

DESKTOP ASSISTANT

A project report submitted in partial fulfillment of the requirements for the

Award of degree of

**Bachelor of Technology in
Computer Science & Engineering**

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Certificate

I hereby declare that the work which is being presented in the project report entitled, “**Desktop Assistant**”, in partial fulfillment of the requirements for the award of degree of Bachelor of Technology submitted in Computer Science and Engineering of Meerut Institute of Technology, Meerut, is an authentic record of my own work carried out under the supervision of **Mr.Ayush Singhal** and refers other researcher’s works which are duly listed in the reference section.

The matter presented in this Project has not been submitted for the award of any other degree of this or any other university.

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This is to certify that the above statement made by the candidate is correct and true to the best of my knowledge.

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ABSTRACT

A Desktop Assistant is a software agent that can perform tasks and services for an individual based on verbal commands. User can ask assistant questions, control home automation devices, and manage other basic tasks such as email, to do list and many more. It gives user the privilege to have his/her own personal assistant and credit goes to artificial intelligence based voice assistant. Desktop Assistant come in somewhat small packages and can perform a variety of actions after hearing your command. Its drawback is that it does not maintain a knowledge database of its own and its understanding comes from the information captured in domain and data models.

1. INTRODUCTION

In today's era almost all tasks are digitalized. We have Smartphone in hands and it is nothing less than having world at your finger tips. These days we aren't even using fingers. We just speak of the task and it is done. There exist systems where we can say Text Dad, "I'll be late today." And the text is sent. That is the task of a Virtual Assistant. It also supports specialized task such as booking a flight, or finding cheapest book online from various ecommerce sites and then providing an interface to book an order are helping automate search, discovery and online order operations. Virtual Assistants are software programs that help you ease your day to day tasks, such as showing weather report, creating reminders, making shopping lists etc. They can take commands via text (online chat bots) or by voice. Voice based intelligent assistants need an invoking word or wake word to activate the listener, followed by the command. For our project the wake word is VOID. We have so many virtual assistants, such as Apple's Siri, Amazon's Alexa and Microsoft's Cortana. For this project, wake word was chosen VOID. This system is designed to be used efficiently on desktops. Personal assistant software improves user productivity by managing routine tasks of the user and by providing information from online sources to the user. VOID is effortless to use. Call the wake word 'JIA' followed by the command. And within seconds, it gets executed. Voice searches have dominated over text search. Web searches conducted via mobile devices have only just overtaken those carried out using a computer and the analysts are already predicting that 50% of searches will be via voice by 2020. Virtual assistants are turning out to be smarter than ever. Allow your intelligent assistant to make email work for you. Detect intent, pick out important information, automate processes, and deliver personalized responses. This project was started on the premise that there is sufficient amount of openly available data and information on the web that can be utilized to build a virtual assistant that has access to making intelligent decisions for routine user activities.

1.1 BACKGROUND

There are already various desktop virtual assistants in the market. Currently available assistants are Siri from Apple, Google Play from Google.

Functions

- I. Search on Wikipedia
- II. Launch applications like YouTube and Google
- III. Send text mail to someone
- IV. Display time
- V. Play a specific song
- VI. Enter a new note

And many more

1.2 OBJECTIVE

Main objective of building personal assistant software (a Desktop assistant) is using semantic data sources available on the web, user generated content and providing knowledge from knowledge databases. The main purpose of an intelligent virtual assistant is to answer questions that users may have. This may be done in a business environment, for example, on the business website, with a chat interface. On the mobile platform, the intelligent virtual assistant is available as a call-button operated service where a voice asks the user “What can I do for you?” and then responds to verbal input. Virtual assistants can tremendously save you time. We spend hours in online research and then making the report in our terms of understanding. VOID can do that for you. Provide a topic for research and continue with your tasks while VOID does the research. Another difficult task is to remember test dates, birthdates or anniversaries. It comes with a surprise when you enter the class and realize it is class test today. Just tell VOID in advance about your tests and she reminds you well in advance so you can prepare for the test. One of the main advantages of voice searches is their rapidity.

2. SOFTWARE REQUIREMENT SPECIFICATION

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.

2.1 SOFTWARE USED

- I. Pycharm
- II. Functions
- III. Directories

2.2TECHNOLOGY USED

- I. Advanced python
- II. Artificial Intelligene

3.FEASIBILITY STUDY

Feasibility study can help you determine whether or not you should proceed with your project. It is essential to evaluate cost and benefit. It is essential to evaluate cost and benefit of the proposed system. Five types of feasibility study are taken into consideration.

3.1 TECHNICAL FEASIBILITY

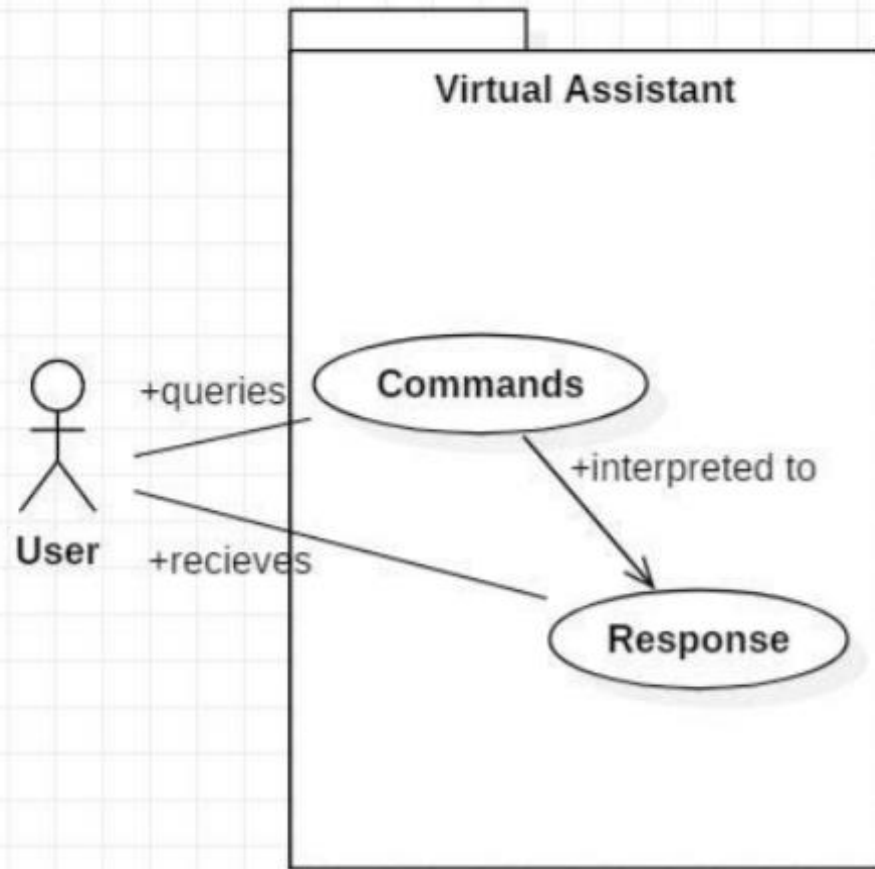
It includes finding out technologies for the project, both hardware and software. For virtual assistant, user must have microphone to convey their message and a speaker to listen when system speaks. These are very cheap now a days and everyone generally possess them. Besides, system needs internet connection. While using VOID, make sure you have a steady internet connection.

3.2 OPERATIONAL FEASIBILITY

It is the ease and simplicity of operation of proposed system. System does not require any special skill set for users to operate it. In fact, it is designed to be used by almost everyone. Kids who still don't know to write can read out problems for system and get answers.

4.SYSTEM DESIGN

USE CASE DESIGN



5.TESTING

Test Case 1

Test Title: Response Time

Test ID: T1

Test Priority: Moderate

Test Objective: To make sure that the system respond back time is efficient. Description: Time is very critical in a voice based system. As we are not typing inputs, we are speaking them. The system must also reply in a moment. User must get instant response of the query made.

Test Case 2

Test Title: Accuracy

Test ID: T2 Test Priority: Moderate

Test Objective: To assure that answers retrieved by system are accurate as per gathered data.

Description: A virtual assistant system is mainly used to get precise answers to any question asked. Getting answer in a moment is of no use if the answer is not correct. Accuracy is of utmost importance in a virtual assistant system.

6.SNAPSHOTS

7.CONCLUSION

Limitations of the project

Will take some time to put all of the to-do items in – you could spend more time putting the entries in than actually doing the revision.

Scope

Voice assistants will continue to offer more individualized experiences as they get better at differentiating between voices. However, it's not just developers that need to address the complexity of developing for voice as brands also need to understand the capabilities of each device and integration and if it makes sense for their specific brand. They will also need to focus on maintaining a user experience that is consistent within the coming years as complexity becomes more of a concern. This is because the visual interface with voice assistants is missing. Users simply cannot see or touch a voice interface.

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- II. Learning Python - Mark