meeting the diverse needs of clients can be challenging. Traditional methods of booking appointments and handling orders often involve manual processes that are time-consuming and prone to errors. In response to these challenges, the concept of an online studio management system, named "Photo-shop Website," has emerged. This innovative platform aims to revolutionize the way photography studios interact with their clients, streamlining the reservation process for photo-shoots and offering a seamless experience for ordering customized product

1.2 Objective:

Streamline Reservation Process: Develop a user-friendly online reservation system to simplify the process of scheduling photo-shoot sessions, allowing clients to book appointments conveniently and efficiently. Enhance Customer Experience: Create an interactive and visually appealing interface that offers a seamless user experience, ensuring customer satisfaction and fostering long-term loyalty to the studio.Enable Customized Product Ordering: Implement a feature-rich platform that allows users to upload their own photos and order personalized products, catering to individual preferences and enhancing the studio's offerings.

Improve Operational Efficiency: Provide studio owners with robust management tools to track orders, manage workflow processes, and delegate tasks effectively, thereby optimizing operational efficiency and ensuring timely delivery of services.

Facilitate Online Payments: Integrate secure online payment options to enable customers to make reservations and purchase customized products conveniently, enhancing transaction efficiency and minimizing administrative overhead.

1.3 <u>Scope:</u>

The scope of the project encompasses the development of an interactive website application that serves as a comprehensive studio management system. Key features include:

- ❖ Online Reservation System: A user-friendly interface for clients to schedule photo-shoot sessions at their preferred time and location.

- ❖ Customized Product Ordering: A feature-rich platform for users to upload their own photos and order personalized products such as prints and photo albums.

- ❖ Order Tracking and Management: Tools for studio owners to efficiently manage incoming orders, track their progress, and delegate tasks to employees.

- ❖ Online Payment Integration: Secure payment options to enable customers to make reservations and purchase products online.

- ❖ Interactive Interface: A visually appealing and intuitive interface to enhance the overall user experience and foster customer satisfaction.

- ❖ The scope also includes ensuring data security and privacy, complying with relevant regulations, and providing ongoing support and maintenance for the website application.

2. <u>System Requirements and Specifications</u>

2.1 <u>What is SRS</u>?

The production of the requirements stage of the software development process is Software Requirements Specifications (SRS) (also called a requirements document). This report lays a foundation for software engineering activities and is constructing when entire requirements are elicited and analyzed. SRS is a formal report, which acts as a representation of software that enables the customers to review whether it (SRS) is according to their requirements. Also, it comprises user requirements for a system as well as detailed specifications of the system requirements.

The SRS is a specification for a specific software product, program, or set of applications that perform functions in a specific environment. It serves several goals depending on who is writing it. First, the SRS could be written by the client of a system. Second, the SRS could be written by a developer of the system. The two methods create entirely various situations and establish different purposes for the document altogether. The first case, SRS, is used to define the needs and expectations of the users. The second case, SRS, is written for various purposes and serves as a contract document between customer and developer.

2.2 <u>Role of SRS</u>:

The SRS provides a common communication channel between stakeholders, so that everyone agrees as to what the project aims at. It reduces ambiguity and the risks of misunderstandings among team members in clearly defining requirements.

2.3 <u>Requirements Specification Document</u>:

Requirement Specification document acts as a detailed reference, outlining the scope and nature of our software project.

It includes a variety of factors such as project objective, scope, functional and non-functional needs, and environmental concerns.

It also specifies safety and security standards to ensure the integrity and dependability of our software solution.

2.4 <u>Functional Requirements</u>:

Functional requirements specify which capabilities our system must provide.

These criteria define the different stages of input data as well as the processing procedures needed to create output data.

Essentially, functional requirements specify the particular behaviors and operations that our software program must do.

2.5 <u>Non-Functional Requirements</u>:

Non-functional requirements evaluate our system's performance and operation.

These criteria include characteristics such as dependability, performance, and security, which establish the standards for our system's performance and operating limits.

For example, our system must run smoothly, without glitches, and with little latency when presenting content.

2.6 <u>Performance:</u>

Evaluating the performance of our deployed website is vital for ensuring that it achieves specified goals.Thís review entails detecting any bottlenecks that may affect performance and deciding if the application meets performance objectives. Defining measures such as reaction time, latency, throughput, and resource consumption is crucial for evaluating performance and efficiency.

2.7 <u>Software Requirements:</u>

- Operating system: Windows or MAC OS.
- Platform: Microsoft Azure, Visual Studio Code
- Microsoft azure subscription (Free Trial or Azure for student or Pay-as- you-go)
- website programming language: HTML, CSS, JavaScript, PHP

2.8 <u>Hardware Requirements:</u>

- Processor: Intel core i3 and above
- Hard disk: 256 GB or above
- RAM: 4GB or above
- Internet: 1 Mbps or above

3. <u>Used Azure Services</u>

<u>Azure App Service</u>:

App Service is a Platform as a Service (PaaS) offered by Microsoft. We use it to host web applications, REST API's and backend services for mobile applications. It doesn't really matter which programming language or framework you have used. Web applications and services that are developed using any of the following programming languages or frameworks can be hosted using azure app service. It could be

Benefits of using azure app service:

1. Fully managed environment

It's a fully managed environment, meaning App Service automaticallypatches and maintains the OS and language frameworks for you. You get the time to focus on designing, developing and maintaining your application and data.

Azure App Service supports a wide variety of programming languages and frameworks.

- .NET
- .NET Core
- Java
- Ruby
- Node.js
- PHP
- Python

You can also run PowerShell and other scripts or executables as background services.

2. Scalability

Based on the demand for your application, App Service can scale resources up and down or in and out. You can do this either manually if you want to or automatically based on metrics like CPU utilization for example.

3. Compliance

App Service is ISO (International Organization for Standardization), SOC (Service Organization Controls), and PCI (Payment Card Industrycompliant.

4. Security

Authenticate users with Azure Active Directory or any of the external authentication providers like Google, Facebook, Twitter, or Microsoft.

5. Support for Containerization and Docker

You can also host a custom Windows or Linux container in App Service. So, if you want to, you can dockize your app and host it in App Service. You can also run multi-container apps with Docker Compose. We will discuss how to do all these in our upcoming videos.

6. DevOps optimization

Set up CI/CD i.e. continuous integration and deployment with Azure DevOps, GitHub, Bitbucket, Docker Hub, or Azure Container Registry.

7. Access on-premises data

With App Service you can still access data on your on-premises servers using Hybrid Connections and Azure Virtual Networks.

Azure QnA Service:

Azure QnA Maker is a cloud-based Natural Language Processing (NLP) service that allows you to create a natural conversational layer over your data.

It is used to find the most appropriate answer for any input from your custom knowledge base (KB) of information.

Azure QnA Maker is commonly used to build conversational client applications, which include social media applications, chat bots, and speech-enabled desktop applications. Azure QnA Maker doesn't store customer data. All customer data (question answers and chat logs) are stored in the region the customer deploys the dependent service instances in. Azure Bot Service is basically Microsoft's artificial intelligence (AI) chatbot platform offered as a service on the Azure cloud service marketplace. Azure Bot Services offers the ability to chatbot developers to add intelligent agents to their bots that are capable of conversation without having to commit the resources to develop one's own AI.

Azure Resource Group:

Resources are instances of azure services that you create, like virtual machines, app services, storage accounts, SQL databases, function apps etc. All these are azure services. Every time you create an instance of a service, you are creating a resource. There are hundreds of Azure services. As the name implies, a Resource Group is a group of azure resources like virtual machines, app services, storage accounts, SQL databases etc. It's a logical container for grouping related azure resources.

Azure Application Insights

The key features of Azure Application Insights, a powerful service for monitoring and improving your web applications:

Monitoring Alerts:

- Monitor various aspects of your application and trigger actions based on thresholds.

Usage Analysis:

- Understand user interactions, sessions, and events.
- Analyze conversion rates using funnels.
- Visualize user paths with flows.
- Group users by shared characteristics using cohorts.

Azure SQL Databases

Azure SQL Database is a cloud-based relational database service provided by Microsoft, offering a managed database platform for building and deploying applications.

It allows users to store and retrieve relational data, supporting features such as transactions, indexing, and querying using the structured query language (SQL).

Azure SQL Database offers high availability and scalability features, including automatic backups, replication, and dynamic scaling to handle varying workloads.

Users can choose from different service tiers based on their performance and pricing requirements, including options for provisioned compute serverless, and hyperscale architectures.

App Service Backup

In Azure App Service, you can easily restore app backups. You can also make on-demand custom backups or configure scheduled custom backups. You can restore a backup by overwriting an existing app by restoring to a new app or slot. This article shows you how to restore a backup and make custom backups.

Backup and restore are supported in Basic, Standard, Premium, and Isolated tiers. For Basic tier, only the production slot can be backed up and restored.

For App Service Environments:

➢Automatic backups can be restored to a target app within the App Service environment itself, not in another App Service environment.

➢Custom backups can be restored to a target app in another App Service environment, such as from App Service Environment v2 to App Service Environment v3.

➢Backups can be restored to target app of the same OS platform as the source app

4. <u>Implementation</u>

1)**Create a Web App**
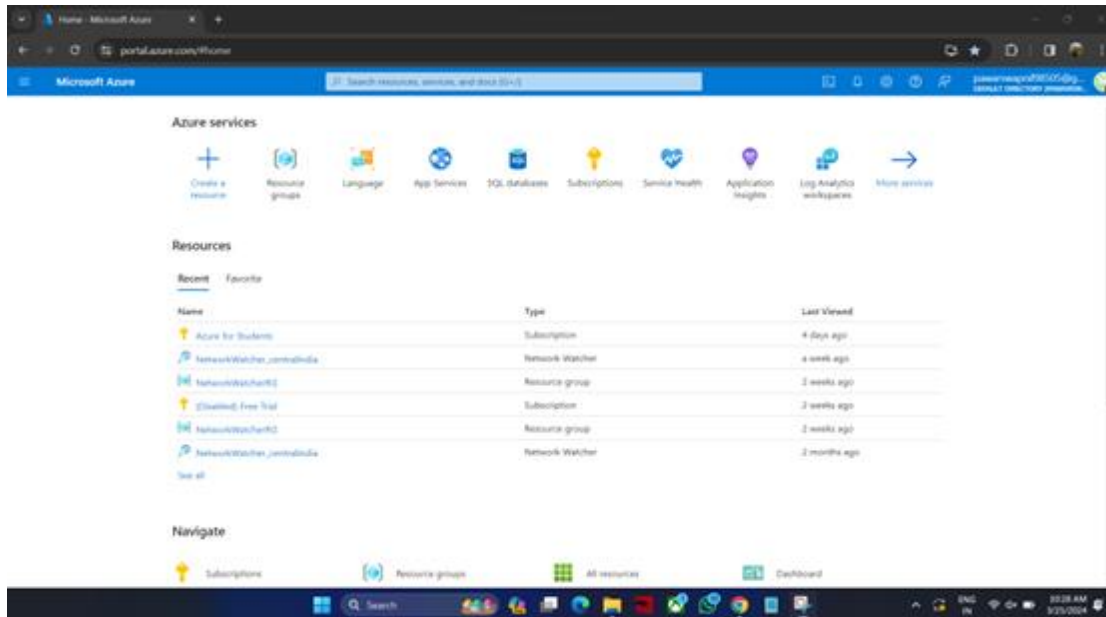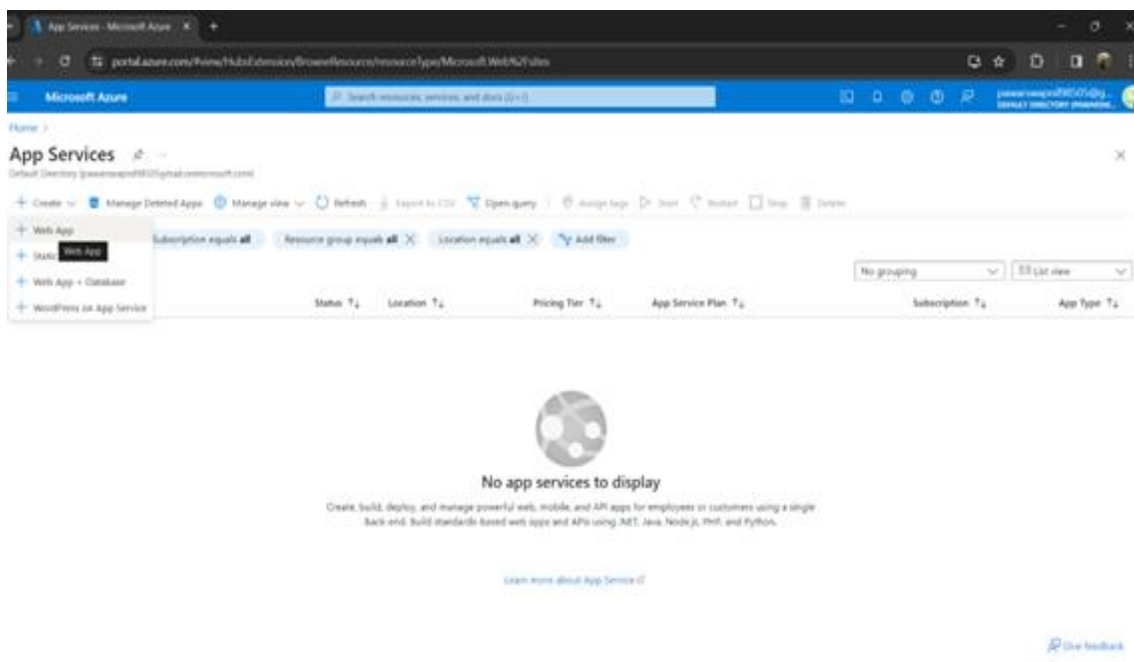
❖ Go to App services

❖ Create Web App

❖ Fill the required details (resource group, runtime stack-8.2 PHP, pricing plan,)

❖ In deployment page enable option continuous deployment and connect to git hub where our project source code is stored
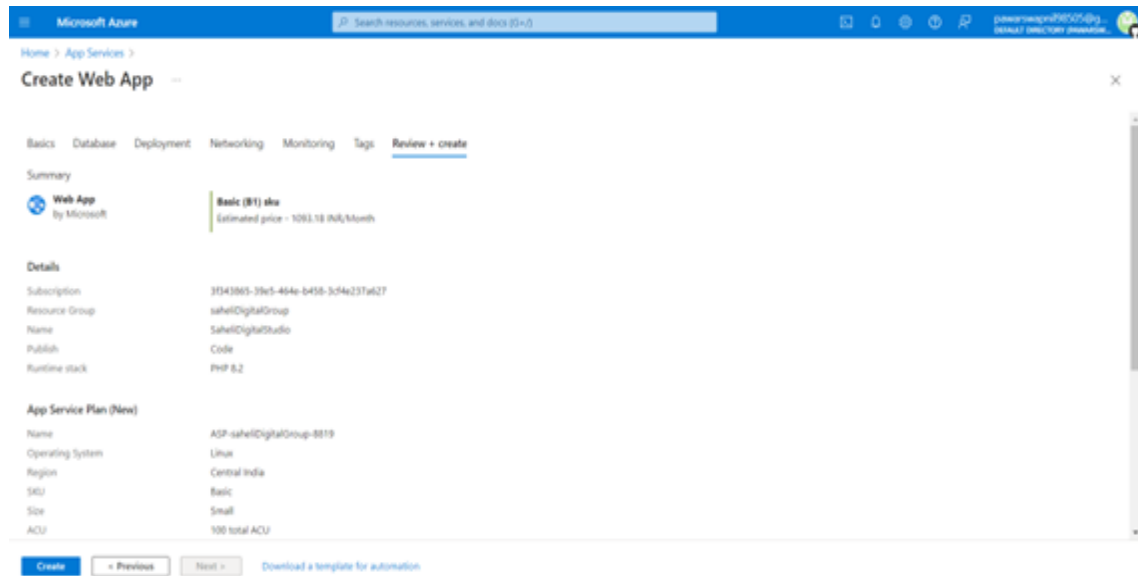
❖ Review + Create

2) **Creating a database**

❖ SQL database
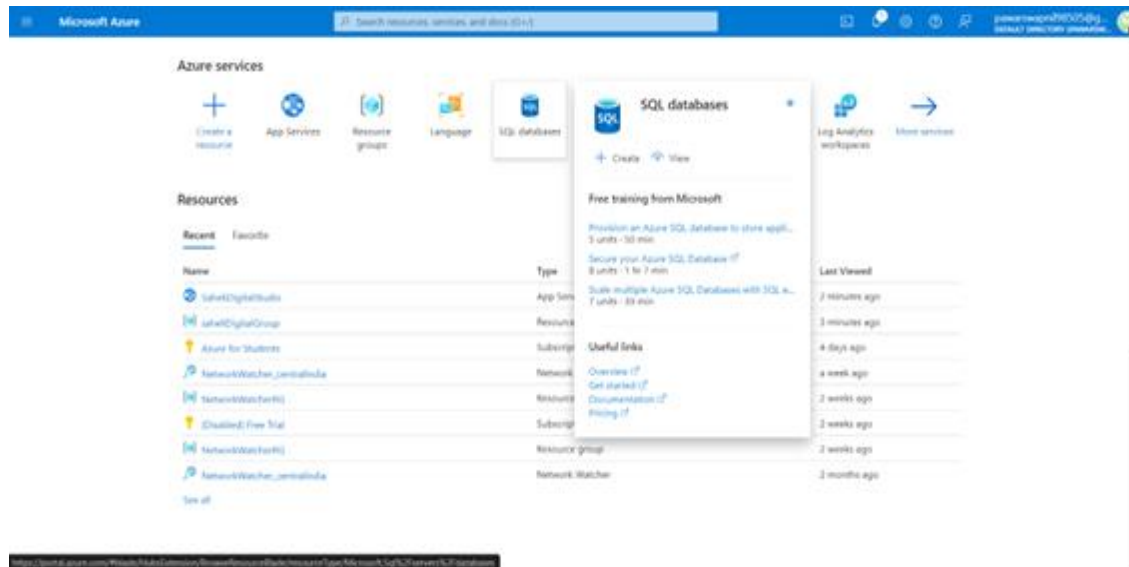
❖ Create
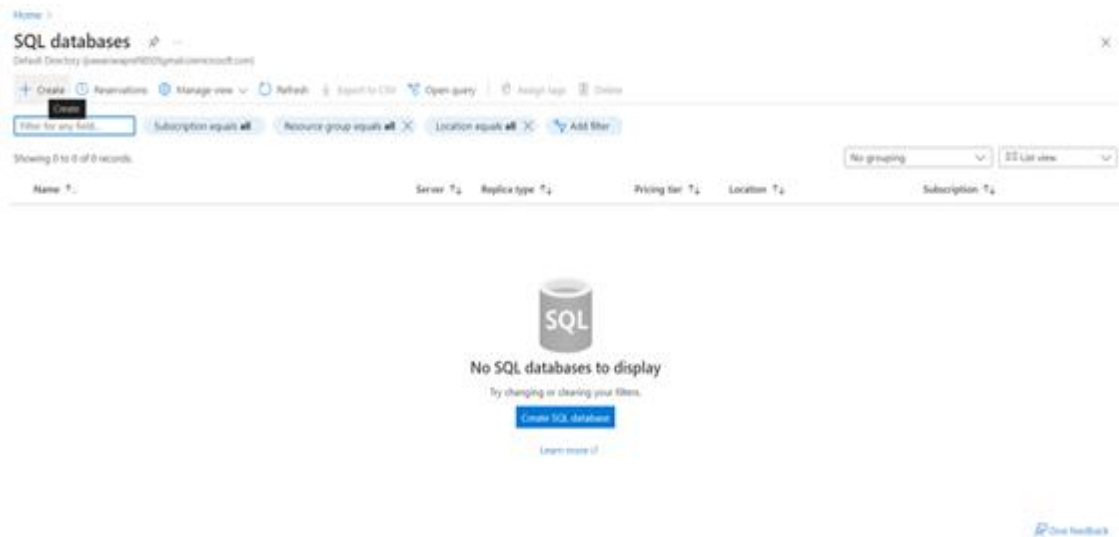
❖ Fill all the required details

❖ Use workload environment as deployment

❖ Review and create

3) Creating a backup service for our created web app using Azure storage and container service
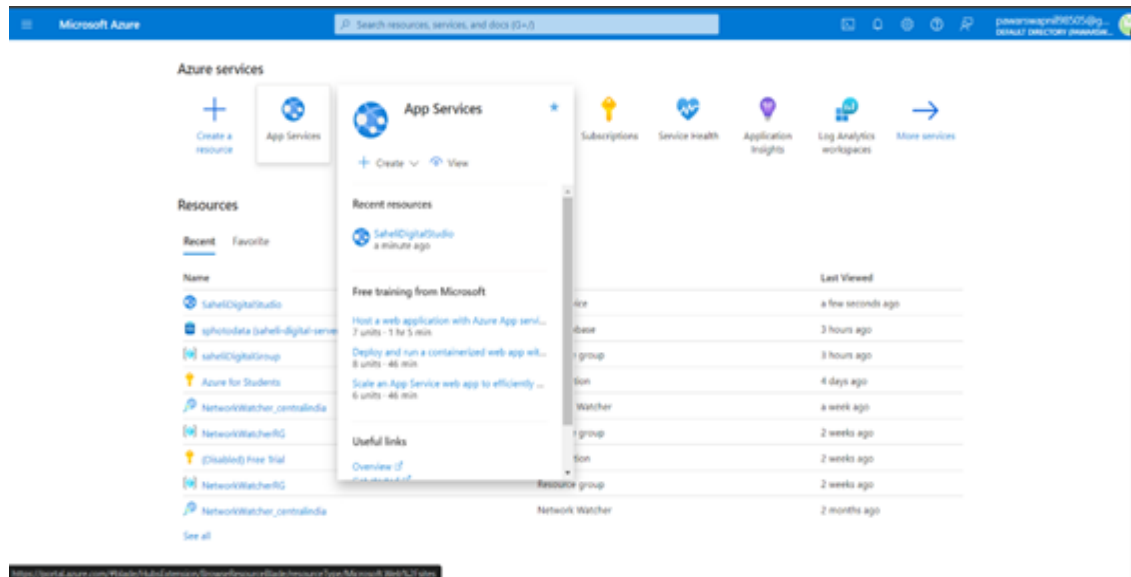
❖ Go to created web app
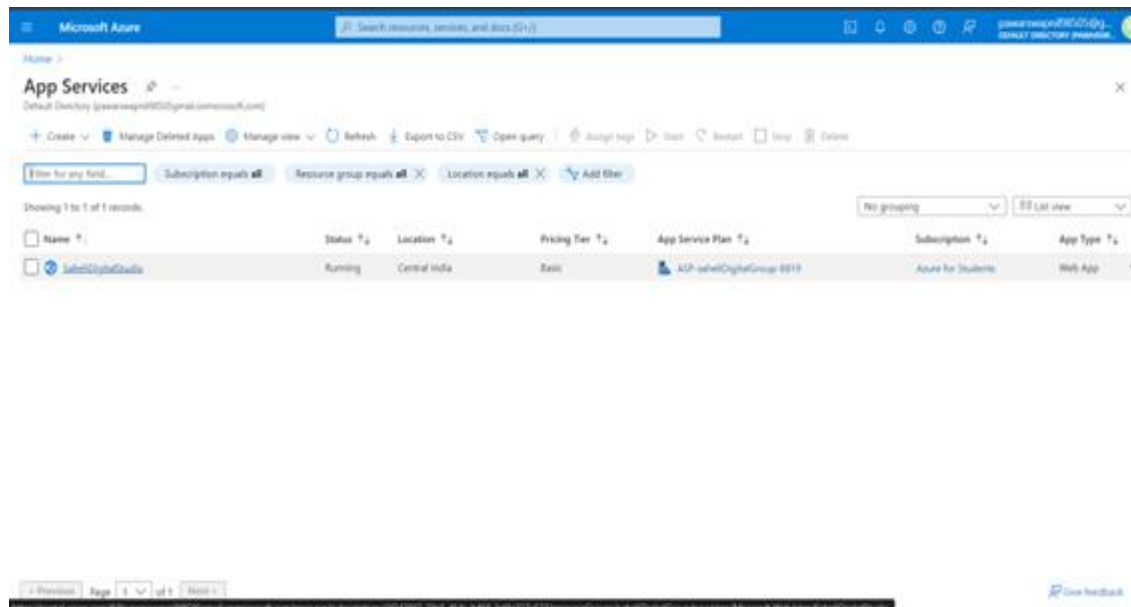
❖ Go to backups
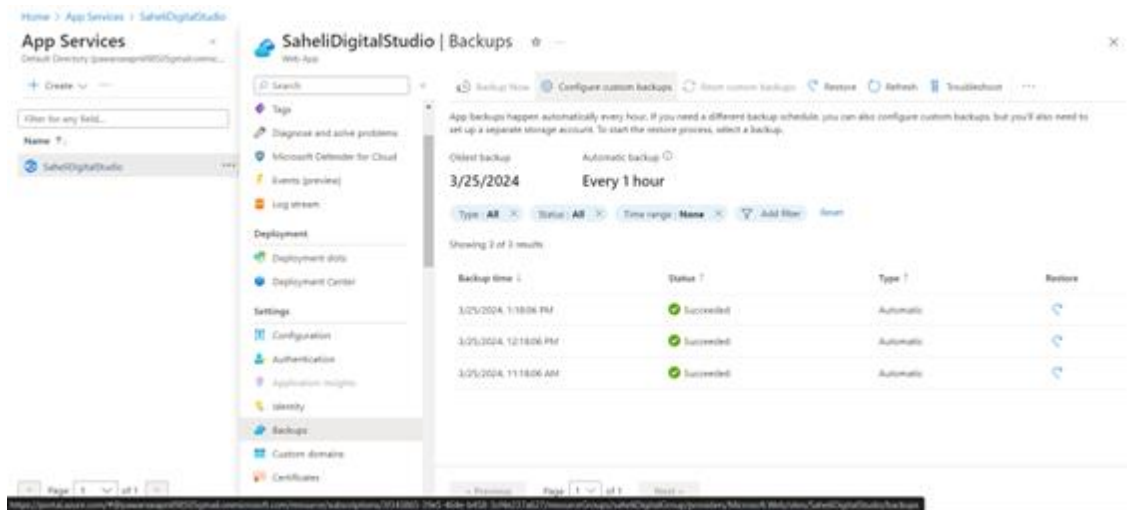
❖ Select the configure custom backups option

Configure custom backups
SaheliDigitalStudio   ✕

You can set a custom backup schedule here. Note that Individual databases in the backup
can be 4 GB max but the total max size of the backup is 10 GB. If your database is large and
growing, use Azure Backup for database backup instead. Learn more ☐

Basics   Advanced

Select a storage

Choose storage account and container to store your backup.

ⓘ The app you're backing up is in **Central India**.

Subscription | Azure for Students   ⌄ |

Storage account * ⓘ | (New) storage12321   ⌄ |
                           Create new

Container * | (New) backup-container   ⌄ |
                           Create new

☐ Backup/restore over virtual network integration

ⓘ Backup/restore over virtual network requires your app to be connected to a virtual
network. Azure storage account and your app should be part of the same virtual network
topology.

Configure   < Previous   Next : Advanced >

❖ Set schedule for the backup and retention day for the backup

Configure custom backups

SaheliDigitalStudio

Backup/restore over virtual network requires your app to be connected to a virtual network. Azure storage account and your app should be part of the same virtual network topology.

Set schedule

Configure the exact time and recurrence for your backups.

☑ Set schedule

Repeats every *	1	Day ⌄
Start time *	3/25/2024 📅	13:36:57

Time zone *

○ UTC

◉ Local (UTC+5:30)

Preview

Backup every 1 Day at Local (13:36:57) starting 3/25/2024

Retention

Keep your backup files for up to 60 days, or enter 0 to keep them indefinitely.

Days *

60

Keep at least one backup at all times ☑

Configure   < Previous   Next : Advanced >

❖ Backup service is created

4). Ai Chatbot Integration

❖ Search for language
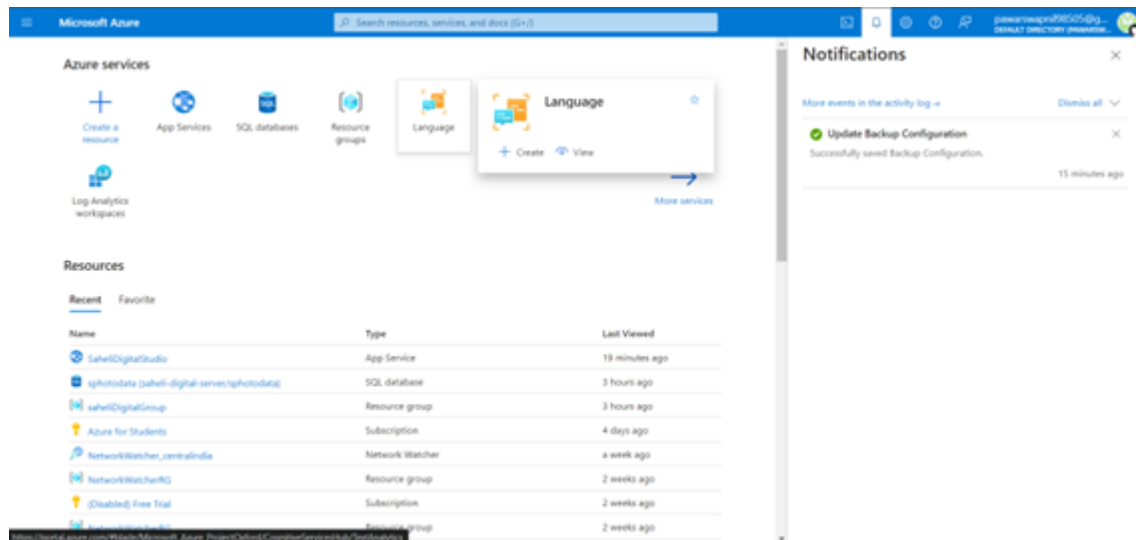
❖ Click on create

❖ Select custom question and answering

❖ And continue creating the resource

❖ Fill all the input fields which co-relate to the project you are building

❖ Review and create

❖ Once deployment is done

❖ Go to resources

❖ Scroll down in overview and click get started with language studio

❖ Sign in to your azure account
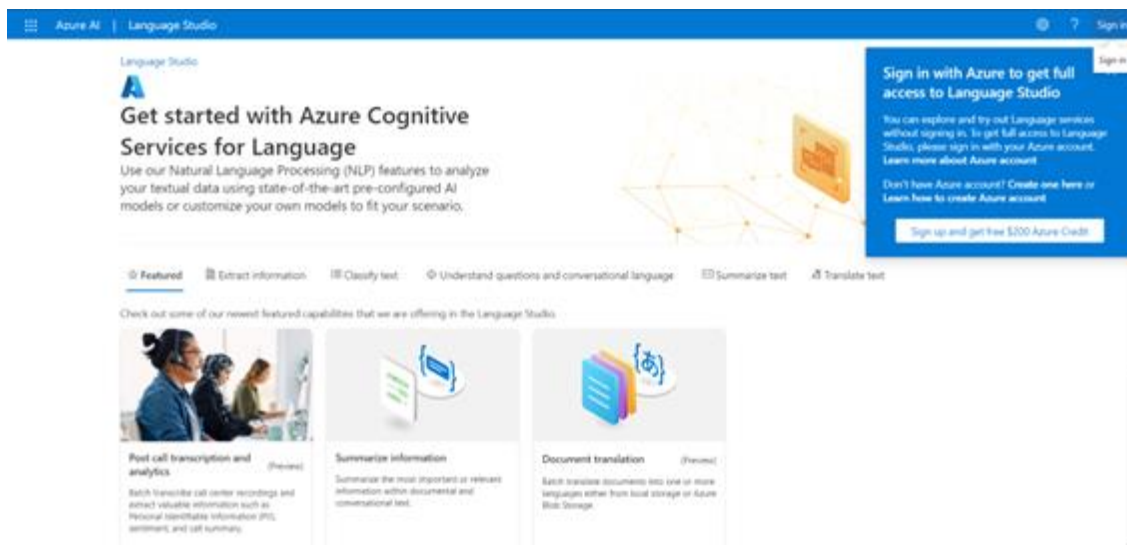
❖ Select the Predetermined resources of your project
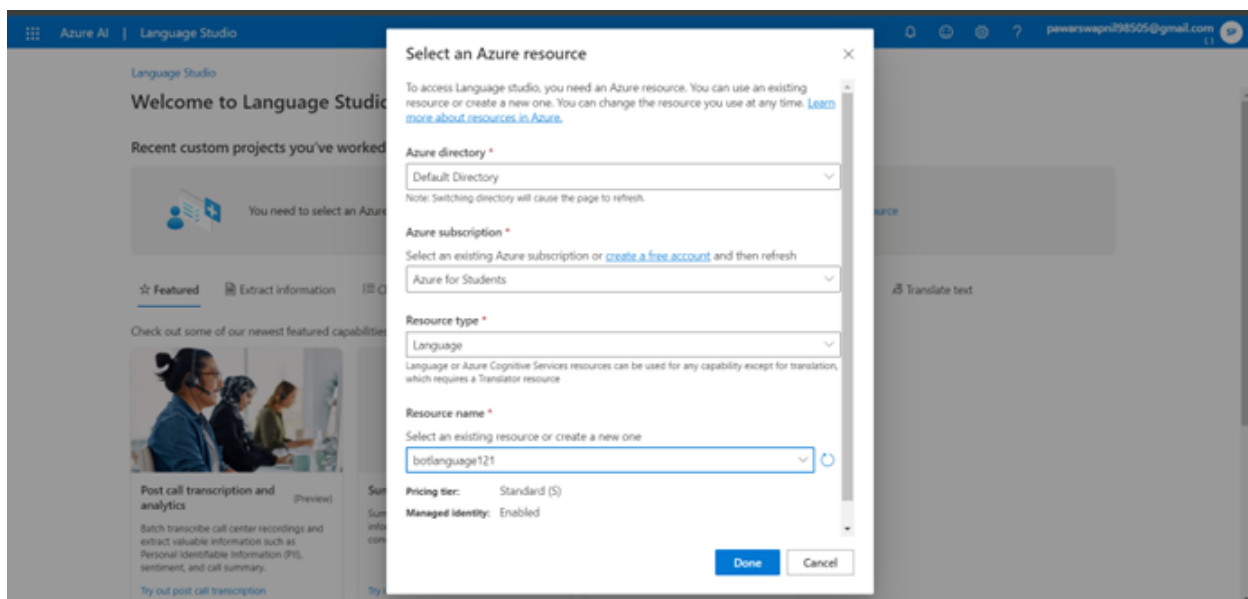
❖ Click on create new and select custom question and answering
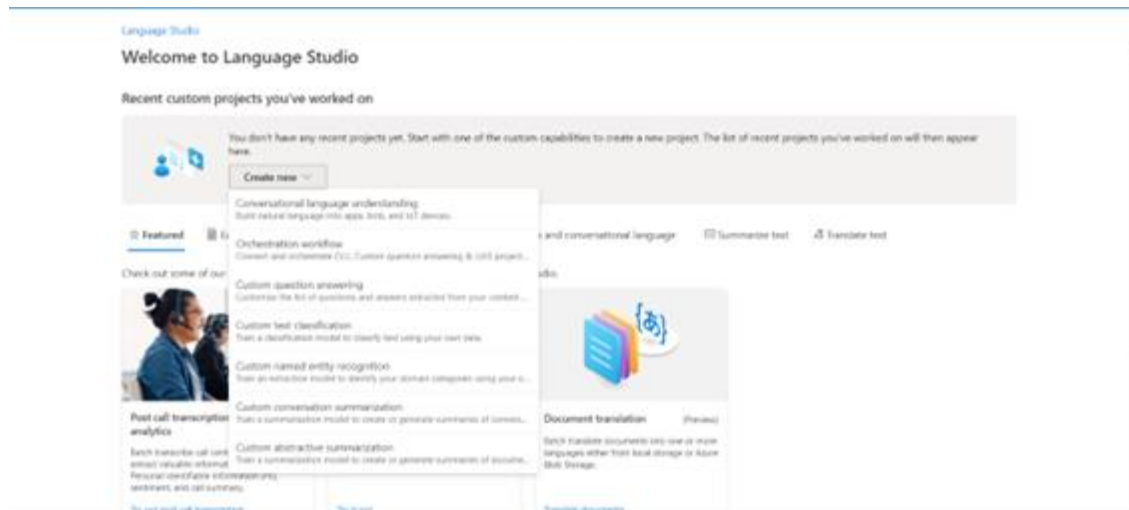
❖ Create new project
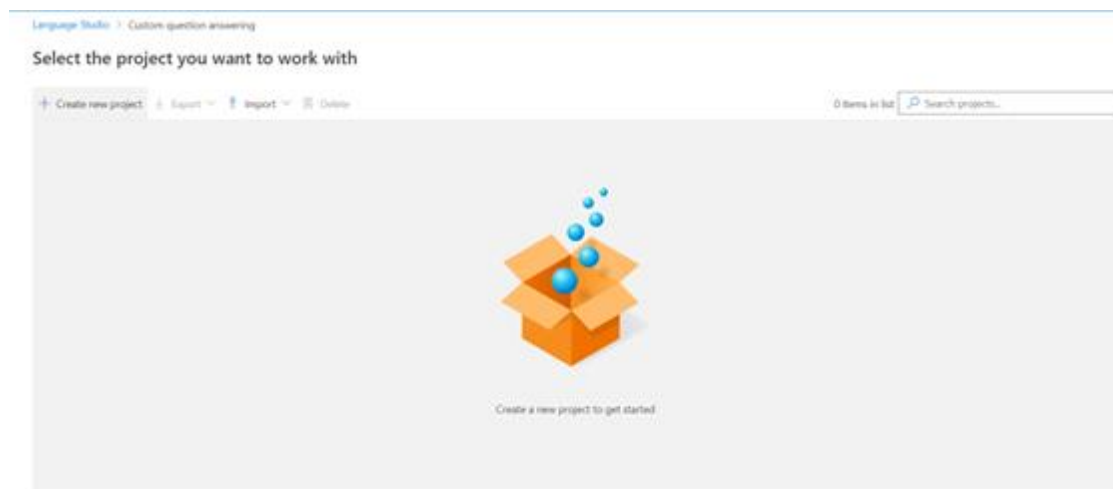
❖ Select English as a language

Create a project   ✕

- ● Choose language setting
- ○ Enter basic information
- ○ Review and finish

Choose language setting for resource botlanguage121.

Permanently set whether or not you can create projects in multiple languages using your Azure resource botlanguage121. Learn more about projects in multiple languages and pricing.

How do you want to select the language for projects in this resource?* ⓘ

○ I want to select the language when I create a project in this resource

    When creating a project in this resource you will be able to select what language the data is in. Selecting this option will incur more costs. Learn more about pricing

◉ I want to set the language for all projects created in this resource

    All projects created in this resource will always use the same language for the data.

    Select the language for all projects* ⓘ

    | English   ⌄ |

Back   **Next**   Create project   Cancel

❖ Fill all the details required

Create a project ✕

- ✓ Choose language setting
- ● Enter basic information
- ○ Review and finish

Enter basic information

Enter the basic information for your custom question answering knowledge base such as name and description.

botlanguage121 ⌄

To change your resource go to Settings

Azure search resource

botlanguage121-ash3ur276jvnzv6 ⌄

To change your resource go to Azure Search

Name *

Chatbot

Description

Type project description

Source language * ⓘ

English ⌄

Default answer when no answer is returned * ⓘ

No answer found

Back   **Next**   Create project   Cancel

❖ Create Project

Create a project ✕

- ✓ Choose language setting
- ✓ Enter basic information
- ● Review and finish

Review and finish

Review the configurations you set for your project in the previous steps.

Projects in multiple languages allowed?
No

Language resource
botlanguage121

Azure Search resource
botlanguage121-ash3ur276jvnzv6

Project name
Chatbot

Description
--

Source language
English

Default answer when no response is returned
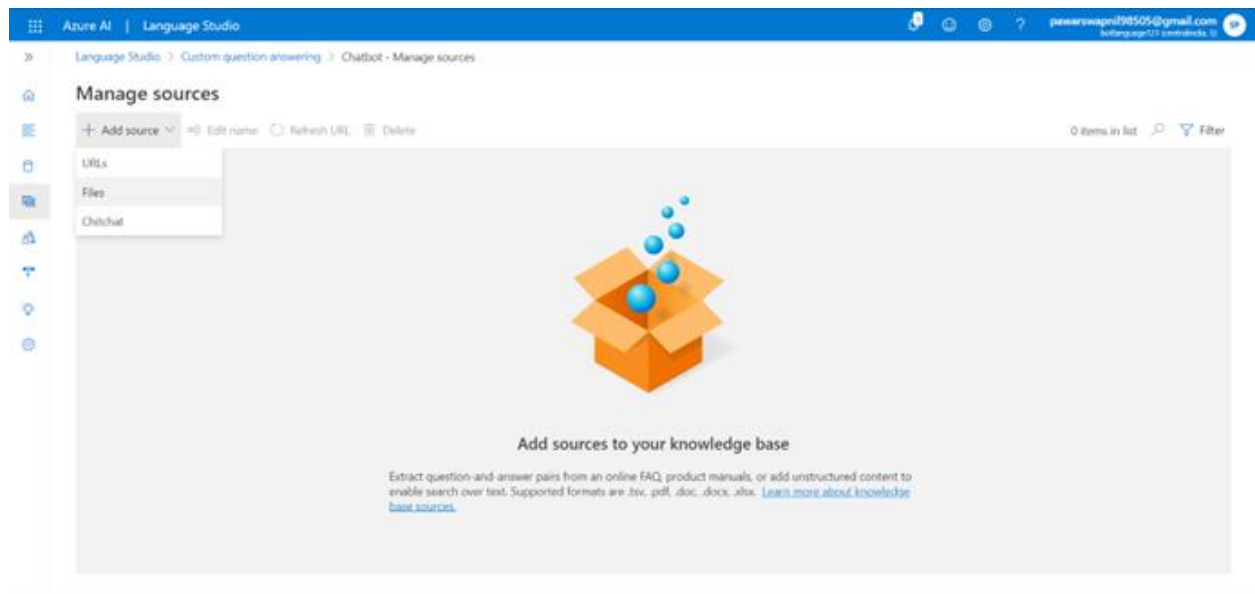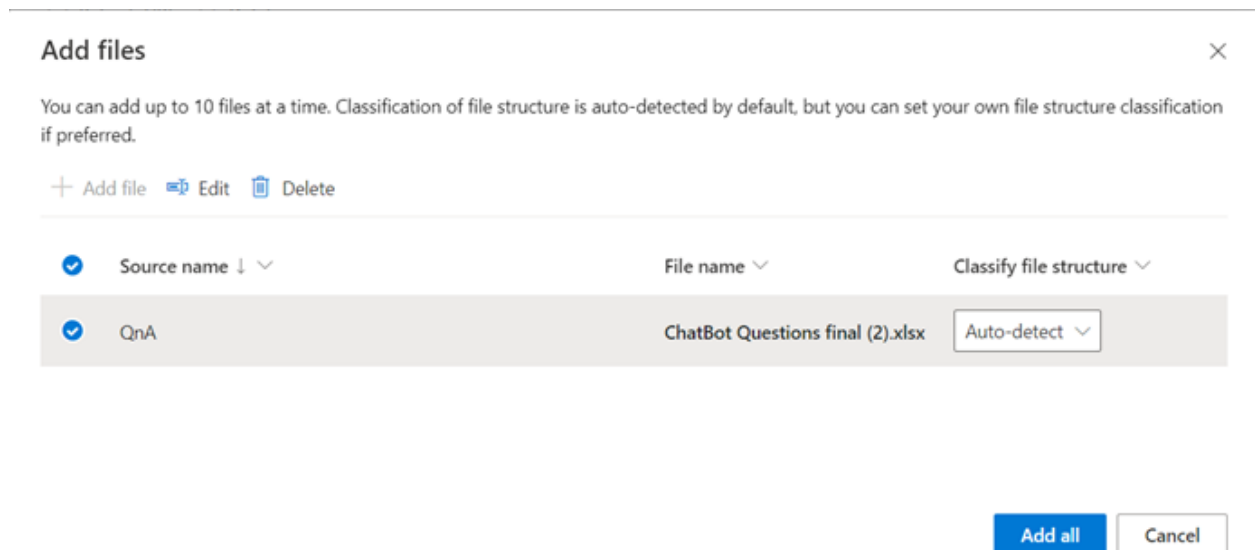No answer found

Back   Next   **Create project**   Cancel

❖ Click on the add source

❖ Click the file option and browse your file which has all the questions

Add files ✕

You can add up to 10 files at a time. Classification of file structure is auto-detected by default, but you can set your own file structure classification if preferred.

+ Add file   ↪ Edit   🗑 Delete

	Source name ↓ ∨	File name ∨	Classify file structure ∨
✔	QnA	ChatBot Questions final (2).xlsx	Auto-detect ∨

Add all   Cancel

❖ Done
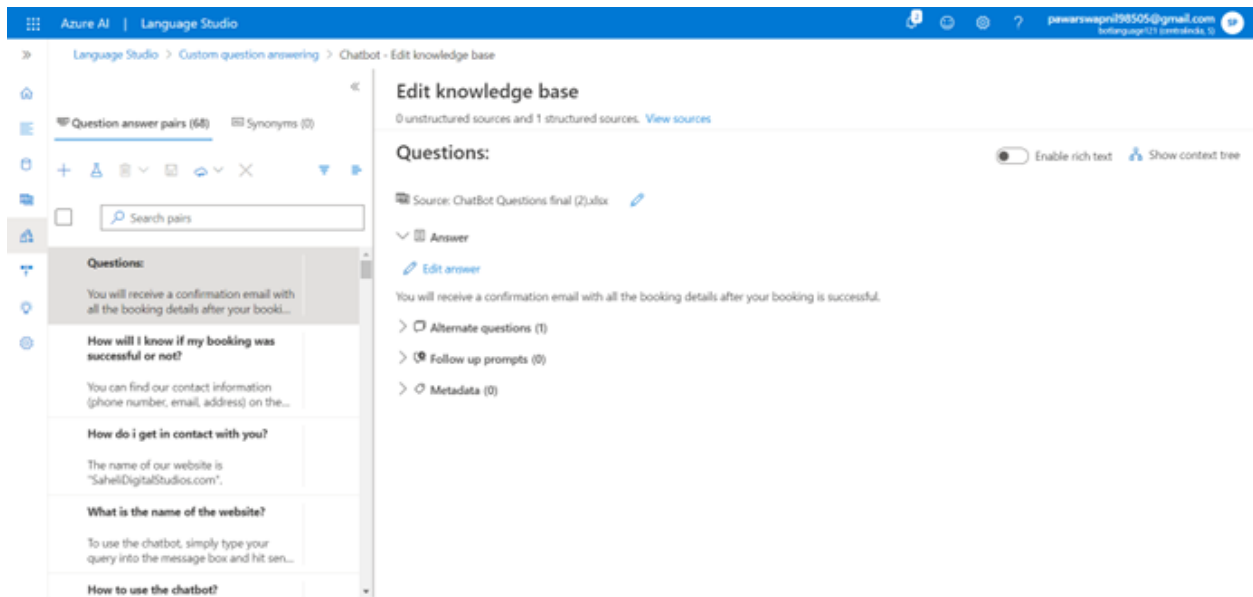
❖ Then go to deploy

❖ After deploying select Create a bot

❖ It will redirect you to azure bot creation page, fill all the basic details
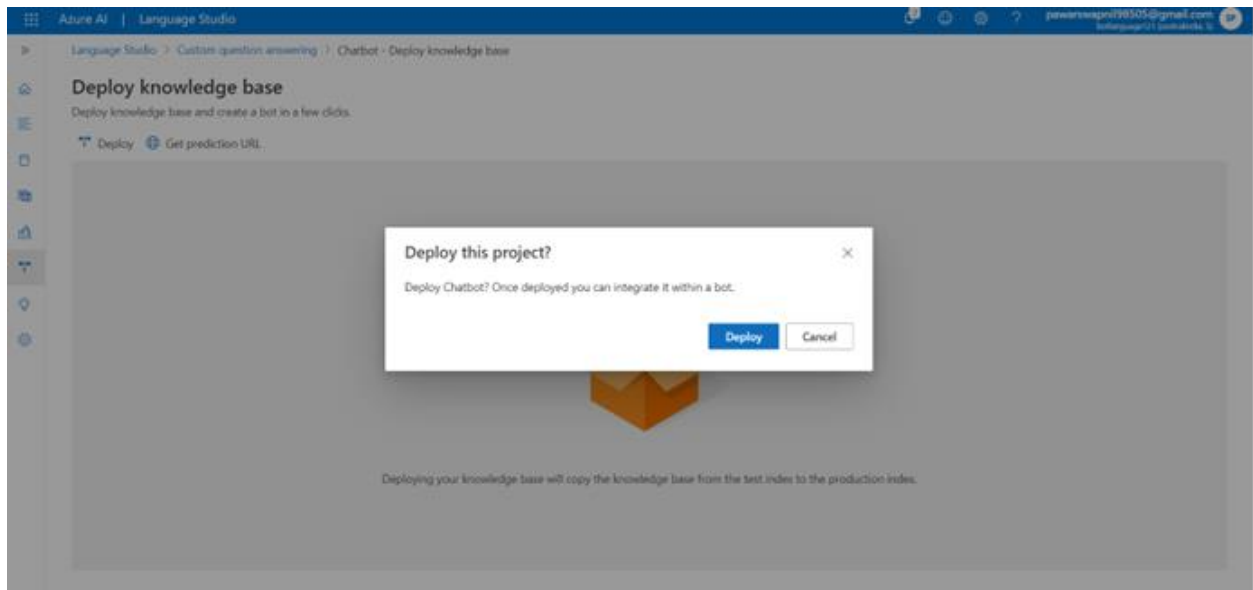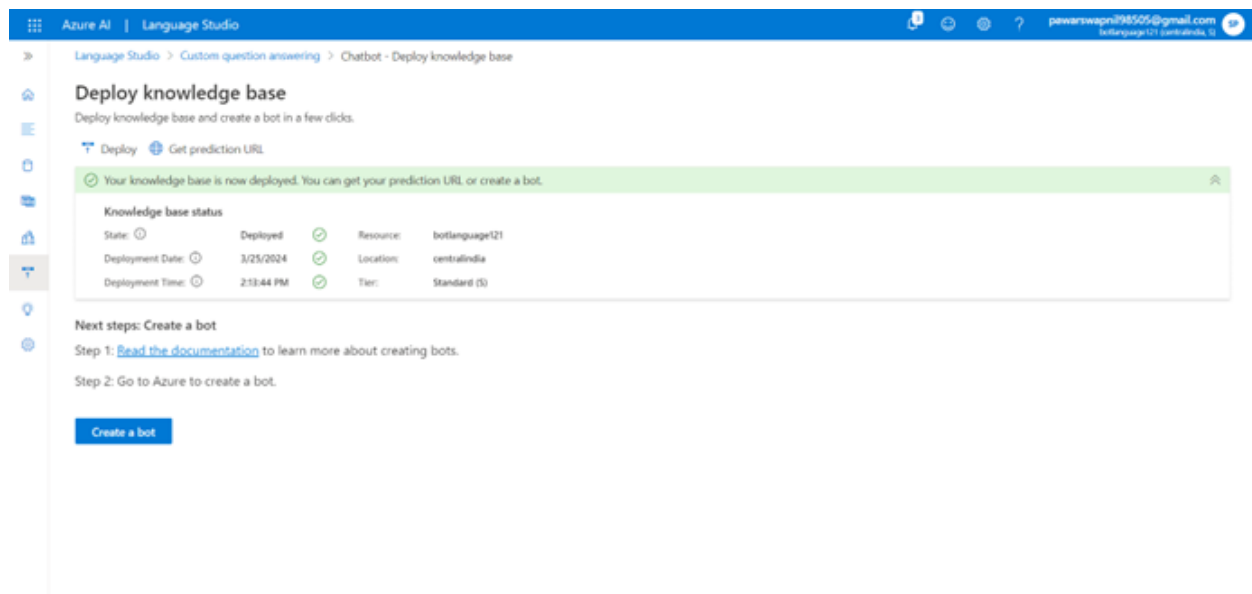
❖ Select all the required details

❖ In language resource key field, you need to copy the resource key which is provided it the language studio setting->resources->resource Key

❖ Paste that key where we needed to fill the key

❖ Review and create

Resource Visualizer

Saheli_Digital_Studio Resource Group
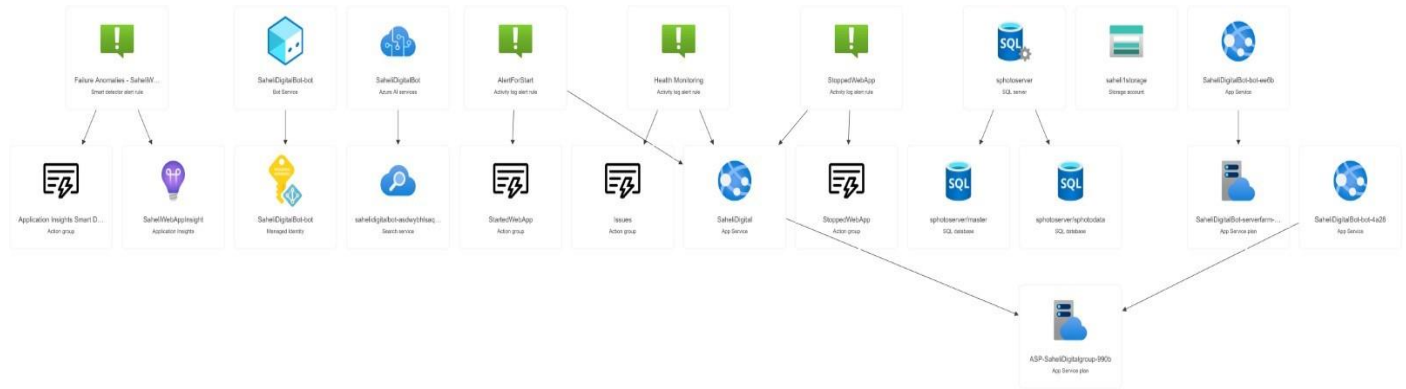
5. <u>Website Preview</u>

❖ Our Website Homepage

📷 Saheli Digital Studio   Home   Services   About   Photographers   Book   Chat With Us

Capture Moments That Are Too Imporant

Here At Saheli Studios We Capture The Moments That Are Too Important To Be Forgotten In Time. Lets Protect Those Important MOMENTS.

Contact Us ❯
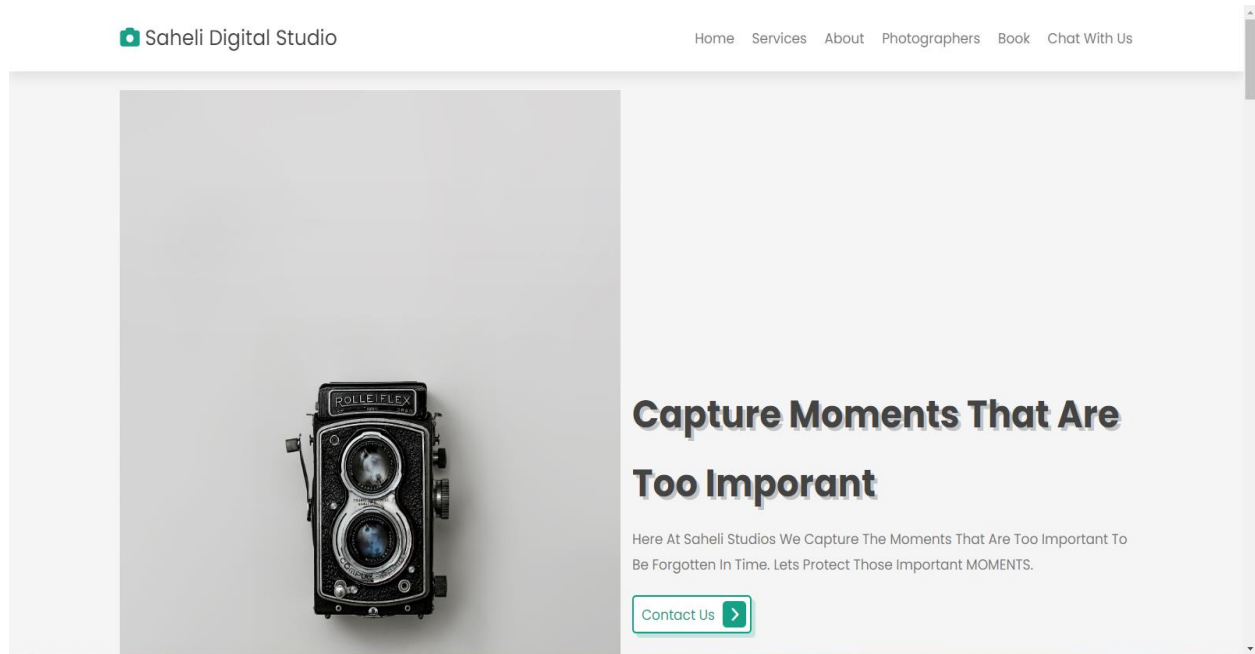
❖ Services Provided by the Photo Studio

OUR SERVICES

Pre-Wedding Photoshoots

Capture The Romantic Phase Of Life Before The Wedding

Learn More ❯

Outdoor Photoshoots

Photos Or Videos In The Natural Environment

Learn More ❯

Studio Photoshoots

Photos Or Videos In The Studio Whith Additional Effects

Learn More ❯

Photo Banners

Let The World See Your Glory With Our Personal And Promotional Banners Facility

Learn More ❯

Videography

Capture Every Second Of Your Precious Moments And Re-Live

Equipment On Rent

We Also Provide Photography And Videography Equipment On Rent

❖ Booking Section for Appointment Booking

❖ Customer Review Section

❖ Ai Chatbot to resolve Customer queries

📷 Saheli Digital Studio

Home Services About Photographers Book Chat With Us

IF YOU HAVE ANY QUERIES PLEASE TYPE YOUR QUERIES BELOW TO HAVE THEM ANSWERED BY OUR CHATBOT

You will get a confirmation call on your phone number that you have provided during the booking process.

A minute ago

What methods can I use to reach out to you?

Just now

We have a dedicated section at the end of the webpage where we have provided our contact info if you wish to contact us.

Just now

What's the process for utilizing the chatbot?

Just now

Click on the message textbox and type your query in the textbox. After you finish typing click on the arrow buuton on the left.

Just now

Type your message

❖ Footer Section for additional links and Contact Info

Quick Links	Our Services	Contact Info	Site Developers
Home	Pre-Wedding Photoshoots	9420969856	Swapnil Pawar
Services	Outdoor Photoshoots	8108372972	Rithik Puthampurail
About	Studio Photoshoots	Pawarnarayan9856@Gmail.Com	Abhijit Pawar
Photographers	Photo Banners	Pawarswapnil98505@Gmail.Com	
Book	Videography	Chandgad,Maharashta	
Review			

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6. <u>Conclusion</u>

  Owning a website can greatly enhance convenience for both customers and potential leads. It serves as a powerful tool to draw in more clientele. The beauty of an online platform lies in its accessibility round the clock, accommodating visitors at any hour, day or night. Internally, a website streamlines operations, saving valuable time by consolidating all necessary resources in a single, readily accessible location.