Project Work on

“Pizza Chatbot Development”

Using

Azure QnA Maker Service

Submitted by

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Submitted to

Future Ready Talent

Objective

In this project, I would be using QnA Maker service to make a Chatbot that orders your favourite fast food like Pizzas, Cakes, Ice Creams, Garlic Bread, etc.

Problem Statement

Develop a Chatbot for Pizza which greets the customer and provides the menu to choose from the given menu and it should also mention the parcel services will be soon coming.

Problem Context

The purpose of chat bots is to support and scale business teams in their relations with customers. It could live in any major chat applications like Outlook, Facebook Messenger, Slack, Telegram, Text Messages, etc. Chatbot applications streamline interactions between people and services, enhancing customer experience. At the same time, they offer companies new opportunities to improve the customers engagement process and operational efficiency by reducing the typical cost of customer service.

This project is focussed on building a custom chatbot that will be the fundamental step of the learning curve of building the own professional chatbots. In this project, we would be building an Chatbot service, to which you can talk and communicate. And talking to a chatbot would not be business driven. It would just be casual conversations. Collaborating with these types of APIs is very much critical as in today's world the popular chatbots do much more than simply having a data-driven conversation; to supplement additional user-oriented features.

What is an Azure QnA Maker service?

QnA Maker is a cloud-based Natural Language Processing (NLP) service that allows you to create a natural conversational layer over the data. It is used to find the most appropriate answer for any input from the custom knowledge base (KB) of information.

QnA Maker is commonly used to build conversational client applications, which include social media applications, chat bots, and speech-enabled desktop applications.

QnA Maker does not store customer data. All customer data (question answers and chat logs) is stored in the region the customer deploys the dependent service instances in. For more details on dependent services see here.

This documentation contains the following article types

- The quickstarts are step-by-step instructions that let you make calls to the service and get results in a short period of time.
- The how-to guides contain instructions for using the service in more specific or customized ways.
- The conceptual articles provide in-depth explanations of the service's functionality and features.
- Tutorials are longer guides that show you how to use the service as a component in broader business solutions.

When to use QnA Maker

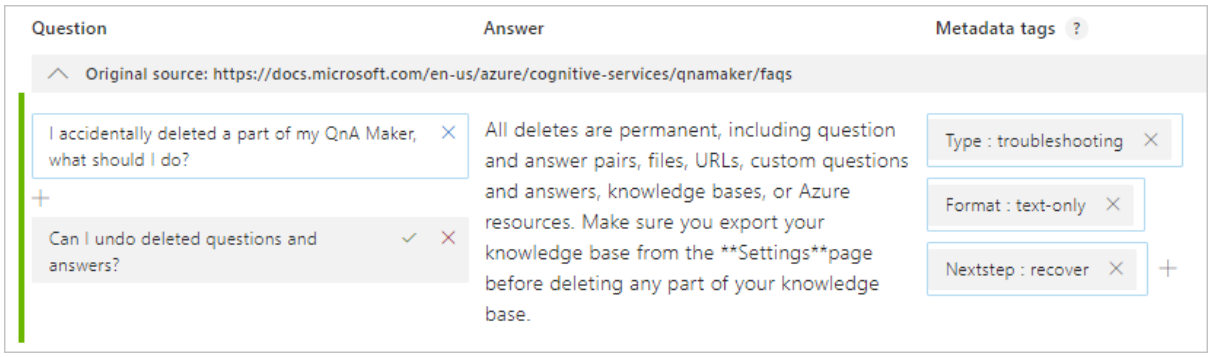
- **When you have static information** - Use QnA Maker when you have static information in the knowledge base of answers. This knowledge base is custom to the needs, which you've built with documents such as PDFs and URLs.
- **When you want to provide the same answer to a request, question, or command** - when different users submit the same question, the same answer is returned.
- **When you want to filter static information based on meta-information** - add metadata tags to provide additional filtering options relevant to your client application's users and the information. Common metadata information includes chit-chat, content type or format, content purpose, and content freshness.
- **When you want to manage a bot conversation that includes static information** - your knowledge base takes a user's conversational text or command and answers it. If the answer is part of a pre-determined conversation flow, represented in your knowledge base with multi-turn context, the bot can easily provide this flow.

What is a Knowledge Base?

QnA Maker imports the content into a knowledge base of question-and-answer pairs. The import process extracts information about the relationship between the parts of your structured and semi-structured content to imply relationships between the question-and-answer pairs. You can edit these question-and-answer pairs or add new pairs.

The content of the question-and-answer pair includes:

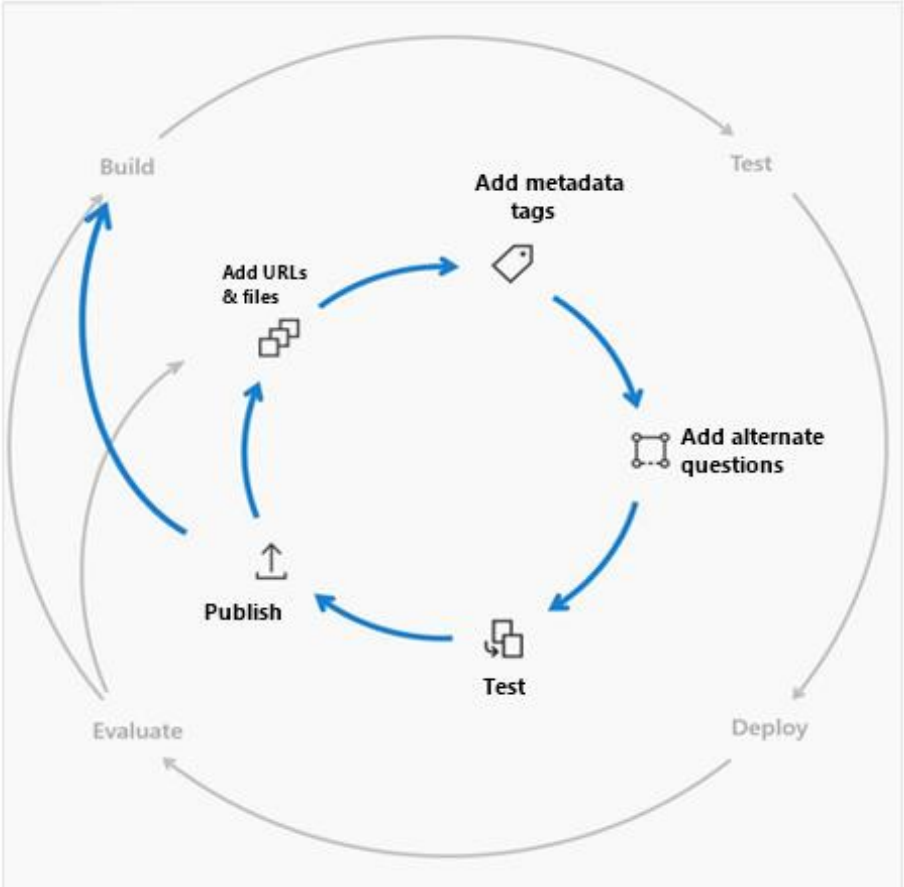
- All the alternate forms of the question
- Metadata tags used to filter answer choices during the search
- Follow-up prompts to continue the search refinement



After publishing the knowledge base, a client application sends a user's question to your endpoint. QnA Maker service processes the question and responds with the best answer.

Azure QnA Maker Development Cycle

QnA Maker provides authoring, training, and publishing along with collaboration permissions to integrate into the full development life cycle.



Primary Goals

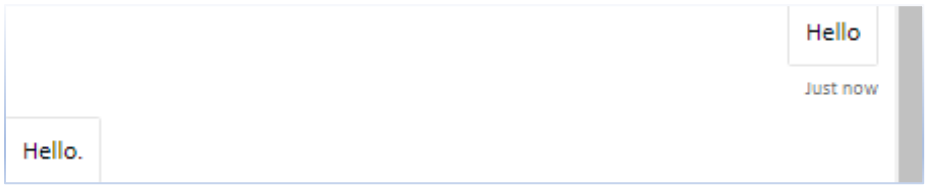
- ✓ Setting up a chatbot that can order your requirements (Pizza, Cakes, Ice creams…).
- ✓ Using a QnA Maker Bot service to build **Pizza** ordering chatbot.
- ✓ Having a real-world chatbot, to which you can chat like you chatting to a real person and ordering Pizza, Cakes.

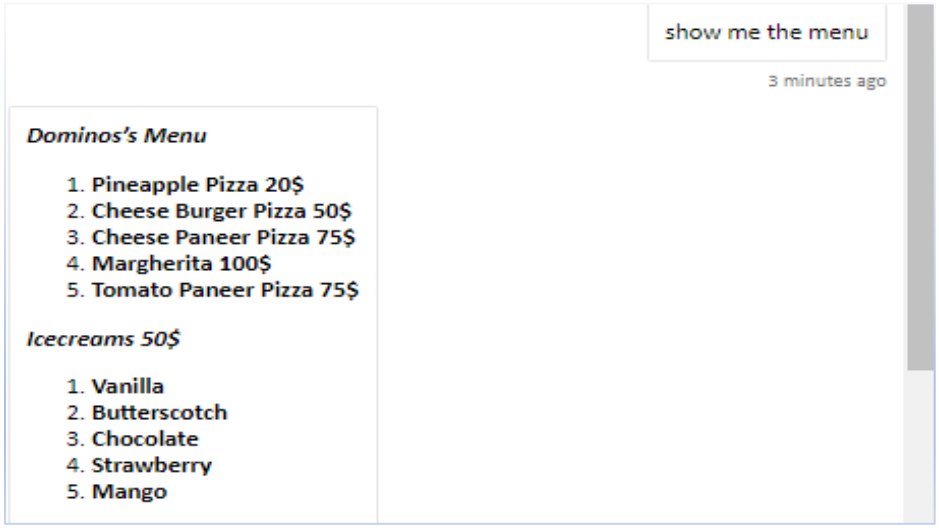
Input

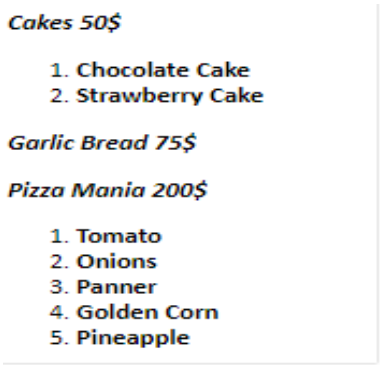
Below are the few training phrases for validating the bot:

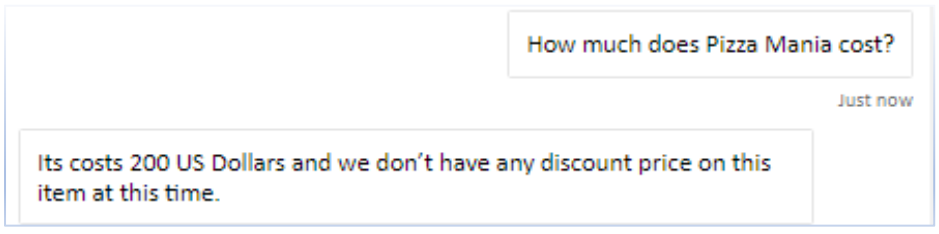
Intents: **Training Phrases**
greetings: Hello
showMenu: Can you please show me the menu of your restaurant?
itemCost: How much does Pizza Mania cost?
orderStatus: When will I get my order?
provideParcel: Do you provide parcels now?

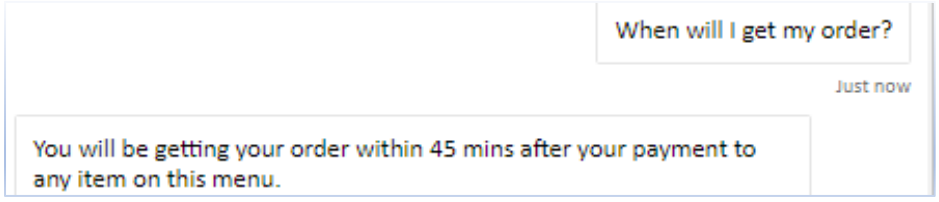
Output

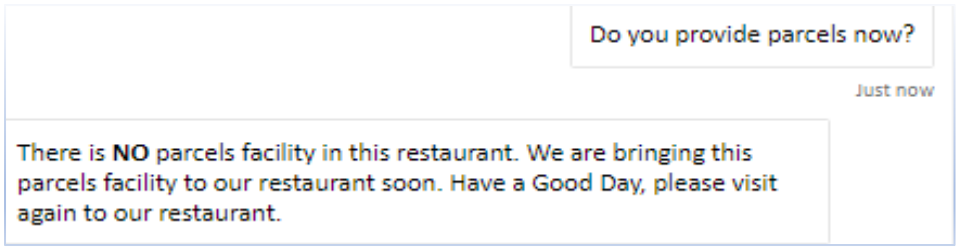

Hello
Just now
Hello.


show me the menu
3 minutes ago
Dominos's Menu
1. Pineapple Pizza 20$
2. Cheese Burger Pizza 50$
3. Cheese Paneer Pizza 75$
4. Margherita 100$
5. Tomato Paneer Pizza 75$
Icecreams 50$
1. Vanilla
2. Butterscotch
3. Chocolate
4. Strawberry
5. Mango


Cakes 50$
1. Chocolate Cake
2. Strawberry Cake
Garlic Bread 75$
Pizza Mania 200$
1. Tomato
2. Onions
3. Panner
4. Golden Corn
5. Pineapple


How much does Pizza Mania cost?
Just now
Its costs 200 US Dollars and we don't have any discount price on this item at this time.


When will I get my order?
Just now
You will be getting your order within 45 mins after your payment to any item on this menu.

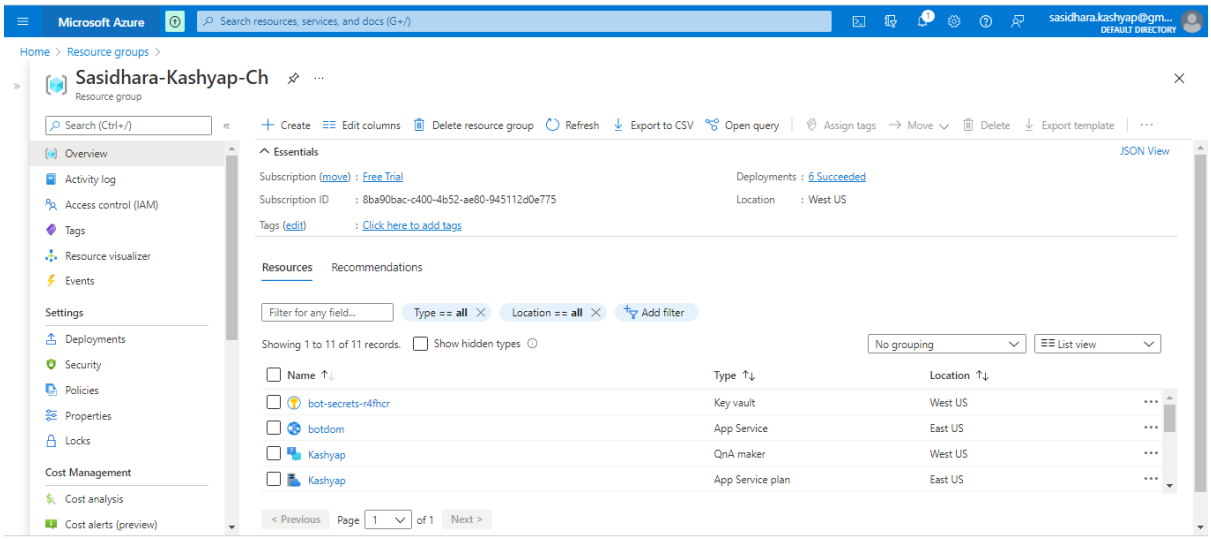


Process

README.md file given in GitHub has the required information and some of the screenshots below.

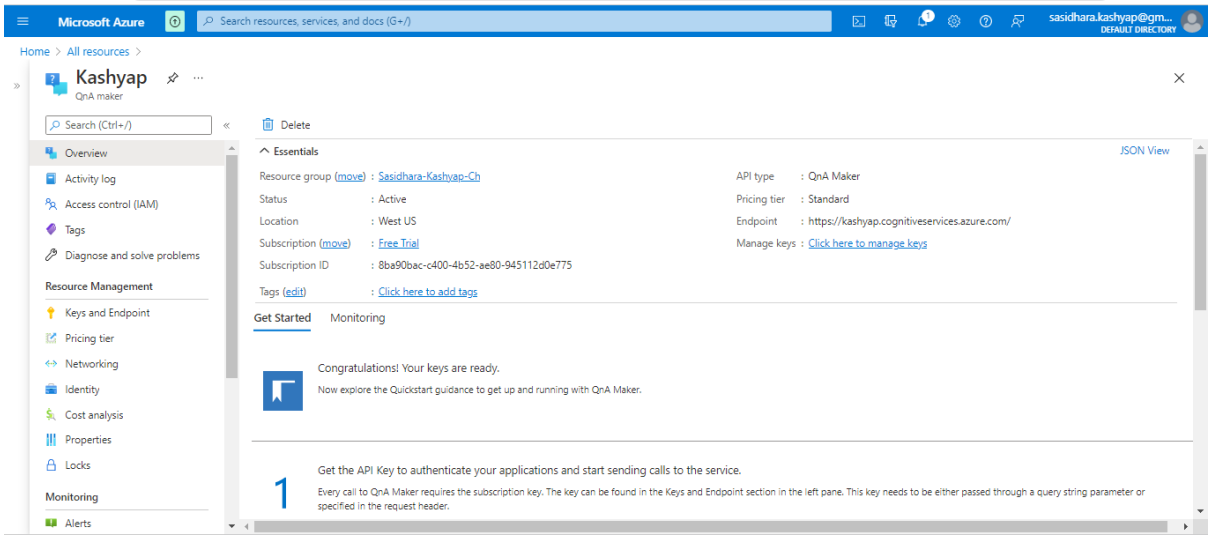
Task 1

✓ Create a Resource Group on Azure



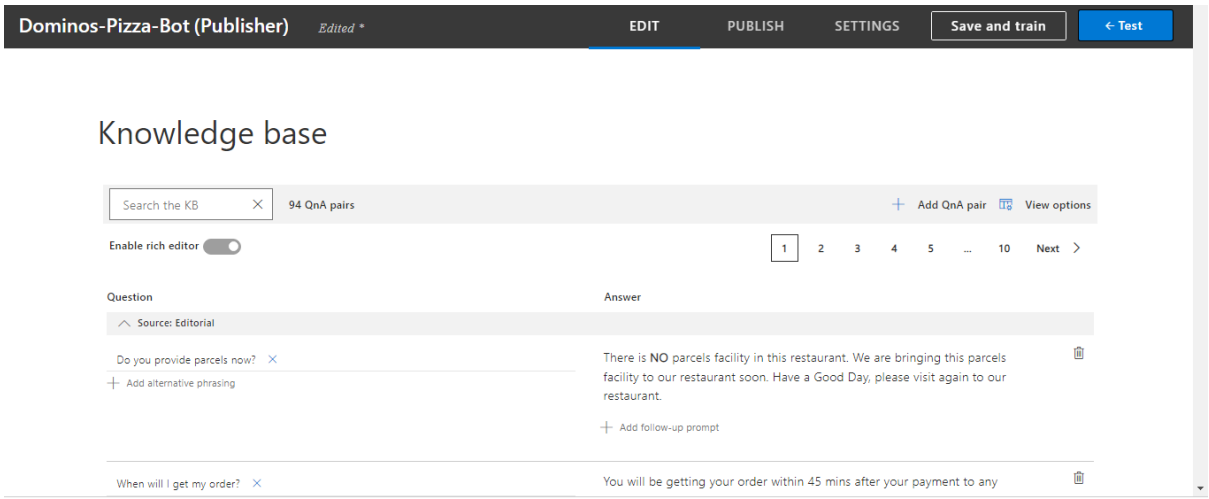
Task 2

✓ Create a QnA Maker Service on Azure



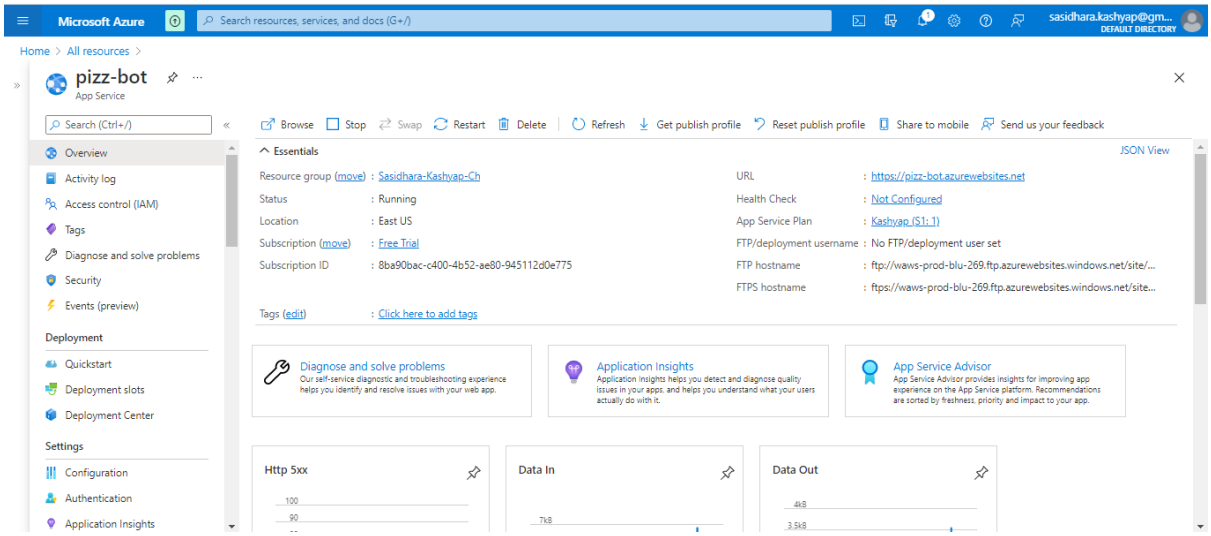
Task 3

✓ Create a Knowledge Base on Azure



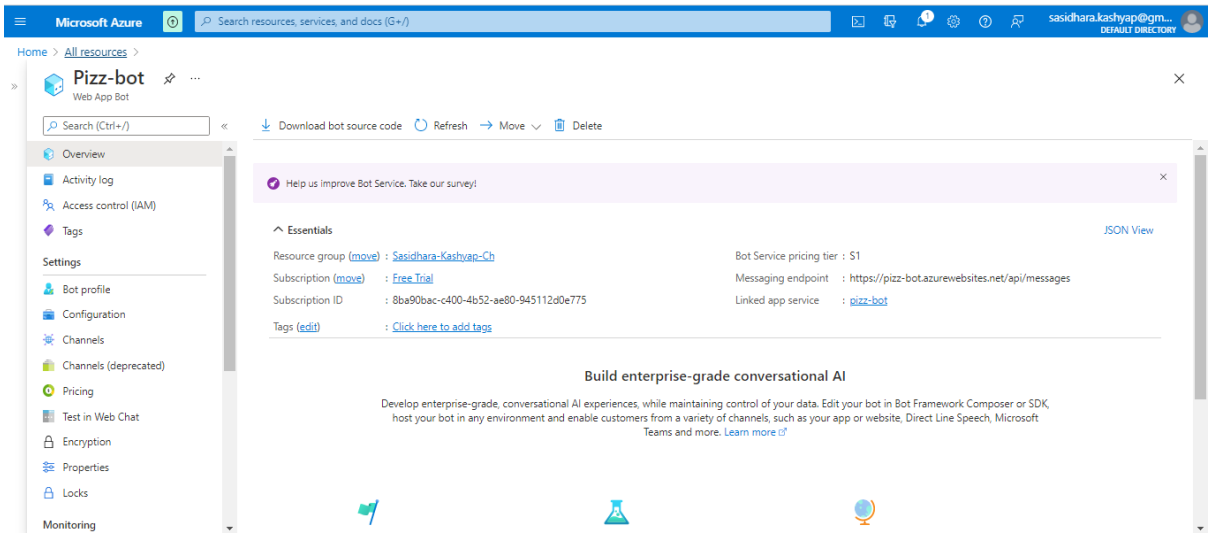
Task 4

✓ Create an App Service on Azure



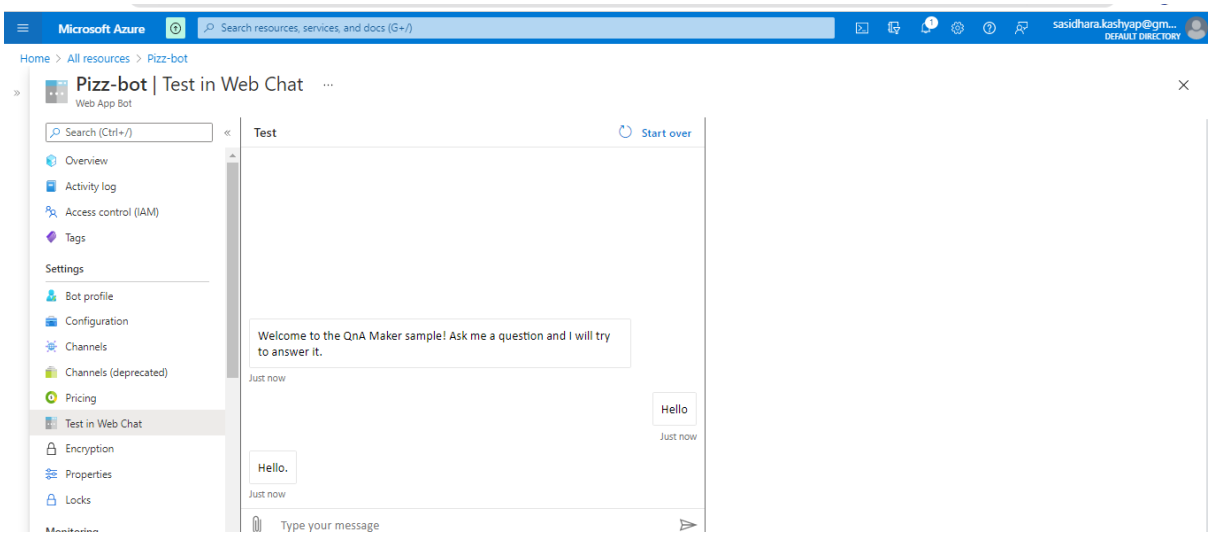
Task 5

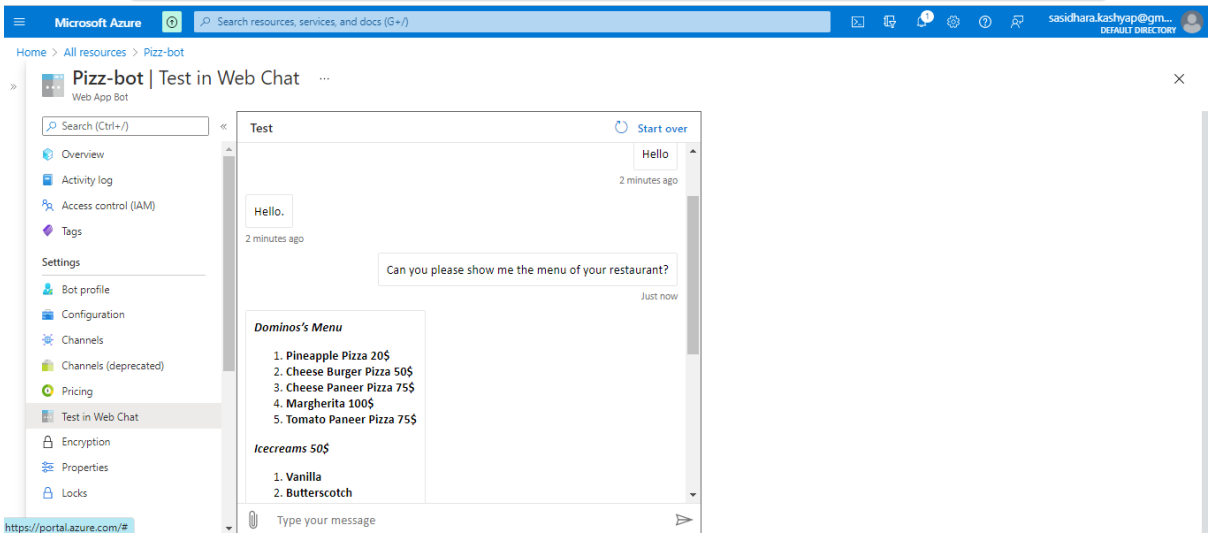
✓ Create a Web App Bot on Azure



Task 6

✓ Testing my Bot on Azure




Microsoft Azure
Search resources, services, and docs (G+/)
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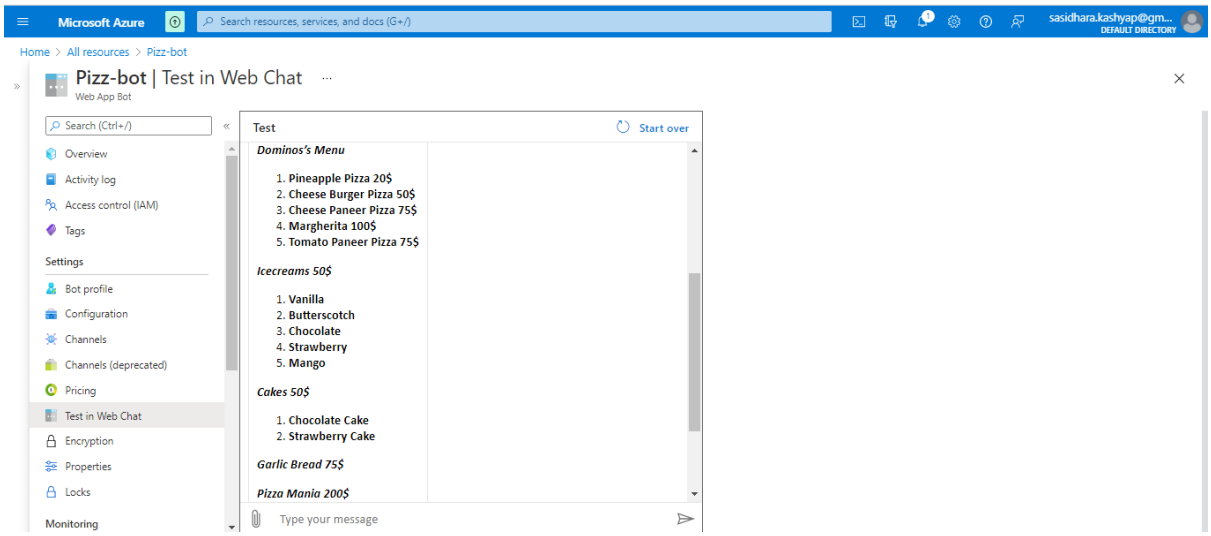
DEFAULT DIRECTORY
Home > All resources > Pizz-bot
Pizz-bot | Test in Web Chat
Web App Bot
Search (Ctrl+/)
Overview
Activity log
Access control (IAM)
Tags
Settings
Bot profile
Configuration
Channels
Channels (deprecated)
Pricing
Test in Web Chat
Encryption
Properties
Locks
Test
Start over
Hello
2 minutes ago
Hello.
2 minutes ago
Can you please show me the menu of your restaurant?
Just now
Dominos's Menu
1. Pineapple Pizza 20$
2. Cheese Burger Pizza 50$
3. Cheese Paneer Pizza 75$
4. Margherita 100$
5. Tomato Paneer Pizza 75$
Icecreams 50$
1. Vanilla
2. Butterscotch
Type your message
https://portal.azure.com/#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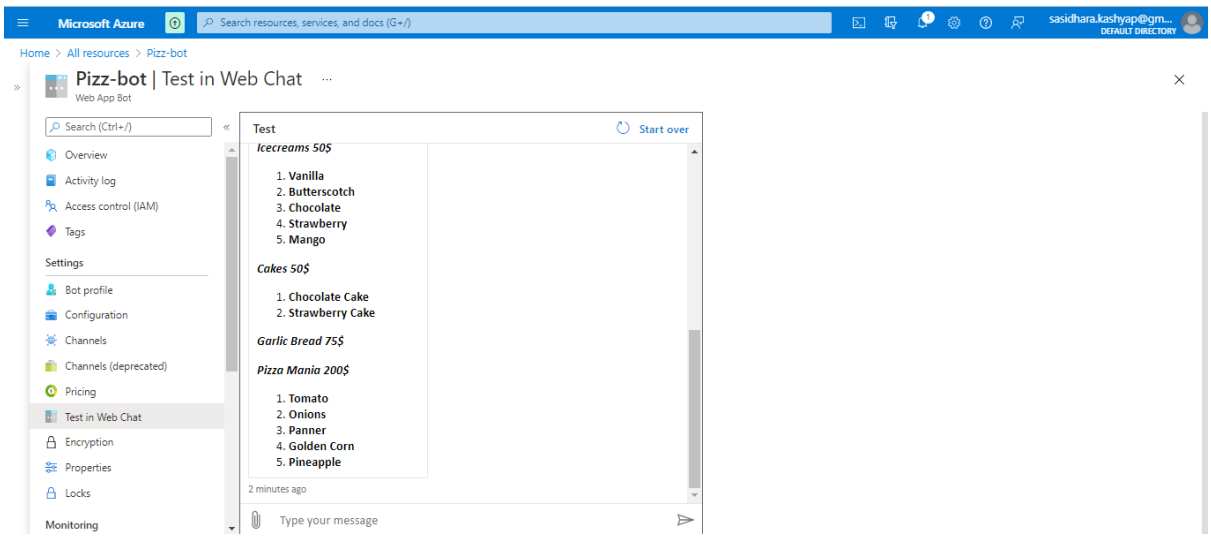
Type your message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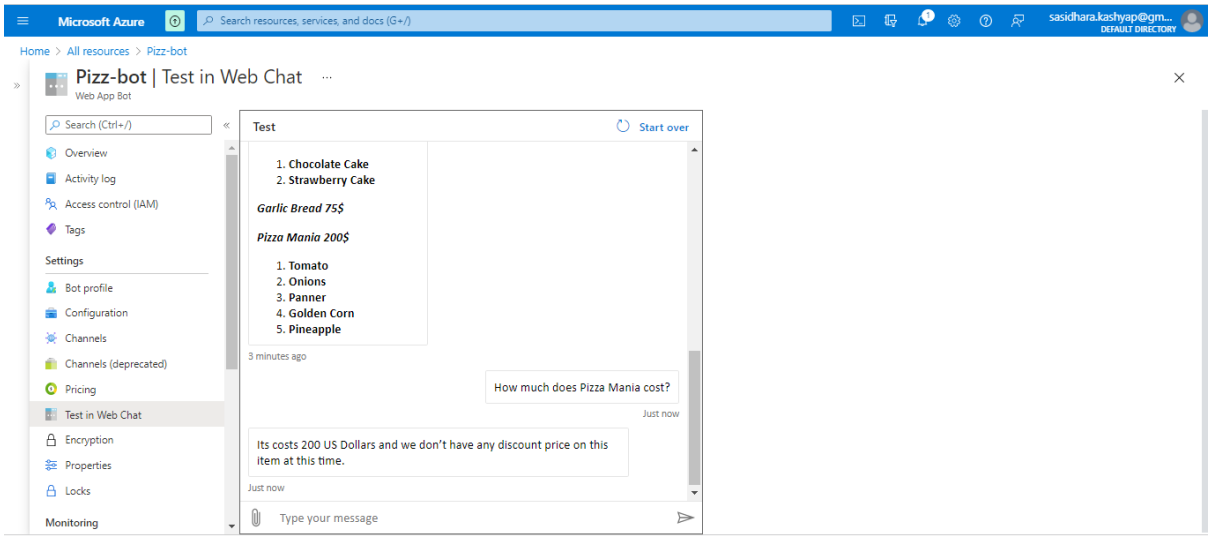
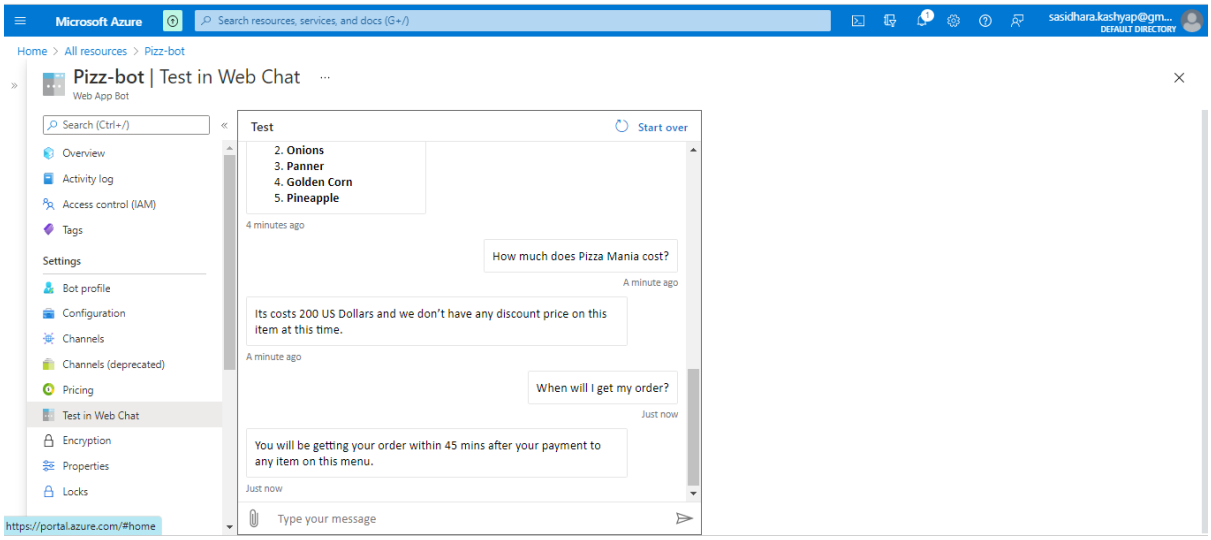
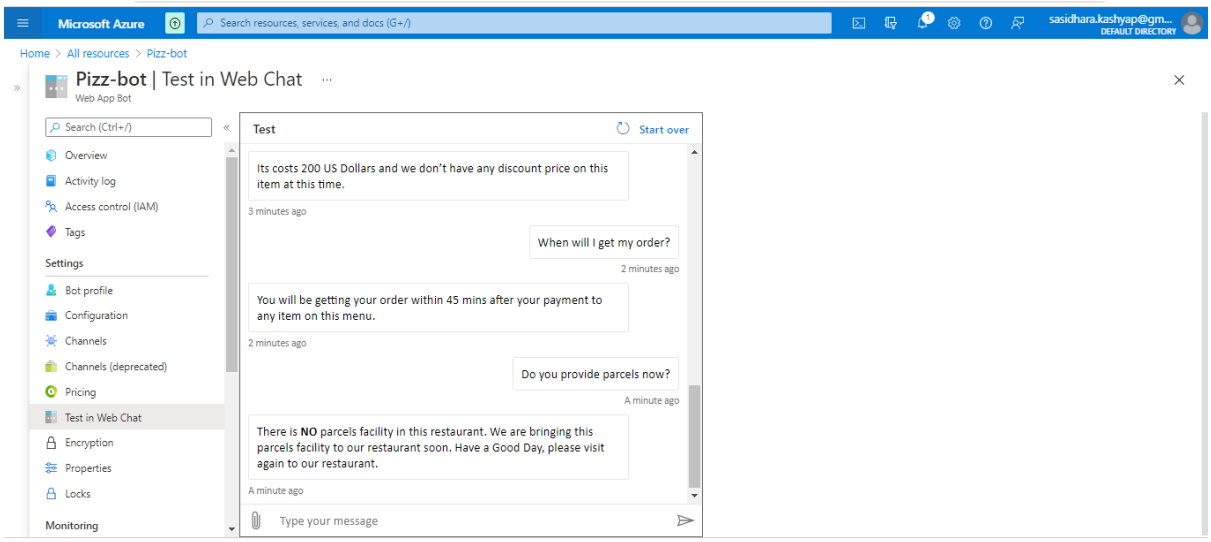
5. Pineapple
2 minutes ago
Type your message







Code link

- ✓ **GitHub URL: https://github.com/sasidhara-kashyap0903/PizzaBot-azure-master**
- ✓ **Demo URL: https://dev.botframework.com/**

Account ID

- ✓ **Git Hub ID: sasidhara-kashyap0903**
- ✓ **Azure Account ID: sasidhara.kashyap@gmail.com**

Technologies / Tools Used

- ✓ **Azure QnA Maker Service**
- ✓ **Git Hub**
- ✓ **Microsoft Office**
- ✓ **Microsoft Visual Studio**

Expected Outcome

By the end of this milestone, you would be having a working chatbot system that orders your favourite food like Pizzas, Cakes, Ice Creams and Garlic Bread to the user along with chatting.

My sincere thanks, to Microsoft for an impressive QnA Maker service on MS Azure Cloud to make the chatbot development easy. It was a wonderful experience learning this and would like to explore more in next two years of my B.Tech. Sincere appreciation to Team of Future Ready Talent who supported and encouraged us to work on this project.