PROJECT

CHATBOT CODE USING DIALOGFLOW AND PYTHON

CHATBOT NAME = PIZZASERVICE

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ABSTRACT

A chatbot is a computer software program that conducts a conversation via auditory or textual methods. This software is used to perform tasks such as quickly responding to users, informing them, helping to purchase products and providing better service to customers. Chatbots are programs that work on Artificial Intelligence (AI) & Machine Learning Platform. Chatbot has become more popular in business groups right now as it can reduce customer service costs and handles multiple users at a time. But yet to accomplish many tasks there is a need to make chatbots as efficient as possible. In this project, we provide the design of a chatbot, which provides a genuine and accurate answer for any query using Dialogflow provided by Google and Python. In this project we developed a chatbot and named it pizzaservice in Dialogflow and after that we successfully link with python and through ngrok we link our dialogflow code with localhost server.

OBJECTIVE

The objectives of chatbot are following:
- It provides 24/7 availiabilty.
- Themes
- Help to user
- Voice to text
- Language
- Customize chatbot
- Quality of conversation
- Sustainability

Chatbots boost operational efficiency and bring cost savings to businesses while offering convenience and added services to internal employees and external customers. They allow companies to easily resolve many types of customer queries and issues while reducing the need for human interaction.

With chatbots, a business can scale, personalize, and be proactive all at the same time—which is an important differentiator. For example, when relying solely on human power, a business can serve a limited number of people at one time. To be cost-effective, human-powered businesses are forced to focus on standardized models and are limited in their proactive and personalized outreach capabilities.

By contrast, chatbots allow businesses to engage with an unlimited number of customers in a personal way and can be scaled up or down according to demand and business needs. By using chatbots, a business can provide humanlike, personalized, proactive service to millions of people at the same time.

Consumer research is showing that messaging apps are increasingly becoming the preferred method for connecting with businesses for certain types of transactions. Delivered through messaging platforms, chatbots enable a level of service and convenience that in many cases exceeds what humans can provide. For example, banking chatbots save an average of four minutes per inquiry compared to traditional call centers. The same capabilities that help businesses achieve greater efficiency and cost reductions also deliver benefits to customers in the form of an improved customer experience. It's a win/win proposition.

INTRODUCTION

A chatbot is an automated software program that interacts with humans. A chatbot is merely a computer program that fundamentally simulates human conversations. A chatbot that functions through AI and machine learning has an artificial neural network inspired by the neural nodes of the human brain. Chatbots are programs that can do talk like human conversations very easily. For example, Facebook has a machine learning chatbot that creates a platform for companies to interact with their consumers through the Facebook Messenger application. In 2016, chatbots became too popular on Messenger. By the consequences is noted that 2016 was the entire year of chatbots. The software industry is mainly oriented on chatbots. Thousands of chatbots are invented on startups and used by the businesses to improve their customer service, keeping them hanging by a kind communication. According to research, nowadays chatbots are used to solve a number of business tasks across many industries like E-Commerce, Insurance, Banking, Healthcare, Finance, Legal, Telecom, Logistics, Retail, Auto, Leisure, Travel, Sports, Entertainment, Media and many others. Thus that was the moment to look at the chatbots as a new technology in the communication field. Nowadays various companies are using chatbots to answer quickly and efficiently some frequented asking questions from their own customers.

In this project ,we developed a basic pizza service bot that takes information like address, phone number, email-id, flavour of pizza, toppings ,size ,name of user and placed order after that we link our dialogflow code to python code through ngrok that is localhost server .this method is discuss in part of methodology.

What is Dialogflow?

Answer=Dialogflow is a natural language understanding platform that makes it easy to design and integrate a conversational user interface into your mobile app, web application, device, bot, interactive voice response system, and so on. Using Dialogflow, you can provide new and engaging ways for users to interact with your product.

Dialogflow can analyze multiple types of input from your customers, including text or audio inputs (like from a phone or voice recording). It can also respond to your customers in a couple of ways, either through text or with synthetic speech.

We discuss python code and ngrok in detail in Methodology.

METHODOLOGY

In this project we discuss three things that were used in project that are Dialogflow, ngrok , python code. First we discuss Dialogflow

Dialogflow

in this we create our agent named it pizzaservice then we go to intent and create intent and fill basic action training phrases like user enter addresses, phone number and then we create entities like toppings, size, flavour. After this we save our dialogflow code And test our chatbot works properly or not after that we goes to ngrok.

NGROK

Now download ngrok by using given official website:

https://ngrok.com/ log-in and download file.

Download ngrok zip file and extract it and then run **ngrok.exe** file. New ngrok terminal window open.

Then open ngrok.exe file
Open terminal or ngrok application and type=**ngrok.exe http 5000**

and this shows


```
ngrok

Join us in the ngrok community @ https://ngrok.com/slack

Session Status            online
Session Expires           51 minutes
Terms of Service          https://ngrok.com/tos
Version                   3.1.0
Region                    India (in)
Latency                   656ms
Web Interface             http://127.0.0.1:4040
Forwarding                https://5b7b-2401-4900-446e-4f3b-8c94-e0ad-fa8e-8d76.in.ngrok.io -> http://localhost:5000

Connections               ttl     opn     rt1     rt5     p50     p90
                          56      0       0.00    0.01    0.32    0.34

HTTP Requests
-------------
```

After this copy this **https://5b7b-2401-4900-446e-4f3b-8c94-e0ad-fa8e-8d76.in.ngrok.io**

This is our localhost machine.

And paste this to your webhook URL of fulfilment section and save the program.

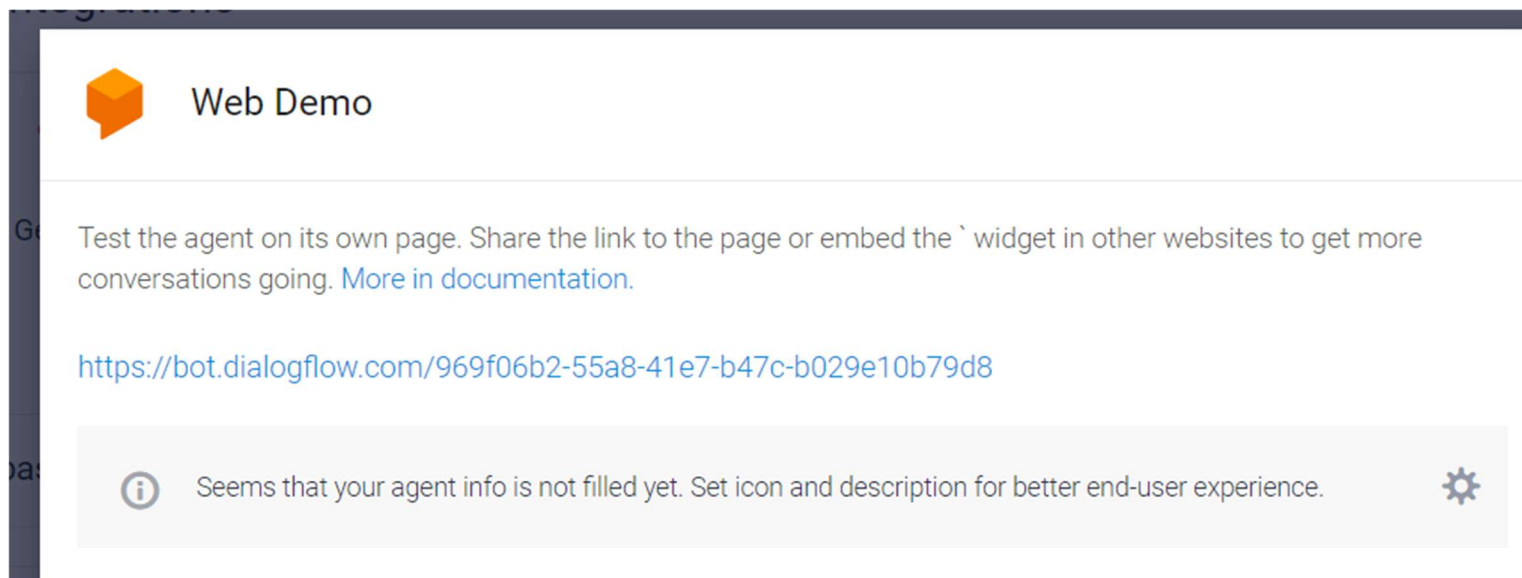After this we come to our python code. That we discuss in our code section.
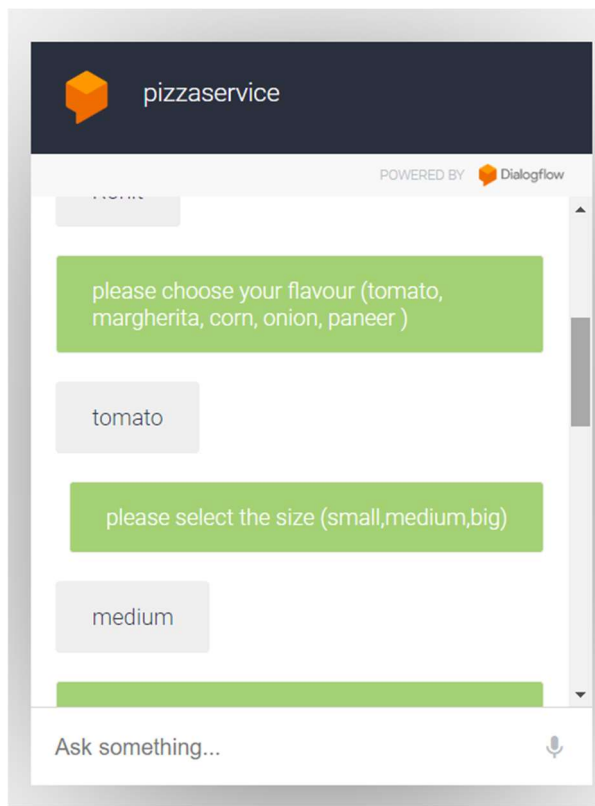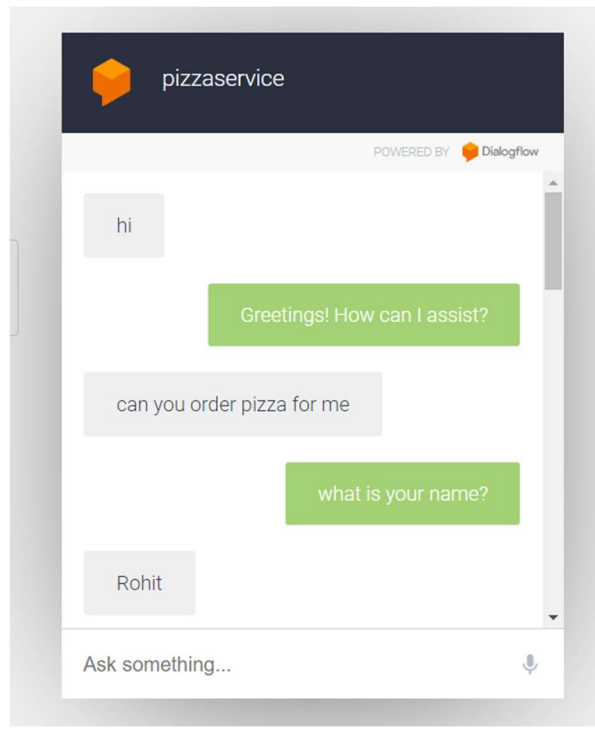
CODE
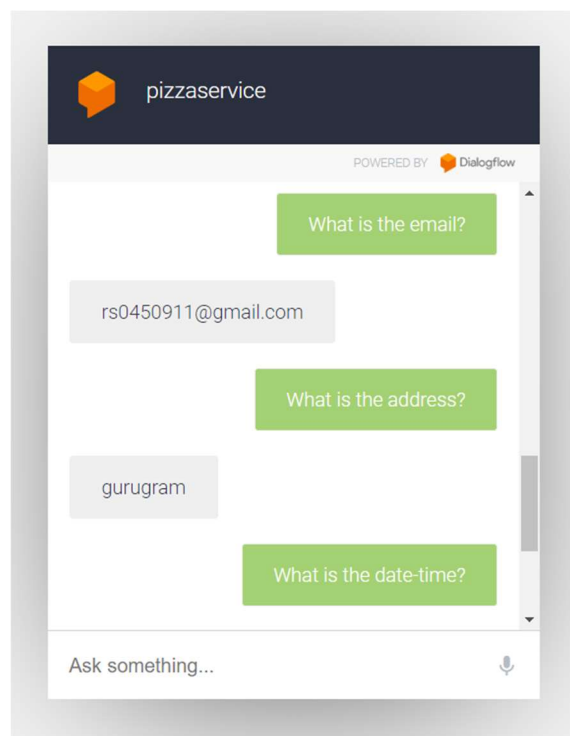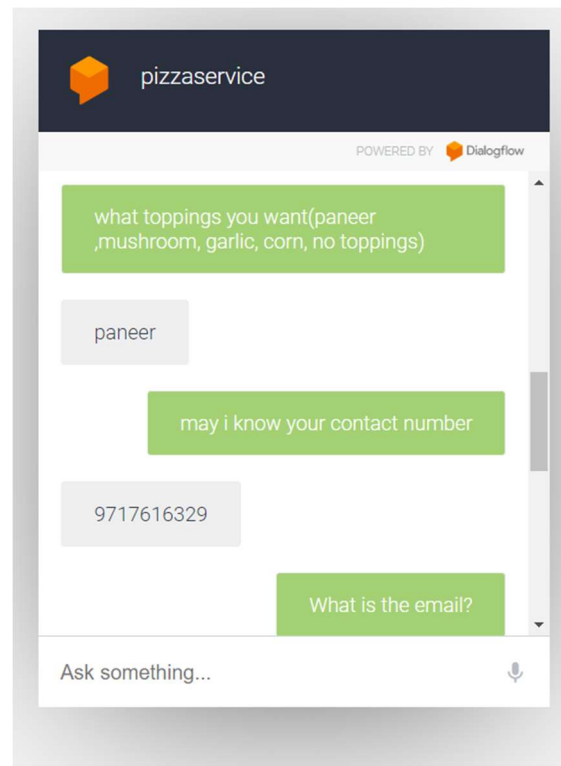
DIALOGFLOW CODE

In this we check our dialogflow code .
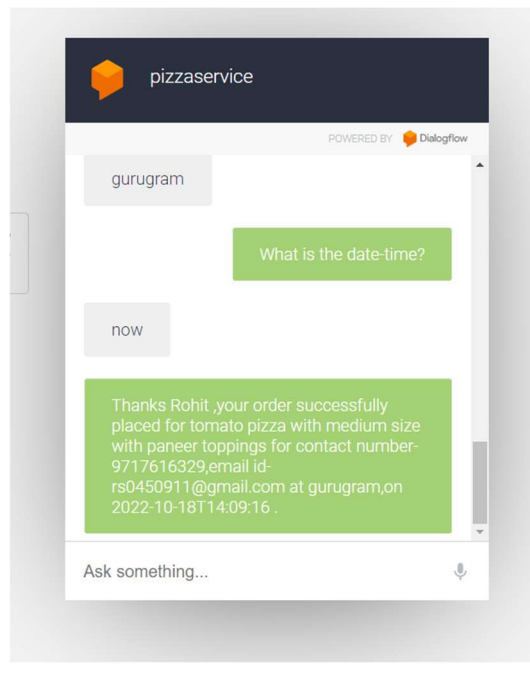
The link of dialogflow of our code is given by dialogflow

Link=https://bot.dialogflow.com/969f06b2-55a8-41e7-b47c-b029e10b79d8

After this we attach our screenshots of our dialogflow code.

That's we complete our dialogflow code. Now we jump to our python code.

PYTHON CODE

```
from flask import Flask
from flask import request
app= Flask(__name__)
@app.route('/',methods=["POST","GET"])
def webhook():
    if request.method == "GET":
        return "hello pizzaservice !=not connected to DF "
    elif request.method == "POST":
        payload= request.json
        user_responce=(payload["queryResult"]["queryText"])
        bot_response=(payload["queryResult"]["fulfillmentText"])
```

```python
        if (user_responce or bot_response )!= " ":

            print("user:=" + user_responce)

            print("bot :=" + bot_response)

        return "message received"

    else:

        print(request.data)

        return "200"

if __name__=="__main__":

    app.run(debug=True)
```

OUTPUT

```
 * Debugger is active!
 * Debugger PIN: 194-382-180
 * Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
user:=can you order pizza for me
bot :=what is your name?
127.0.0.1 - - [18/Oct/2022 13:37:05] "POST / HTTP/1.1" 200 -
user:=Rohit
bot :=please choose your flavour (tomato, margherita, corn, onion, paneer )
127.0.0.1 - - [18/Oct/2022 13:37:11] "POST / HTTP/1.1" 200 -
user:=tomato
bot :=please select the size (small,medium,big)
127.0.0.1 - - [18/Oct/2022 13:37:42] "POST / HTTP/1.1" 200 -
user:=medium
bot :=what toppings you want(paneer ,mushroom, garlic, corn, no toppings)
127.0.0.1 - - [18/Oct/2022 13:37:52] "POST / HTTP/1.1" 200 -
user:=paneer
bot :=may i know your contact number
127.0.0.1 - - [18/Oct/2022 13:38:13] "POST / HTTP/1.1" 200 -
user:=9717616329
bot :=What is the email?
127.0.0.1 - - [18/Oct/2022 13:38:23] "POST / HTTP/1.1" 200 -
user:=rs0450911@gmail.com
bot :=What is the address?
127.0.0.1 - - [18/Oct/2022 13:38:37] "POST / HTTP/1.1" 200 -
user:=gurugram
bot :=What is the date-time?
127.0.0.1 - - [18/Oct/2022 13:38:57] "POST / HTTP/1.1" 200 -
user:=now
bot :=Thanks Rohit ,your order successfully placed for  tomato pizza with  medium size with  paneer toppings for contact number- 9717616329,email id- rs0450911@gmail.com a
gram,on 2022-10-18T14:09:16 .
127.0.0.1 - - [18/Oct/2022 13:39:14] "POST / HTTP/1.1" 200 -
```

CONLUSION

 In this project, we have introduced a chatbot that is able to interact with users. This chatbot can answer queries in the textual user input. For this purpose, dialogflow, ngrok, python has been used. The chatbot can answer only those questions which he has the answer in its action phrases . So, to increase the knowledge of the chatbot, we can add the APIs of Wikipedia, Weather Forecasting Department, Sports, News, Government and a lot more. In such cases, the user will be able to talk and interact with the chatbot in any kind of domain. Using APIs like Weather, Sports, News and Government Services, the chatbot will be able to answer the questions outside of its dataset and which are currently happening in the real world. The next step towards building chatbots involves helping people to facilitate their work and interact with computers using natural language or using their set of rules. Such chatbots, backed by machine-learning technology, will be able to remember past conversations and learn from them to answer new ones. The challenge would be conversing with the various multiple bot users and multiple users. As future work, we can make a chatbot that is based on AIML and LSA. This technology will enable a client to interact with a chatbot in a more natural fashion. We can enhance the discussion by including and changing patterns and templates for general client queries .In this we successfully make a chatbot using dialogflow and python that was link to various social platform, websites ,application in which user is facing difficulty .A chatbot is very useful for the future because it is based on software and it was very low in cost.

To the user, chatbots seems to be

"intelligent" due to their

informative skills. However,

<u>Chatbots</u> are only as intelligent as

the underlying database.