**Summer Project Report on**

# "WHATSAPP CHATBOT"

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# Abstract

In this modern era of virtual assistance and automation it has become increasingly popular to use tools which further reduce human efforts. Ranging from a simple RTO website to website with high level applications, ChatBots are being used to help users from a simple task to a complicated one ChatBots are assisting users find their answers .With the ever-growing digital community it is becoming increasingly difficult for humans to reply. Hence, ChatBot are being deployed.

ChatBots are like robots but digital, they are trained to reply a certain set of answer.
These ChatBots have become so advanced that now they can be integrated with voice to become the virtual assistance which we know as Siri, Alexa, Bixby, Google assistant and many more.

These ChatBots can be further integrated with advanced Machine Learning, Deep-Learning Algorithms to try to make them humane.

Our project is a WhatsApp chatbot which can send the registered user updates about Weather of the location of the user choice, COVID Update of any country, Top News update and meanings of different words from the Dictionary.

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# INTRODUCTION

# 1. INTRODUCTION

## 1.1 BACKGROUND

ChatBot are typically used in dialog systems for various purposes including customer service, request routing, or for information gathering. While some chatbot applications use extensive word-classification processes, Natural Language processors, and sophisticated AI, others simply scan for general keywords and generate responses using common phrases obtained from an associated library or database.

## 1.2 MOTIVATION / NEED / PURPOSE

As 21st century people, we have been using virtual assistants like Siri, Alexa and others a lot. One of the major motivators was to make a simple implementation of the same.

In this modern era of virtual assistance and automation it has become increasingly popular to use tools which further reduce human efforts. Ranging from a simple RTO website to website with high level applications ChatBot are being used to help users from a simple task to a complicated one ChatBot are assisting users find their answers .With the ever-growing digital community it is becoming increasingly difficult for humans to reply. Hence, ChatBots are being deployed.

Our basic idea of developing was that we all have seen the rise in technology in the modern era which makes us anxious about its usefulness. Thus seeing most of the apps using such platform we tend to get lean towards this idea of making a bot which will have the functions which are required by the people of the modern era to make things easier as well as better.

## 1.3 SCOPE

ChatBot are increasingly present in businesses and often are used to automate tasks that do not require skill-based talents. With customer service taking place via messaging apps as well as phone calls, there are growing numbers of use-cases where chatbot deployment gives organisations a clear return on investment. ChatBot can be used in a wide array of applications including but not limited to customer care, hospitals sending updates to its patients, movie ticket bookings.


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## 1.4 APPLICATIONS

### 1. Messaging apps

Many companies' ChatBot run on messaging apps or simply via SMS. They are used for B2C customer service, sales and marketing.

In 2016, Facebook Messenger allowed developers to place ChatBot on their platform. There were 30,000 bots created for Messenger in the first six months, rising to 100,000 by September 2017.

### 2. Company internal platforms

Companies can use ChatBot to send updates to its employees about deadline, updates, notices, etc.

### 3. Customer Service

Many high-tech banking organizations are looking to integrate automated AI-based solutions such as ChatBot into their customer service in order to provide faster and cheaper assistance to their clients who are becoming increasingly comfortable with technology. In particular, ChatBot can efficiently conduct a dialogue, usually replacing other communication tools such as email, phone, or SMS. In banking, their major application is related to quick customer service answering common requests, as well as transactional support.

### 4. Healthcare

ChatBots are also appearing in the healthcare industry. A study suggested that physicians in the United States believed that ChatBot would be most beneficial for scheduling doctor appointments, locating health clinics, or providing medication information

### 5. Awareness

ChatBot can be used to share important information like the one which was made by United Nations to share information about COVID 19.

## 1.5 LIMITATIONS

The creation and implementation of ChatBot is still a developing area, heavily related to artificial intelligence and machine learning, so the provided solutions, while possessing obvious advantages, have some important limitations in terms of functionalities and use cases. However this is changing over time.

The most common ones are listed below:

- As the database, used for output generation, is fixed and limited, ChatBot can fail while dealing with an unsaved query.
- A Chabot's efficiency highly depends on language processing and is limited because of irregularities, such as accents and mistakes that can create an important barrier for international and multi-cultural organisations
- ChatBot are unable to deal with multiple questions at the same time and so conversation opportunities are limited.
- ChatBot require a large amount of conversational data to train.
- As it happens usually with technology-led changes in existing services, some consumers, more often than not from the old generation, are uncomfortable with ChatBot due to their limited understanding, making it obvious that their requests are being dealt with by machines.

# CHAPTER 2

# SYSTEM DESIGN

# 2 SYSTEM DESIGN

## 2.1 ARCHITECTURE DESIGN

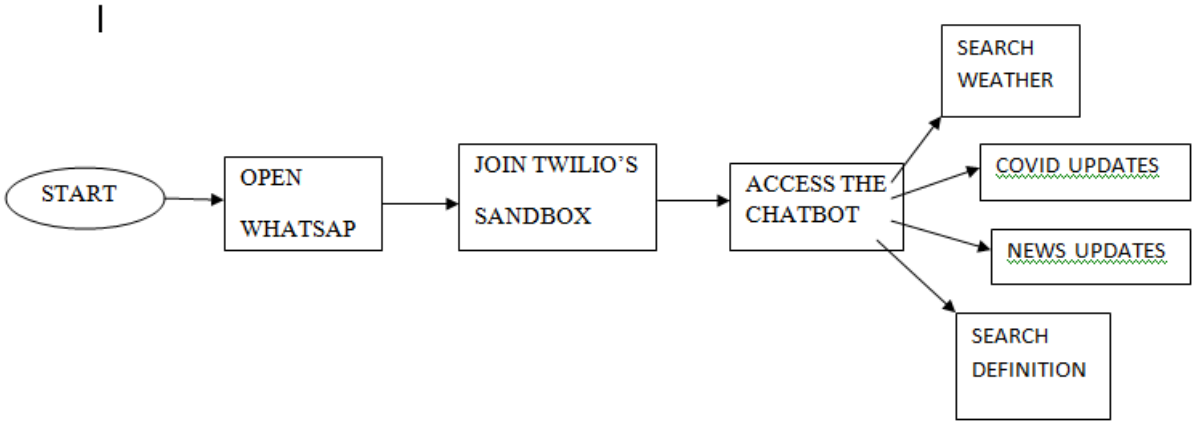



**FIG 2.1: INITIAL FLOW OF APPLICATION**

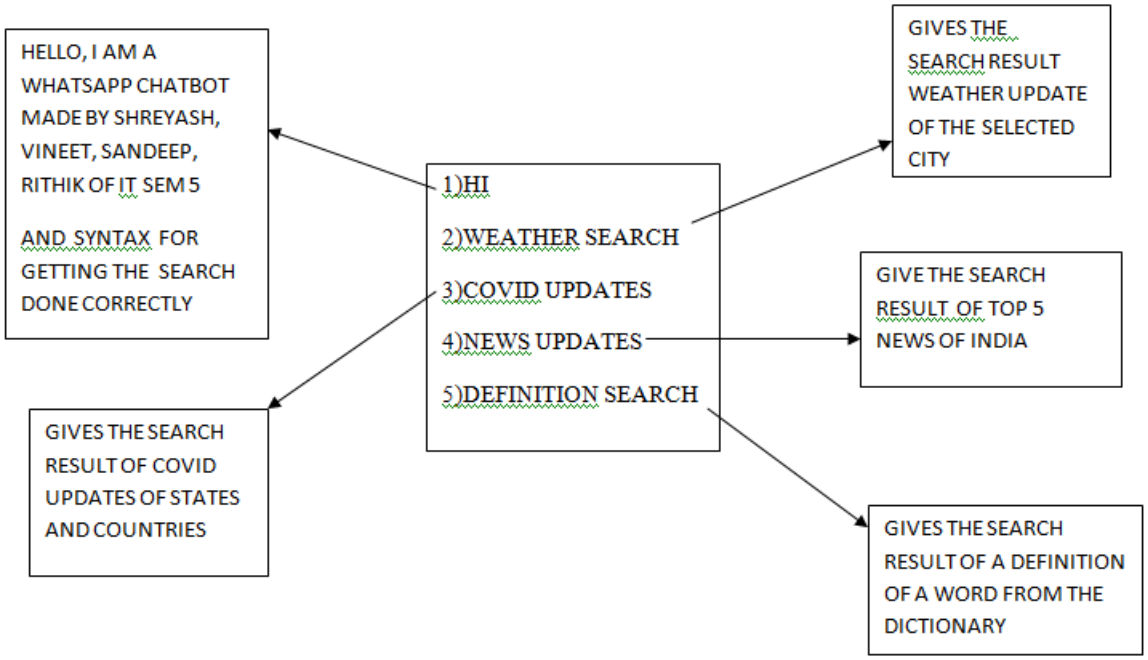



**FIG 2.2: FLOW CONTROL AT USER'S END**

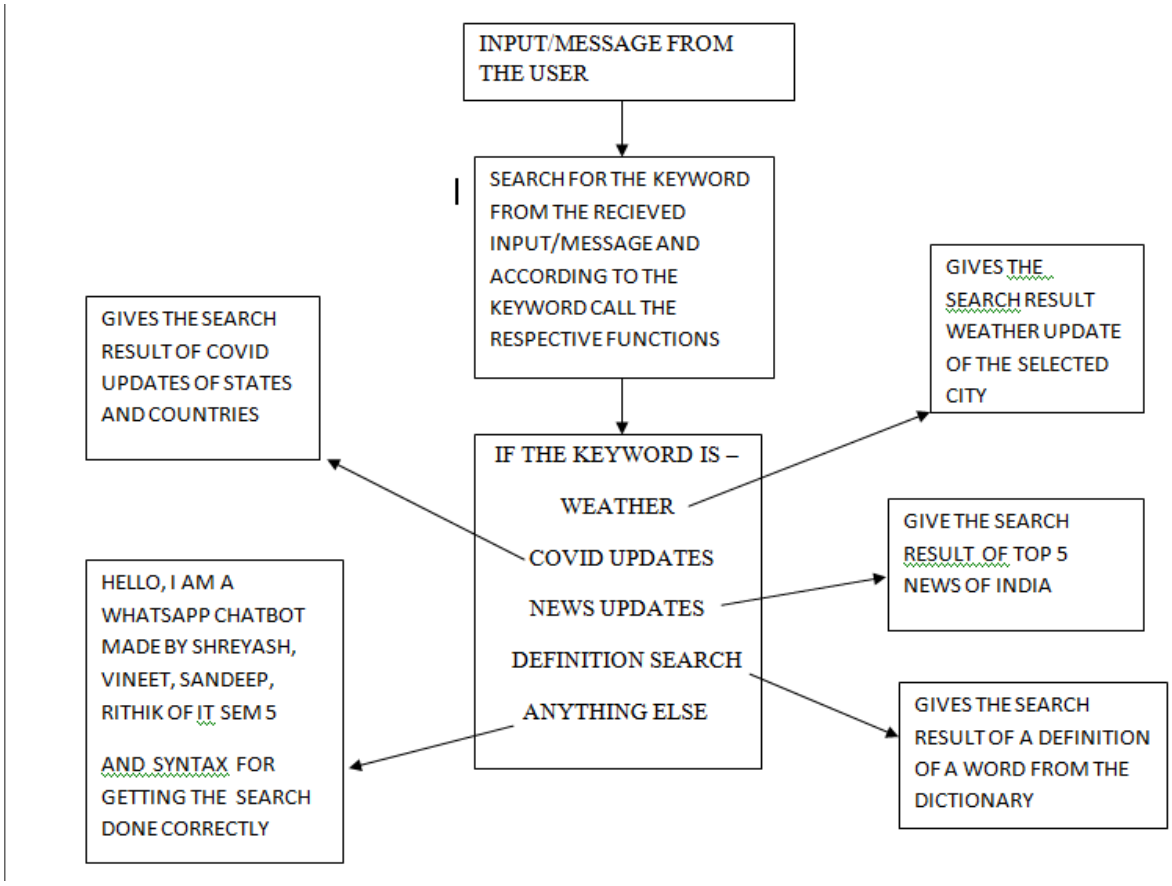



**FIG 2.3: CONTROL FLOW AT SERVER'S END**

# CHAPTER 3

# SYSTEM REQUIREMENTS

# 3SYSTEM REQUIREMENTS

## 3.1 HARDWARE

- Memory: 2GB RAM or higher
- Graphics: 1GB
- Processor: i3 or higher
- Hard Disk Space: 500GB or higher

## 3.2 SOFTWARE

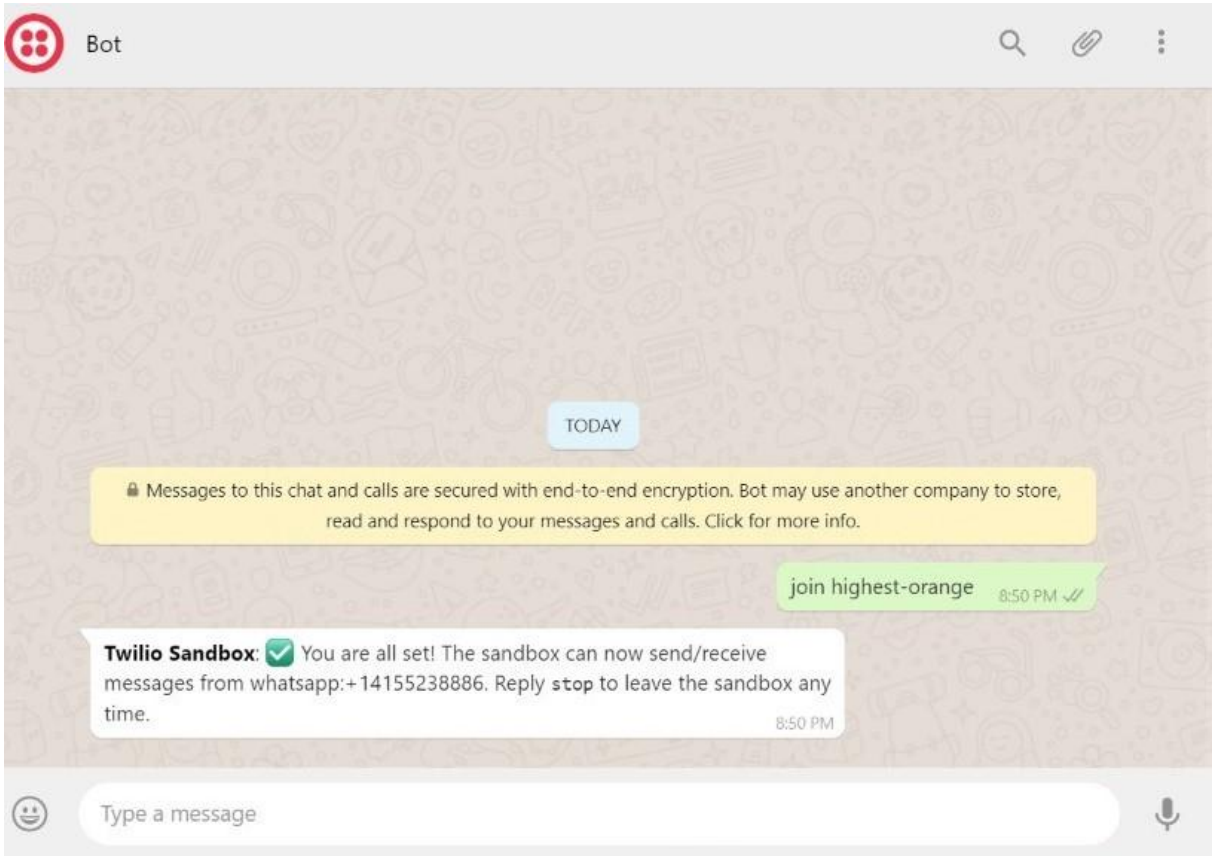
- Pycharm
- Twilio
- ngork

# CHAPTER 4

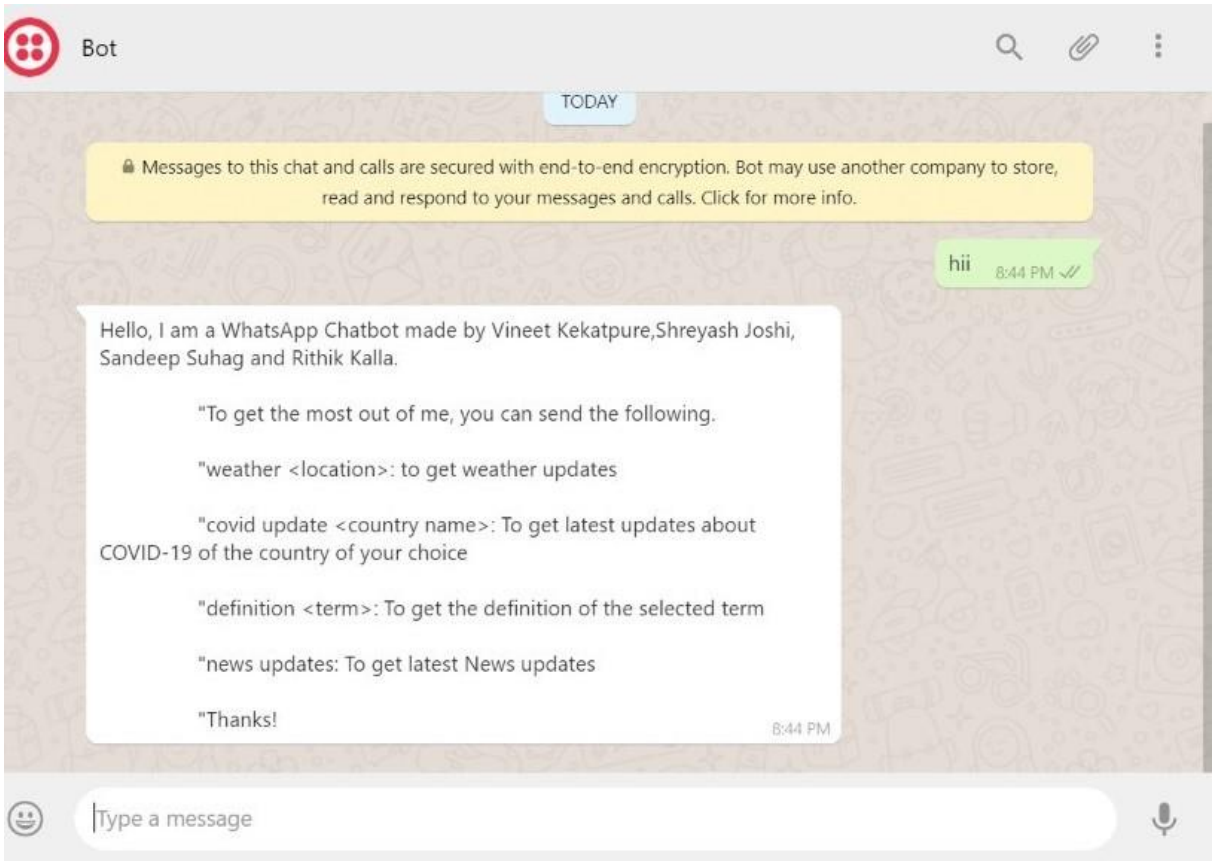
# IMPLEMENTATION DETAILS

# 4. IMPLEMENTATION DETAILS

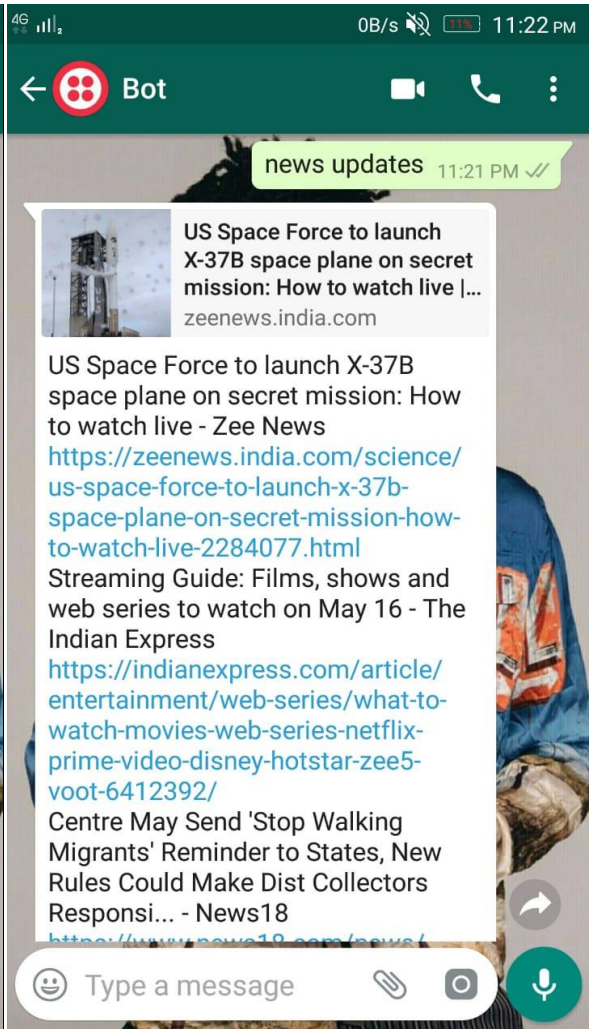
## 4.1 USER INTERFACE




Start WhatsApp and add the number +1 4155238886 as Bot(optional) the official number of twilio's business account and send a message -> "**join highest-orange**" (the sandbox name of twilio) and then the user gets an acknowledgement message that they have be added to the sandbox.

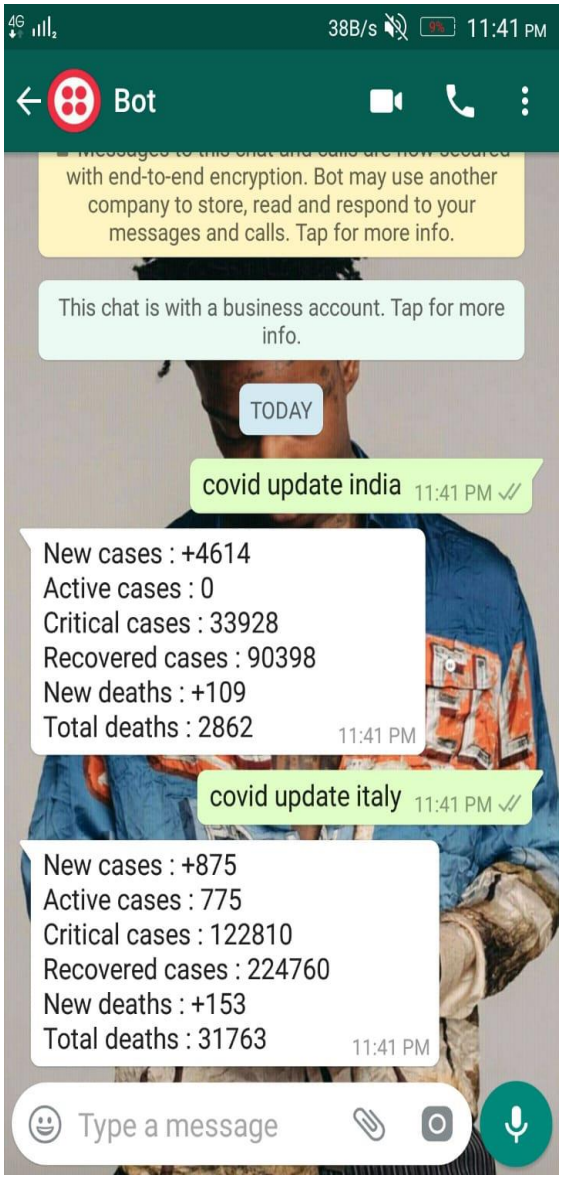


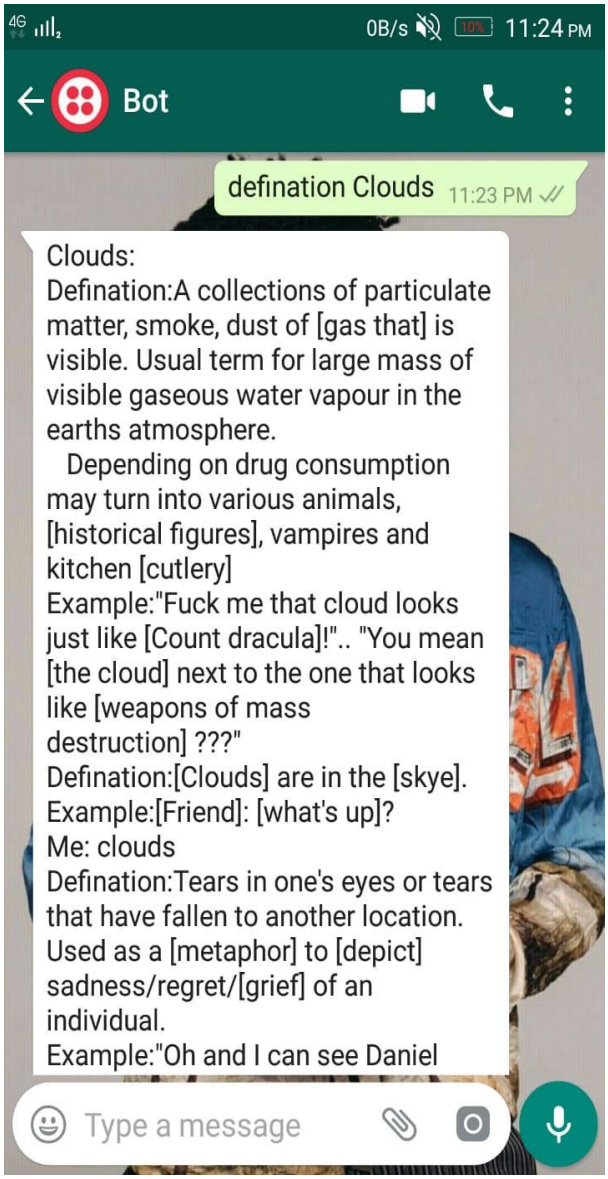

After being registered to the sandbox of twilio send a "**hi**" message and the user will get a welcome/greeting message regarding the creators of the chatbot and then the syntax for using the chatbot and to receive the desired information provided in the welcome message.


For getting weather updates fromFor getting top 5 news updates of

the Chatbot write "**weather <city>**" India from the chatbot write "**news update**"

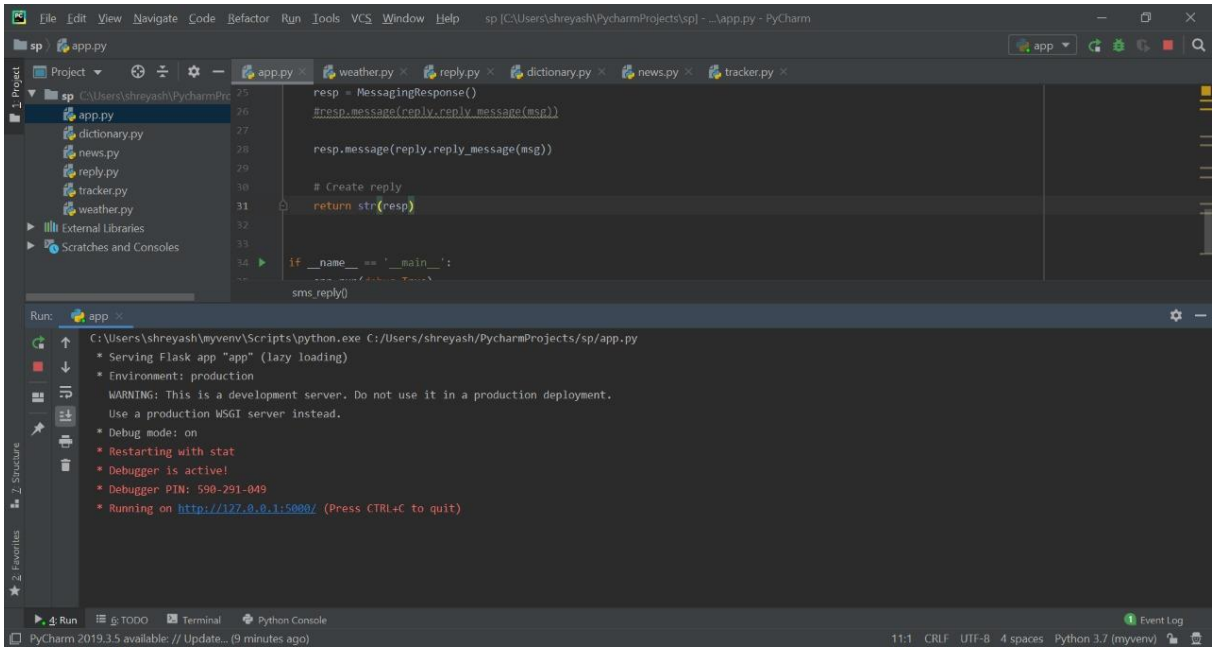


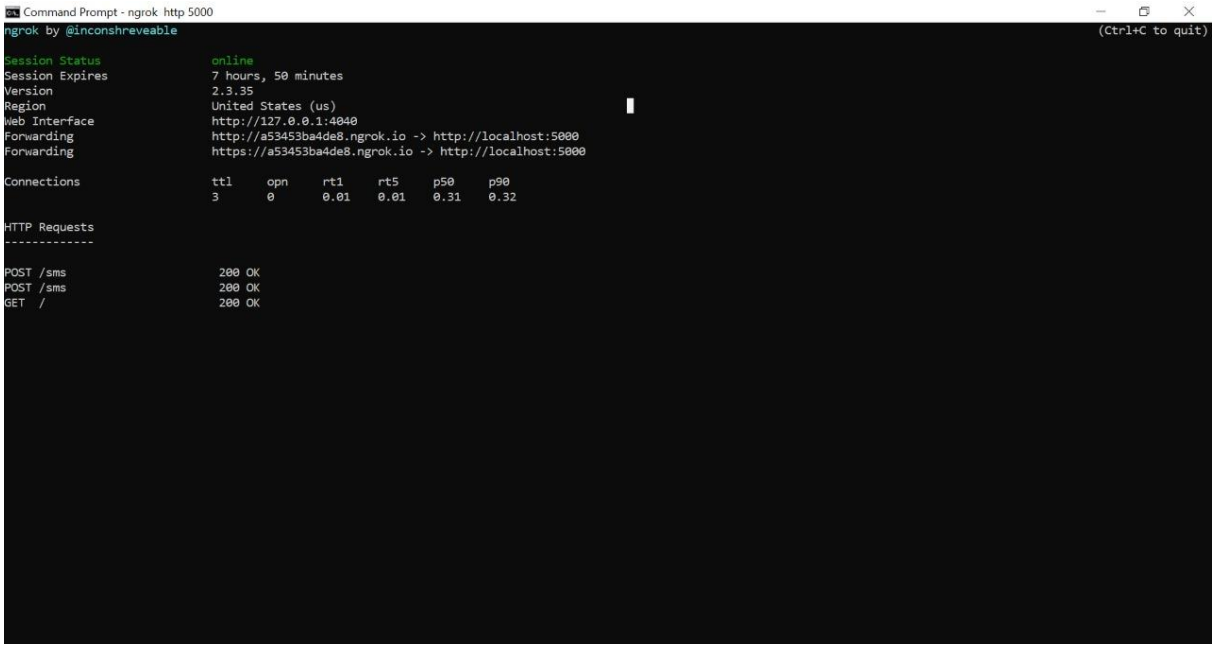

For getting the COVID-19 updates Of a counrty write "**covid update <country name>**"

For getting the definition of a word from the dictionary write "**definition <word>**"

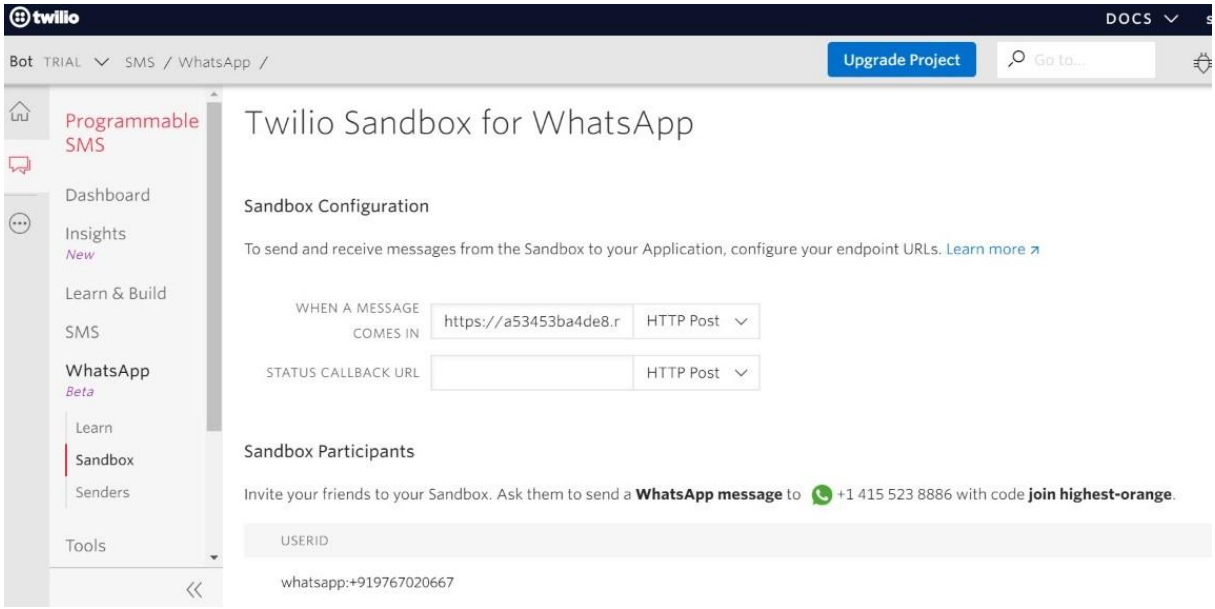
## 4.2 SERVER SIDE




The app.py program which is the main file (flask) which would be run and which will start our local server of twilio and which is the server for the chatbot and the user interaction.




The ngrok applicationwhich is tunnel our server from localhost to the server which is accessable by everyone on the internet.




We have to add the address provided by the ngrok to the twilio sandbox configuration so that when a message is received it is sent to the ngrok server and then the reply is given to the user

# CHAPTER 5

# CONCLUSION/FUTURE SCOPE

# 5. CONCLUSION/FUTURE SCOPE

## 5.1 CONCLUSION

As WhatsApp in used by most of the people, and instead of going on the internet and searching for a specific task and then checking several results to confirm whether the result is correct or not our WhatsApp chatbot helps people to write a simple message to our server or sandbox and we provide them with the correct result within seconds and reduce the issue of going on internet or the browser for searching that is reduces the time and human effort of people. Also in our parent's generations lot of persons are facing difficulties of using the internet for them this chatbot would be very helpful because they know how to use WhatsApp and given then syntax it would be easy for them also. We tried with some important and general things like weather news etc. and a lot of things can be added to the chatbot.

## 5.2 FUTURE SCOPE

We have developed this WhatsApp chatbot which requires a minimal interaction of the user to go on the internet and search for specific things. We made a chatbot that uses the free API's present on the internet and can give automated replies to the customers about the weather of a city, Covid-19 related updates, definition of a word from the dictionary, and recent news about India. Some additional features for the convenience of users like checking scores of different sports, requirement lists.

The chatbot can be developed for other purposes like getting details of your movie booking and show timings and also in hospitals for sending their patients the reminder for the appointment for their check-ups or the Opds. In future, WhatsApp chatbot can be used with machine learning deep learning so that the chatbot can learn the behaviour of human being and reply to the users not as a bot but rather as a human being or a person. Further instead of typing the query or syntax bot could be made that could listen to your query and reply verbally or in a textual format like Siri, Google Assistant etc.

# CHAPTER 6

# APPENDIX: CODE SAMPLES

# 6. APPENDIX: CODE SAMPLE

```
fromflaskimport Flask, request, render_template, redirect, url_for
fromtwilio.twiml.messaging_responseimport MessagingResponse
importtime
importreply


app = Flask(__name__)

@app.route("/")

defhello():
return"Hello world"



@app.route("/sms", methods=['GET','POST'])

defsms_reply():
"""Respond to incoming calls with a simple text message."""
# Fetch the message
    msg = request.form.get('Body')


#check the message by parsing text
    resp = MessagingResponse()

#resp.message(reply.reply_message(msg))

    resp.message(reply.reply_message(msg))

# Create reply
returnstr(resp)


if __name__ == '__main__':
    app.run(debug=True)
```

# CHAPTER 7

# REFERENCES

# 7. REFERENCES

These various articles of the following websites should come in the report in the serial order in which they are being used. Any content from the internet needs to be references properly in the manner given below.

[1] https://www.github.com

[2] https: //www.youtube.com

[3] https:// www.stackoverflow.com

[4] https://www.tutorialspoint.com

[5] https://rapidapi.com/collection/list-of-free-apis

# CHAPTER 8

# ACKNOWLEDGEMENT

# 8. ACKNOWLEDGEMENT

We would like to express our heartfelt gratitude to our college Fr. Conceicao Rodrigues Institute of Technology for giving us an opportunity to undertake this project. We are grateful to our H.O.D, Mrs. Dhanashree Hadsul for giving us a chance to work on this project in our course of Engineering. We are thankful to, and fortunate enough to get constant encouragement, support and guidance from all our teachers of IT Department which helped us in successfully completing our project.

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