# **DESKTOP ASSISTANT**

A Minor project report submitted in behalf of the requirements for the award of the Diploma.

# **COMPUTER SCIENCE ENGINEERING**

**Submitted By:-**

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Under the supervision of Mr. PANKAJ KUMAR (LECTURER COMPUTER SCIENCE ENGINEERING)

# S.S.S.S. RAM SINGH BISHT GOVERNMENT POLYTECHNIC DWARAHAT, ALMORA 263653 (UTTARAKHAND) INDIA NOVEMBER, 2021

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# **SUPERVISOR'S CERTIFICATE**

It is to certify that the Minor Project entitled "Desktop Assistant" which is being submitted by Vijyantak Chand, Deepak Pandey, Bhanu Pratap, Nishant Thapa as their Minor Project to the S.S.S.S.S. Ram Singh Bisht Government Polytechnic Dwarahat, Almora in the benefit of the project requirements for the award of the Computer Science Engineering, is a record of project work carried out by them under our guidance and supervision. The matter presented in this project report has not been submitted either in any other University or Institute for award or for any degree.

(Mr. MUKESH BABU) H.O.D. Computer Science Engineering ( Mr. PANKAJ KUMAR) Lecturer Computer Science Engineering

# **ACKNOWLEDGEMENT**

Here we gladly present this minor project report on "Bank Account application" as part of the 5th semester in Information Technology. At this time of submitting this report we use this opportunity to mention those people who is with us along the work. We take this occasion to thank God, almighty for blessing us with his grace and taking our endeavour to a successful culmination.

We extend our sincere and heartfelt thanks to our esteemed guide, (Lecturer Computer Science Engineering) Mr. Pankaj Kumar for providing us with the right guidance and advice at the crucial junctures and for showing us the right way. We extend our sincere thanks to our respected (Head of the Department) Mr. Mukesh Babu, for allowing us to use the facilities available. We would like to thank the other faculty members also, at this occasion.

Last but not the least; we would like to Thank our friends for the support and encouragement they have given us during the course of our work as all of the group members has worked really hard to bring this project. Thanks for giving this opportunity to enlighten our paths for future & so that it may be beneficial for our future deeds.

# **CANDIDATE'S DECLARATION**

We hereby declare that the work presented in this major project report titled, "Desktop Assistant" submitted by us in the partial benefit of the requirement for the award in the diploma in Computer Science Engineering Submitted in the Department of Computer Science Engineering, S.S.S.S.S. Ram Singh Bisht Government Polytechnic Dwarahat (Almora), is an authentic record of our project carried out under the guidance of stop Mr Pankaj Kumar (Lecturer Computer Science Engineering).

Date : <u>Candidate Name</u>

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# Chapter 1: Introduction

# INTRODUCTION DESKTOP ASSISTANT

An AI personal assistant is a piece of software that understands verbal or written commands and completes task assigned by the client. It is an example of weak AI that is it can only execute and perform quest designed by the user.

#### **PURPOSE OF THIS PROJECT**

Desk Assistants help residents by **answering questions from students and guests**, checking out temporary access cards and keys, disbursing packages, answering the phone, and providing general customer service for resources provided at the desks.

#### **ECONOMIC BENEFIT**

Digital voice-enabled assistant may not be an alien term for you after all these talks about Data Analytics, Artificial Intelligence and Machine Learning going on in the industry. These voice-based virtual assistants have in fact captured the interest of both businesses and consumers alike.

#### MOTIVATION BEHIND THE PROJECT

The Main focus of this Project is to make it easy for the user to handle the individual Desktop.

It is helpful in several aspects as it saves time & helps in detail that have been put so that it save a lot of time & hassle which is required to manually operate the desktop.

#### **OBJECTIVE OF THE PROJECT**

The main objective of Desktop Assistant is to maximize the efficiency & accuracy of the desktop tasks.

#### Other objectives of Desktop Assistant include

To meet the challenges manually operated desktop.

To improve time management of the user

To cope up with new technology of voice assistant.

To modernize office equipment as it can be used anywhere in an organization.

To improve work ethics.

To improve organizational culture and value system

To improve productivity through participative management.

To follow the instructions and stick to rules and guidelines.

#### FUNCTIONS OF DESKTOP ASSISTANT

#### Following are the major functions of Desktop Assistant:

Deposit mobilization

Project evaluation

Office management

Maintenance management

Information management

Legal management

Attendance management

Desktop Assistant project is **a python-based project**. It is useful for handling the desktop for an individual. Desktop Assistant is useful for managing day to day lifestyle of an individual. It can be very useful in saving the time for an individual.

# Chapter 2: Implementation of Proposed Model

## **PROPOSED MODEL**

• Import required libraries:

```
import pyttsx3
import webbrowser
import speech_recognition as sr
import datetime
import wikipedia
import subprocess
import os
import pyjokes
import pywhatkit
```

• Write a function to capture your requests/questions:

```
def wishMe():
    hour = int(datetime.datetime.now().hour)
    if hour>=0 and hour<12:
        speak("Good Morning!")

    elif hour>12 and hour<18:
        speak("Good Afternoon")

    else:
        speak("Good Evening!")

    speak("I am Desktop Assistant of Team
A++, in their Minor Project. how may I help
you")</pre>
```

• Next, write a function to respond to your questions:

```
print(songs)
speak(f"Sir, the time is {strTime}")
  speak('playing ' + song)
  pywhatkit.playonyt(song)
speak('I was created by team A++ in their
Minor Project')
```

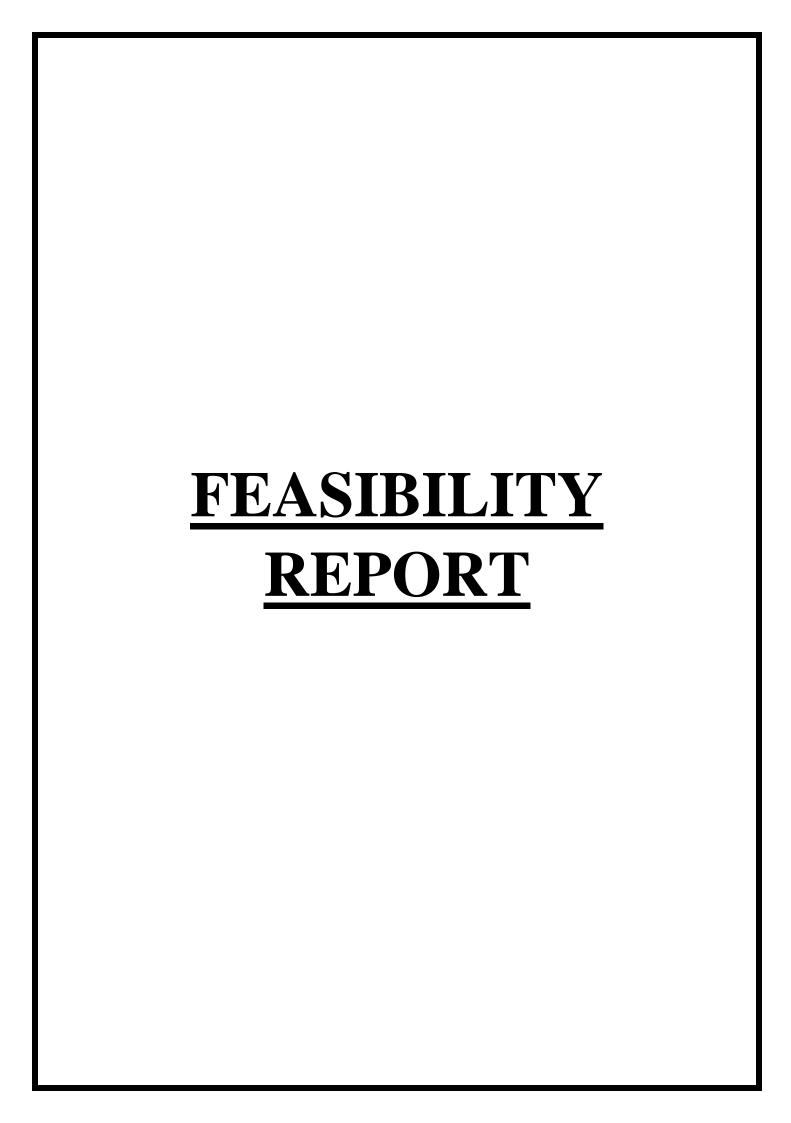
### PROPOSED SYSTEM

#### "Why an Automated desktop assistant System?"

- ➤ Almost 80% of today's desktop systems are manually operated.
- ➤ 30% of all office time is spent finding documents.
- ➤ The average time to find or search a single document is 5 minutes,
- ➤ Hence the requirement is to develop a system that minimizes all these overheads included while giving the maximum output for the organization.
- ➤ The basis for the project is to develop a fully automated desktop assistant system that includes overall every command to operate a desktop.

# **Benefits of the system**

- Enhances e-Commerce Marketing.
- Provides 24/7 Customer Support.
- Eradicates Language Barriers.
- Helps Streamline Operations.
- Saves Time by Automating Repetitive Tasks.



#### • Feasibility Study

Feasibility study can help you determine whether or not you should proceed withyour 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.

#### • 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 adays and everyone generally possess them. Besides, system needs internet connection. While using JIA, make sure you have a steady internet connection. It is also not an issue in this era where almost every home or office has Wi-Fi.

#### • 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 readout problems for system and get answers.

#### • Economic feasibility:

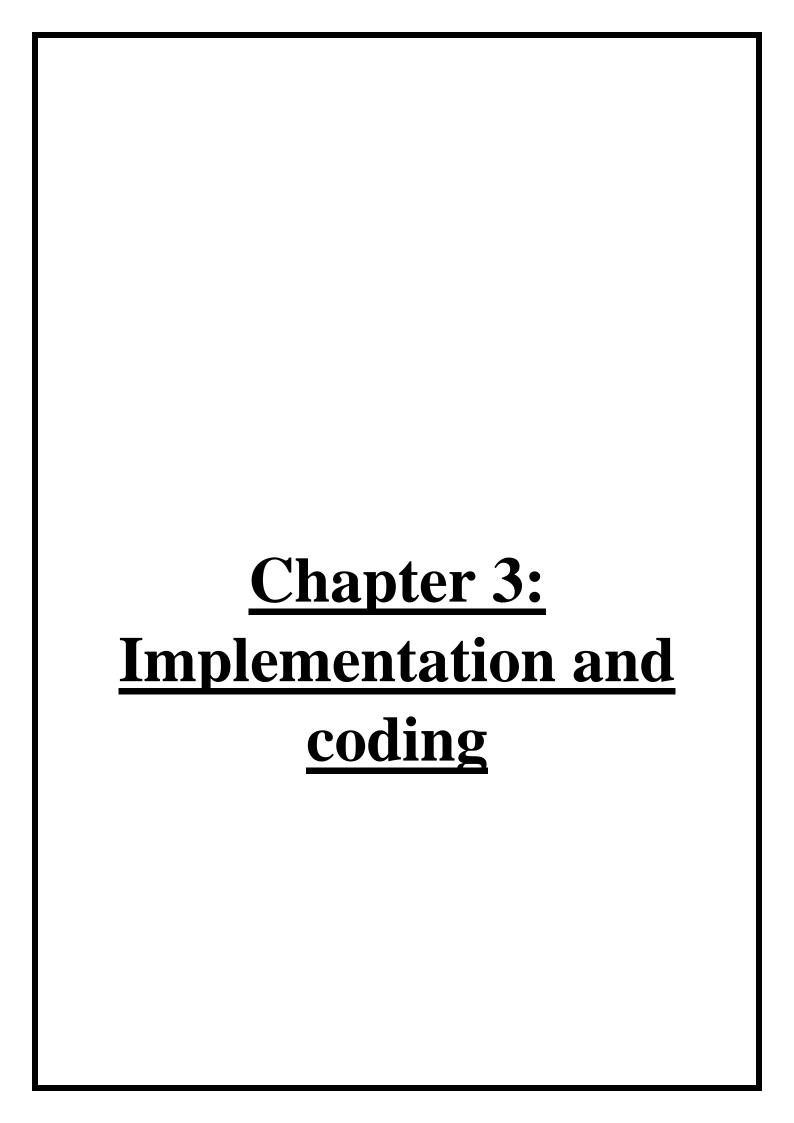
Here, we find the total cost and benefit of the proposed system over current system. For this project, the main cost is documentation cost. User also would have to pay for microphone and speakers. Again, they are cheap and available. As far as maintenance is concerned, JIA won't cost too much.

#### • Organizational feasibility:

This shows the management and organizational structure of the project. This project is not built by a team. The management tasks are all to be carried out by a single person. That won't create any management issues and will increase the feasibility of the project.

#### • Cultural feasibility:

It deals with compatibility of the project with cultural environment. Virtual assistant is built in accordance with the general culture. The project is named OM so as to represent Indian culture without un dermining local beliefs. This project is technically feasible with no external hardware requirements. Also, it is simple in operation and does not cost training or repairs. Overall feasibility study of the project reveals that the goals of the proposed system are achievable. Decision is taken to proceed with the project.



**Implementation:** Let's look at the Python implementation of each of the modules of the program and finally consolidate all the modules together and create a full working program.

#### • Speak Method

Speak Method will help us in taking the voice from the machine. Here is the code explanation of Speak Method

#### • Take query method

This method will check for the condition. If the condition is true it will return output. We can add any number if conditions for it and if the condition satisfy we will get the desired output.

#### takeCommand method

This method is for taking the commands and recognizing the command from the speech\_Recognition module

#### • tellTime method

#### Hello method

This is just used to greet the user with a hello message.

#### USING PYTHON LANGUAGE

Python offers a good major library so that we can use it for making a virtual assistant. Windows has Sapi5 and Linux has Espeak which can help us in having the voice from our machine. It is a weak A.I.

#### **Modules needed**

• **pyttsx3:** pyttsx is a cross-platform text to speech library which is platform independent. The major advantage of using this library for text-to-speech conversion is that it works offline. To install this module type the below command in the terminal.

```
pip install pyttsx3
```

• **SpeechRecognition:** It allow us to convert audio into text for further processing. To install this module, type the below command in the terminal.

```
pip install SpeechRecognition
```

• **webbrowser:** It provides a high-level interface which allows displaying Web-based documents to users. To install this module, type the below command in the terminal.

```
pip install webbrowser
```

 Wikipedia: It is used to fetch a variety of information from the Wikipedia website. To install this module, type the below command in the terminal.

```
pip install wikipedia
```

### **CODING: -**

Let's look at the python implementation of each of the modules of the program and finally consolidate all the modules together and create a full working program.

```
import pyttsx3
import webbrowser
import speech_recognition as sr
import datetime
import wikipedia
import subprocess
import os
import pyjokes
import pywhatkit
engine = pyttsx3.init('sapi5')
voices = engine.getProperty('voices')
engine.setProperty('voice',voices[0].id)
def speak(audio):
    engine.say(audio)
    engine.runAndWait()
def wishMe():
    hour = int(datetime.datetime.now().hour)
    if hour>=0 and hour<12:
        speak("Good Morning!")
    elif hour>12 and hour<18:
        speak("Good Afternoon")
    else:
         speak("Good Evening!")
```

```
speak("I am Desktop Assistant of Team A++, in
their Minor Project. how may I help you")
def takeCommand():
     r = sr.Recognizer()
     with sr.Microphone(device_index=1) as source:
         print("listening....")
         r.adjust_for_ambient_noise(source)
         r.pause_threshold = 1
         audio = r.listen(source)
         query = r.recognize google(audio,
language='en-in')
         print(f"User said: {query}\n")
         if 'open YouTube' in query:
            webbrowser.open("http://www.youtube.com
         elif 'open Google' in query:
            webbrowser.open("http://www.google.com"
         elif 'open stack overflow' in query:
            webbrowser.open("http://www.stackoverfl
ow.com")
         elif 'openstack overflow' in query:
                webbrowser.open("http://www.stackov
erflow.com")
         elif 'open College website' in query:
                webbrowser.open("http://www.gpdwara
hat.com")
         elif 'play music' in query:
            music_dir = "C:\\Users\\91976\\Music"
```

```
songs = os.listdir(music dir)
            print(songs)
            os.startfile(os.path.join(music dir,
songs[0]))
         elif 'the time' in query:
            strTime =
datetime.datetime.now().strftime("%H:%M:%S")
            speak(f"Sir, the time is {strTime}")
         elif 'open code' in query:
            codePath =
"C:\\Users\\91976\\Desktop\\Visual Studio Code.lnk"
            os.startfile(codePath)
         elif 'joke' in query:
          speak(pyjokes.get joke())
         elif 'play' in query:
            song = query.replace('play', '')
            speak('playing ' + song)
            pywhatkit.playonyt(song)
         elif 'who is' in query:
            person = query.replace('who is', '')
            info = wikipedia.summary(person, 1)
            print(info)
            speak(info)
         elif 'who created you' in query:
          speak('I was created by team A++ in their
Minor Project')
         else:
          speak('Please say the command again.')
```

```
if __name__=="__main__" :
    wishMe()

while True:
    takeCommand()
```

# CHAPTER:4 SOFTWARE & HARDWARE REQUIREMENT

#### HARDWARE AND SOFTWARE REQUIREMENTS

The software is designed to be light-weighted so that it doesn't be a burden on themachine 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:

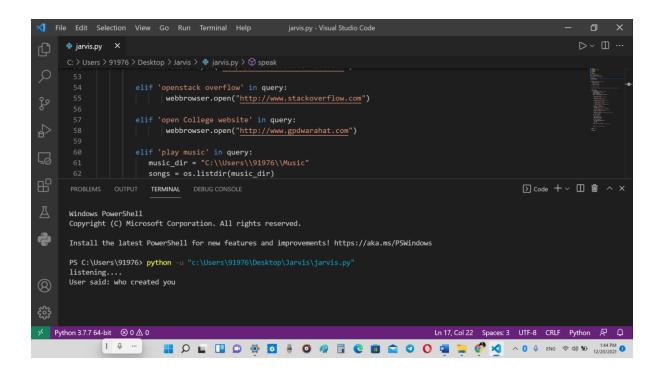
Pentium-pro processor or later.

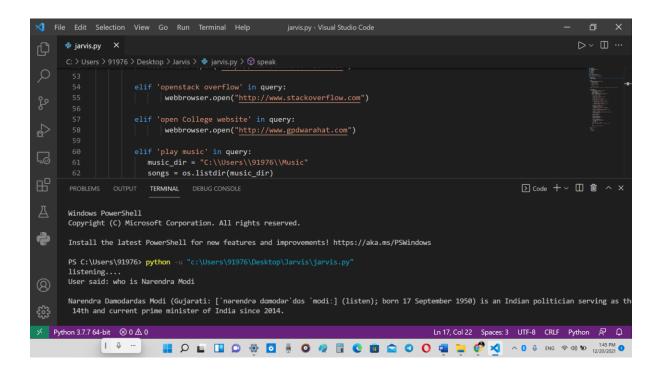
RAM 512MB or more.

• Software:		
Windows 7(32-bit) or above.		
Python 3.7 or later		
Visual Studio Code		

# Chapter 5: Output Of The Project

### **Output:**





### **CONCLUSION**

The Desktop Assistant is an application for maintaining a person's desktop according to individual's needs. In this project we have tried to show the working of a desktop assistant and cover the basic functionality of a virtual assistant Management System. To develop a project for solving problems of a customer in manually operating the desktop in order to nurture the needs of an individual's tasks. Also, to enable the user's work space to have additional functionalities. The Desktop Assistant System undertaken as a project is based on relevant technologies. The main aim of this project is to develop software for personal management for desktop. This project has been developed to carry out the processes easily and automatically, which is not possible with the manuals systems, which are overcome by this software. This project is developed using Python language. Creating and managing requirements is a challenge of IT, systems and product development projects or indeed for any activity where you have to manage a contractual relationship. Organizations need to effectively define and manage requirements to ensure they are meeting needs of the customer, while proving compliance and staying on the schedule and within budget. The impact of a poorly expressed requirement can bring a business out of compliance or even cause injury or death. Requirement's definition and management is an activity that can deliver a high, fast return on investment. The project analysis & the system requirements and then comes up with the requirements specifications. It studies other related systems and then come up with system specifications. The system is then designed in accordance with specifications to satisfy the requirements. The system design is then implemented with Python. The system is designed as an interactive and content management system. The content management system deals with data entry, validation confirm and updating whiles the interactive system deals with system interaction with the administration and users. Thus, above features of this project will save transaction time and therefore increase the efficiency of the system.

The system can be designed for further enhancement. This could also be developed according to the growing needs of the customers.				