

# Tokyo The Voice Assistant

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# Topics Discussed

- Introduction
- Project Motivation
- Existing Systems
- Problem Statement
- Objectives
- Implementation
- Data Flow Diagram
- Result
- Conclusion
- Future Work

# Introduction

- What is Voice Assistant ?
- Why Voice Assistant is needed ?
- Evolution of Assistance ?
- What is Speech Recognition ?
- What is OpenCV and it's application ?

# Project Motivation

- The main motivation of this project is to learn the python programming language. And, there are companies like Google, Apple, Microsoft, etc with virtual assistants like Google Now, Siri, Cortana, etc. which helps their users to control their machine by just giving input in the form of voice.

# Existing Systems

- Google Now
- Siri
- Alexa
- Cartona

# Problem Statement

- For Global usage and it works only for Registered users.
- It consumes more network data.

# Proposed Systems

- Local Usage of the project.
- Non Registered Users.
- Offline Mode of network.
- Works on batteries.

# Objectives

- To learn the the python programming language for the creation of the voice assistant.
- To make things simpler and easier with less time complexity of the project.

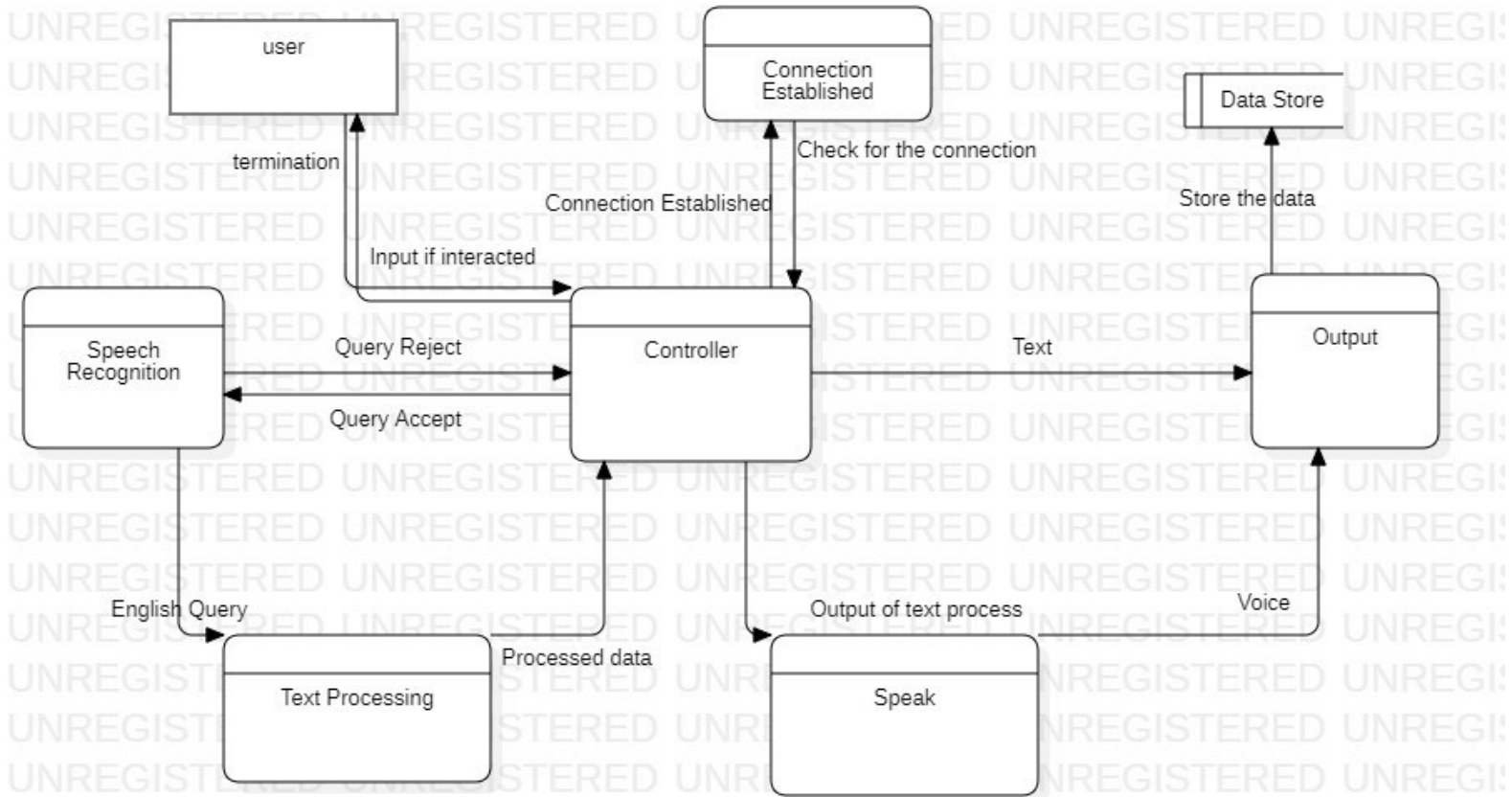


# Implementation

The project is implemented in python programming language and modules used in our project are:

- Speech-Recognition
- Face-Recognition
- Google Text-To-Speech
- OpenCV
- Subprocess

# Data Flow Diagram



# Sample Screens

**TestCase 8.1: Create connection** : Here, we run the program using the command “python3 main.py” then it will show the Connection Error and tells to create the connection to access the Internet.

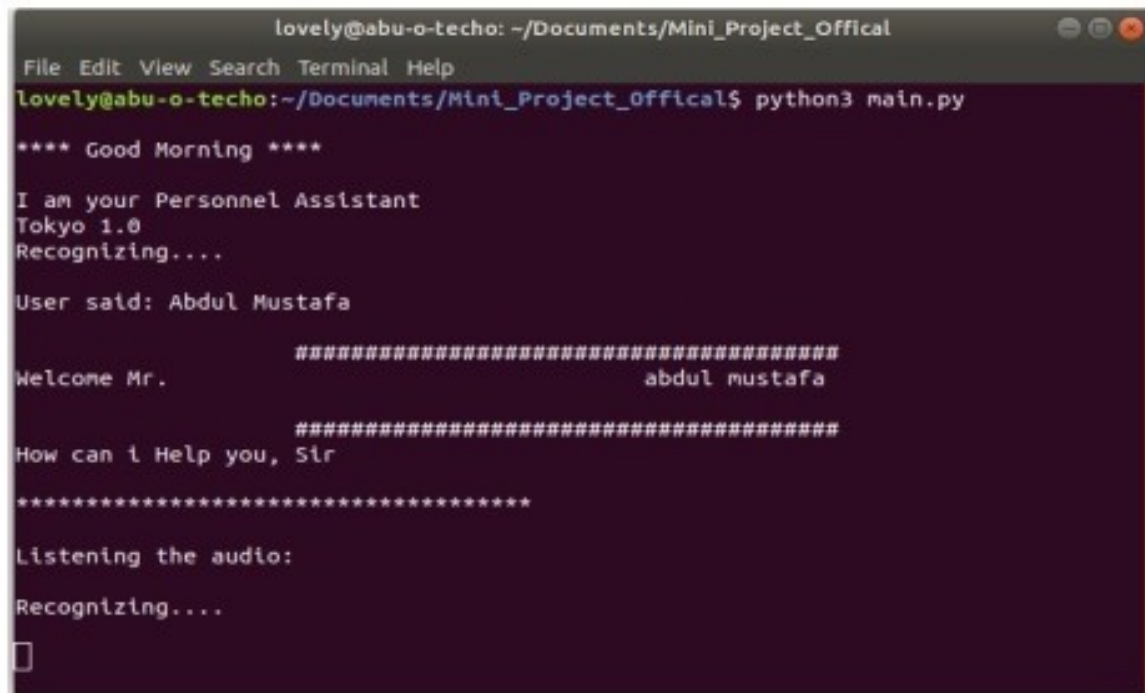
```
lovely@abu-o-techo:~/Documents/Mini_Project_Offical$ python3 main.py
Traceback (most recent call last):
  File "/home/lovely/.local/lib/python3.6/site-packages/urllib3/connection.py",
line 170, in _new_conn
    (self._dns_host, self.port), self.timeout, **extra_kw
  File "/home/lovely/.local/lib/python3.6/site-packages/urllib3/util/connection.
py", line 73, in create_connection
    for res in socket.getaddrinfo(host, port, family, socket.SOCK_STREAM):
  File "/usr/lib/python3.6/socket.py", line 745, in getaddrinfo
    for res in _socket.getaddrinfo(host, port, family, type, proto, flags):
socket.gaierror: [Errno -2] Name or service not known

During handling of the above exception, another exception occurred:

Traceback (most recent call last):
  File "/home/lovely/.local/lib/python3.6/site-packages/urllib3/connectionpool.p
y", line 706, in urlopen
    chunked=chunked,
  File "/home/lovely/.local/lib/python3.6/site-packages/urllib3/connectionpool.p
y", line 382, in _make_request
    self._validate_conn(conn)
  File "/home/lovely/.local/lib/python3.6/site-packages/urllib3/connectionpool.p
y", line 1010, in _validate_conn
    conn.connect()
```

*Test Case 8.1 Create Connection*

**TestCase 8.2: Connection Established and Started:** Connection has been successfully established and the program started by greetings. And take the name of the user before going into the actually execution.

A terminal window titled 'lovely@abu-o-techo: ~/Documents/Mini\_Project\_Offical' with a menu bar (File, Edit, View, Search, Terminal, Help). The prompt is 'lovely@abu-o-techo:~/Documents/Mini\_Project\_Offical\$'. The command 'python3 main.py' has been executed. The output is as follows:

```
**** Good Morning ****  
  
I am your Personnel Assistant  
Tokyo 1.0  
Recognizing....  
  
User said: Abdul Mustafa  
  
Welcome Mr.          #####  
                                abdul mustafa  
  
                                #####  
How can i Help you, Sir  
  
*****  
  
Listening the audio:  
Recognizing....  
  
□
```

*TestCase 8.2: Connection Established and Started*

**TestCase 8.3: Attendance:** Here the user is going to say "take the attendance" then it will check the condition and it will redirect to the attendance.py where the attendance takes place by face recognition.

```
*****
```

```
Listening the audio:
```

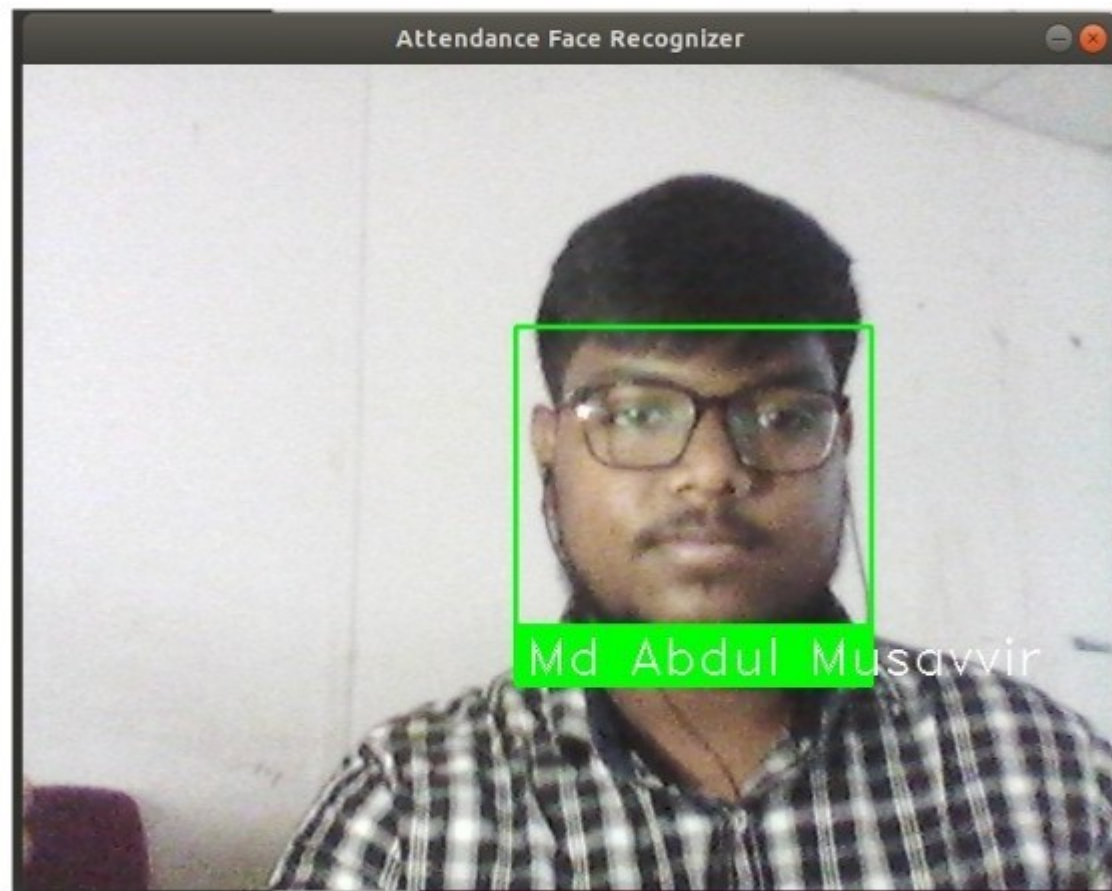
```
Recognizing....
```

```
User said: take the attendance
```

```
Started the attendance
```

*TestCase 8.3: Attendance*

**TestCase 8.3.1: Student1:** Here, the student 1 (Md Abdul Musavvir) is on the screen which is being identified by the face recognizer.



*TestCase 8.3.1: Student1*



**TestCase 8.3.2: Student2:** Here, the student 2 (Nossam Vignatha) is on the screen which is being identified by the face recognizer.



*TestCase 8.3.2: Student2*

**TestCase 8.3.3: Unknown Person** : Here, the Unknown person is on the screen which is not being identified by the face recognizer.



*TestCase 8.3.3: Student3*



**Test Case 8.4: Data Sheet:** The data of the attendance is being kept stored in the same directory of the program execution by "attendance.csv" file name.

	A	B	C	D	E	F	G	H	I
1	Name	Text	Date						
2									
3	Md Abdul Musavvir	09:57:06	02/04/2021						
4	Unknown	09:57:14	02/04/2021						
5	Nossam Vignatha	09:57:40	02/04/2021						
6									
7									
8									
9									
10									
11									
12									

*Test Case 8.4: Data Sheet*

# Conclusion

In this project we have discussed about a Voice activated Personal Assistant developed using Python. This Assistant currently works online and performs basic tasks like Stream Music, Search Wikipedia, Open System installed Applications etc..

# Future Scope

- The virtual assistants which are currently available are fast and responsive but we still have to go a long way. The understanding and reliability of the current systems need to be improved a lot. The assistants available nowadays are still not reliable in critical scenarios.
- Most of us have seen Jarvis, that is a virtual assistant developed by Iron Man which is although fictional but this has set new standards of what we can achieve using voice-activated virtual assistants.

# References

- [https://www.youtube.com/playlist?list=PLzMbGfZo4-mBungzp4GO4fswxO8\\_wTEFx](https://www.youtube.com/playlist?list=PLzMbGfZo4-mBungzp4GO4fswxO8_wTEFx)
- <https://www.geeksforgeeks.org/voice-assistant-using-python>
- <https://pypi.org/>
- <https://en.wikipedia.org/wiki/Siri>
- <https://en.wikipedia.org/wiki/Cortana>
- [https://en.wikipedia.org/wiki/Amazon\\_Alexa](https://en.wikipedia.org/wiki/Amazon_Alexa)

Thank You