**VIRTUAL ASSISTANT -MAGGIE**

Submitted in partial fulfillment of the requirements of the degree

**BACHELOR OF ENGINEERING IN COMPUTER ENGINEERING**

By

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# CERTIFICATE

This is to certify that the Mini Project entitled **“ VIRTUAL ASSISTANT- MAGGIE ”** is a bonafide work of **PRATHMESH PARAB (11), RESHAM PATIL (17), MADHUR RANE (24),** submitted to the University of Mumbai in partial fulfillment of the requirement for the award of the degree of **“Bachelor of Engineering”** in **“Computer Engineering”.**

### (Prof. NIDHI SANGHVI )

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Head of Department Principal

# Mini Project Approval

This Mini Project entitled **“Virtual Assistant -Maggie ”** by **PRATHMESH PARAB (11), RESHAM PATIL (17), MADHUR RANE (24),** is approved for the degree of **Bachelor of Engineering** in **Computer Engineering.**

## Examiners

**1………………………………………**

(Internal Examiner Name & Sign)

### 2………………………………………

(External Examiner name & Sign)

Date:

Place:

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### ABSTRACT:

### An intelligent virtual assistant (IVA) or intelligent personal assistant (IPA) is a software agent that can perform tasks or services for an individual based on commands or questions. In some cases, online chat programs are exclusively for entertainment purposes. Some virtual assistants are able to interpret human speech and respond via synthesized voices. Users can ask their assistants questions, control home automation devices and media playback via voice, and manage other basic tasks such as email, to-do lists, and calendars with verbal commands.

### INTRODUCTION:

### INTRODUCTION TO: VIRTUAL ASSISTANT MAGGIE

### Virtual assistants are software applications that assist you ease your day to day tasks, which includes showing climate reports, creating remainders, making shopping lists and so forth. they could take commands via text or via voice. Voice-primarily based smart assistants need an invoking phrase or wake word to activate the listener, accompanied by means of the command.

### This machine is designed to be used effectively on computer systems.

### This project was started on the basis that there's a sufficient amount of brazenly to be had records and statistics on the internet that can be utilized to build a virtual assistant that has get admission to making shrewd selections for routine personal activities.

### MOTIVATION:

Many times elderly people who aren't used to newer technology have trouble using a computer. Blind and illiterate people are also unable to use a computer properly. These people are our motivation and to help them access the features of a computer we decided that a virtual assistant who will take voice commands is a great way to do it.

### PROBLEM STATEMENT AND OBJECTIVE:

People who are not computer savy may have problems navigating through one and have trouble using its features.

Usually, user needs to manually manage multiple sets of applications to complete one task.

Manually opening websites or browser searches can take a while to perform.

Blind people are not able to operate a computer without the aid of voice commands.

### LITERATURE SURVEY:

Speech recognition has several waves of major innovations. Speech recognition for dictation of voice, search, and voice commands has become a standard feature on smartphones and various other devices.

To this aim, a conversational assistant, capable of answering common questions, has been combined. with a content discovery engine that is more suitable for finding the proper answers from a collection of heterogeneous sources.” Smart assistants are useful in many fields such as education, home appliances, etc. and the voice assistant is also useful for blind people. They can get any information just by telling the assistant, and this is possible because of voice-based Smart assistants”.

### SURVEY OF EXISTING SYSTEM.

### The virtual assistant is a boon for everyone in this new era of the 21st century. This new technology attracted almost the whole world in many ways like smartphones, laptops, computers, etc. Voice recognition, contextual understanding, and human interaction are the issues that are not solved yet in this virtual assistant. So, to solve those issues users participated in a survey and shared their experiences. According to the results, many services were covered by these assistants but still, there are some improvements required in voice recognition, contextual understanding, and hand-free interaction.

### LIMITATIONS OF EXISTING SYSTEMS:

* voice recognition
* contextual understanding
* hand free interaction

### 1)voice recognition

### 2)contextual understanding

### 3) hand free interaction

### MINI PROJECT CONTRIBUTION:

### We distributed the entire project in subdivisions, mentioned below.

### TEAM MEMBER 1: Resham Patil (17)

### Creating a function that takes input from the microphone

* Adding feature: Reminder and detecting the temperature

### TEAM MEMBER 2: Madhur Rane (24)

### Researching voice assistant and speech recognition

* Adding features: Opening Google, Instagram etc

### TEAM MEMBER 3: Prathmesh Parab (11)

### Adding Researching about voice assistants and speech recognition

### Adding Features: Greeting the user, time

### PROPOSED SYSTEM:

### INTRODUCTION:

### In this project, there is only one user. The user queries the command to the system. The system then interprets it and fetches answers. The response is sent back to the user.

### ARCHITECTURE/FRAMEWORK:

User

Receive

Interpreted to

**Virtual Assistant**

Queries

**CLASS DIAGRAM :**

User

+Command audio

+User Audio

+listen()

+reply()

Task

+command string

+reminder

+open()

+googlesearch()

Question

+Command String

#time()

#temperature()

#reminder()

The class user has 2 attributes command that it sends in audio and the response it receives which is also audio. It performs a function to listen to the user command. Interpret it and then reply or sends back a response accordingly. Question class has the command in string format it is interpreted by interpret class. It sends it to general or about temperature and time based on its identification. The task class also has interpreted commands in string format. It has various functions like a reminder, open and google search.

* 1. **ALGORITHM AND PROCESS DESIGN:**

Wake up

Wait for incoming query

Execute query

Good Bye

Execute command

### Initially, the system is in idle mode. As it receives any wake-up call it begins execution. The received command is identified whether it is a questionnaire or a task to be performed. The specific action is taken accordingly. After the question is being answered or the task is being performed, the system waits for another command. This loop continues unless it receives quit command. At that moment, it goes back to sleep.

* 1. **DETAILS OF HARDWARE AND SOFTWARE:**

The software is designed to be light-weighted so that it doesn’t be a burden on the machine running it. This system is being build keeping in mind the generally available hardware and software compatibility. Here are the minimum hardware and software requirement for virtual assistant.

**Hardware**:

* Pentium-pro processor or later.
* RAM 512MB or more.

**Software**:

* + Windows 7(32-bit) or above.
  + Python 2.7 or later
  + Chrome Browser
  + Visual Studio Code
  1. **EXPERIMENT AND RESULT:**

This project is built using python and the software modules were installed with CMD.

The modular nature of this project makes it more flexible and easy to add additional features without disturbing current system functionalities.

It not only works on human commands but also gives responses to the user based on the query being asked or the words spoken by the user such as opening tasks and operations. It is greeting the user the way the user feels more comfortable and feels free to interact with the voice assistant. The application should also eliminate any kind of unnecessary manual work required in the user life of performing every task. The entire system works on the verbal input rather than the next one.

### CONCLUSION:

### A virtual assistant can take on many roles for your business. Having a reliable virtual assistant will save time and generate more revenue in a multitude of ways. You just have to use your virtual assistant property to reap the benefits. Each role has different functions it can perform.

### An excellent virtual assistant will save time and money by doing the small tasks for you and doing them accurately and with high quality. If you handle the virtual assistant correctly, it will be a boom in your business.

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