

# VTA

(Virtual Technical Assistance)



**Name – Deep Govind (Software Engineer)**

**[Email—deepgovind4@gmail.com](mailto:deepgovind4@gmail.com)**

**Mobile No : 7388966141**

# INDEX

1. INTRODUCTION TO VTA
2. VTA FEATURES
3. ABOUT VTA FOR PROGRAMMER
  - 3.1 PROGRAMMING LANGUAGE
  - 3.2 USED LIBRARY
  - 3.3 USED COMPILER FOR PROGRAMMING
  - 3.4 PROGRAM DETAILS
  - 3.5 WORKING FLOW CHART
4. REQUIREMENT FOR INSTALLING VTA
5. INSTALLING VTA
6. ADD COMMAND
  - 6.1 ADD ONE KEYBOARD COMMAND
  - 6.2 ADD ONE MOUSE COMMAND
  - 6.3 ADD ONE CMD COMMAND
7. SET VTA PROPERTY
8. START ENGLISH TYPING
9. START HINDI TYPING
10. START ENGLISH TO HINDI DICTIONARY
11. START CHAT

# INTRODUCTION TO VTA

Vta is a voice recognize. Vta provide a interface bitween your voice and computer command . you can control your computer using your voice and it is a virtual assistance , you can ask qustion and get batter answer so it is called virtual technical assistancs. This software created in **JAVA, C, C++, AIML, CSS** embaded language . you can control your compure **CMD , KeyBoard , Mouse** command with your voice. For **cmd** you can say open c drive this software send command to cmd ( C:> explorer c:\ ) autometric , you can add more then one command which works in CMD For **KeyBoard** if you say copy Vta send Clrt+C Keyboard command and if you say past then Vta send Clrt+V key command you can add more command in Vta. For **Mouse** need to capture image where mouse will click, image capture process is inbule in Vta this process is following. for example if you capture minimize image if you say minimize Vta search this picture in active window if found then Vta move mouse found location and send click or double click command.

Vta provide English and hindi voice typing if you start hindi typing you can speak in hindi all speaking word autometric write. Vta also provide a english word to hindi word convertor, when in hindi typing process some words write wrog you can type english word of hindi in dictionary enhlosh word autometric will convert in hindi.

Vta is a good virtual assistance you can ask qustion and get answer.

## VTA FEATURES

1. Control your computer with voice.
2. control windows CMD command with voice,
3. control Mouse double and single click by giving refrencf of image to click.
4. control key board command , send key by voice .
5. provide voice hindi typer.
6. provide voice english typer.
7. provide englich to hindi convert.
8. Your Virtual Assistance, you can ask qustions and get answer.

# PROGRAMMING LANGUAGE

Vta is created in embeded programming language , language is :-

C, C++, java programming languaage and AIML marcup language and CSS for design interface style . JSGF V1.0 use for creat voice recognize grammer.

- 1) C                ~ = 20%
- 2) C++           ~ = 50%
- 3) Java           ~ = 20%
- 4) AIML          ~ = 7%
- 5) CSS           ~ = 1%
- 6) JSGF V1.0 ~ = 2%

**C** language use for send mouse, keyboard command and get active window. C is also use for image process in opencv.

**C++** language use for Design User interface, control process and work with interface.

**Java** is use for voice recognize recognize and speak typing.

**AIML** use for Artificial intelligent ( Qustion Answer ).

**CSS** is use for change style in UI.

**JSGF V1.0** is use for creating Voice Recognize and Voice command grammer to spinx4.

## **USED LIBRARY**

Vta use many difference library combination . Library are :-

- 1) Sphinx4 java library for voice recognition .
- 2) C & C++ system library.
- 3) OpenCV 3.0 for image process and object recognition which is written in c & c++ language.
- 4) Qt 5.6 is use for UI designing and working process.
- 5) AIML use for Artificial intelligent.
- 6) . freetts for text to speak.

## **USED COMPILER FOR PROGRAMMING**

- 1) To compile C & C++ program used GNU mingw32 5.3.0v
- 2) To compile java program use jdk 8.45

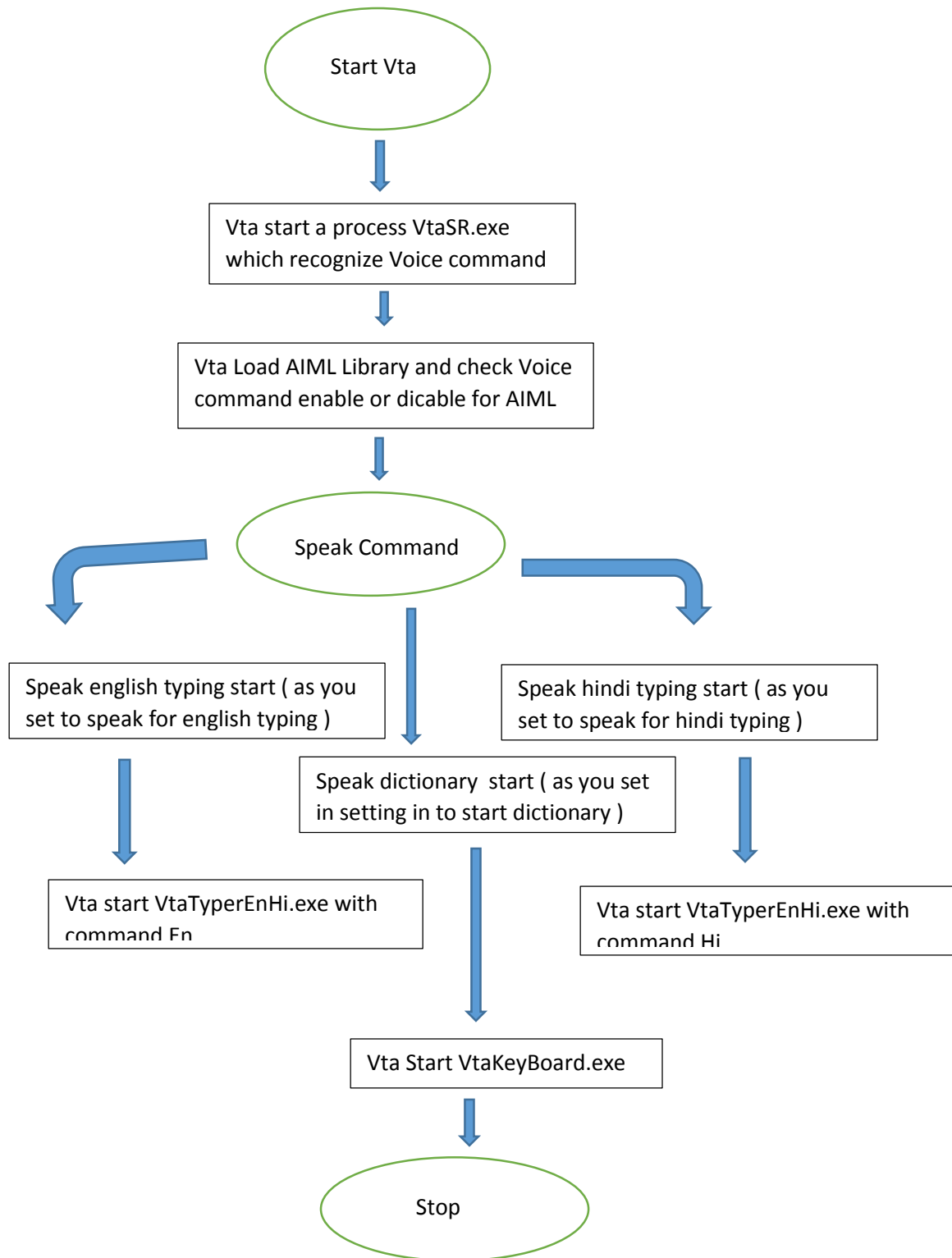
## PROGRAM DETAILS

- 1) **VirtualTecnicalAssistance.exe** is Vta program. (Start Manually)
- 2) **VtaKeyBoard.exe** is English word to hindi word converter. (Start Manually)
- 3) **VtaSR.exe** is command recognize program.
- 4) **tts.exe** is use for text to speech . (Start Manually)
- 5) **VtaTyperEnHi.exe** is use for english to hindi typing (Start Manually)

You can pass VtaTyperEnHi.exe in cmd and as argument En Or Hi

(VtaTyperEnHi.exe En or VtaTyperEnHi.exe Hi)

# WORKING FLOW CHART





# REQUIRNMENT FOR INSTALLING VTA

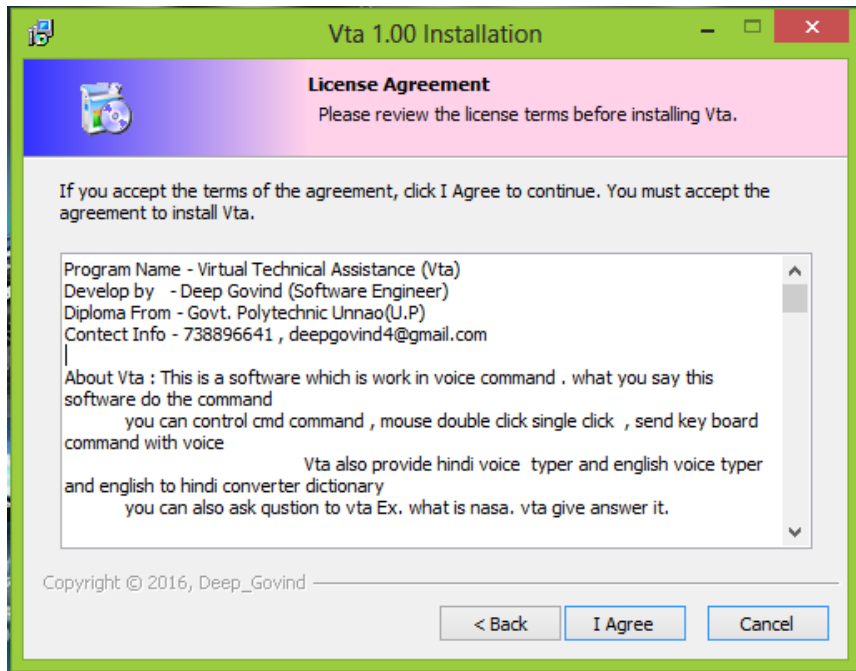
## Vta installing Requirnment:-

- 1) Jre or jdk ( for speak recognition )
- 2) Windows 32-bit or 64-bit
- 3) 500 GB or More Ram
- 4) A good process.

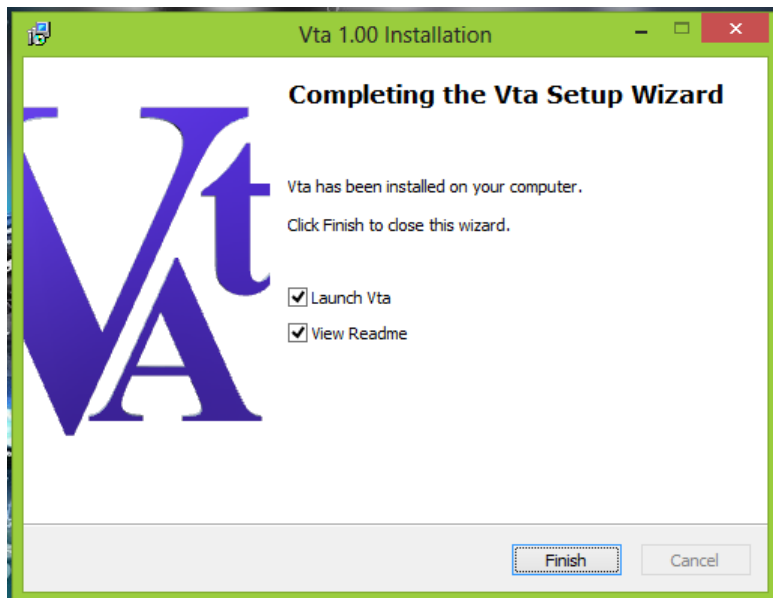
## INSTALLING VTA



Click Next :-



Click I Agree > Next > install > Finish.



## ADD COMMAND

### ADD ONE KEYBOARD COMMAND :-

Add Close Window Command :- ( Alt+F4)

1. Write Voice Text : close window // this is voice recognize text
2. Select Type : SendKey // following command send to KeyBoard
3. There are show two text box show select key command from combo boxes.

Clear : Write Arguments Text;

1. Select : VK\_ALT{0x12}
2. Select : VK\_F4{0x76}

After selecting key in following text box type a command : VK\_ALT{0x12}+VK\_F4{0x76}

( This Command Will be send ).

4. Write Arguments : VK\_ALT{0x12}+VK\_F4{0x76} // you can pass argument also
5. click add button.
6. your command save for next start or start your application again.

In following command : if you speak close window then Vta send KeyBoad command alt+f4.

**Note:** if you want to send more then one key command Write Arguments using key box

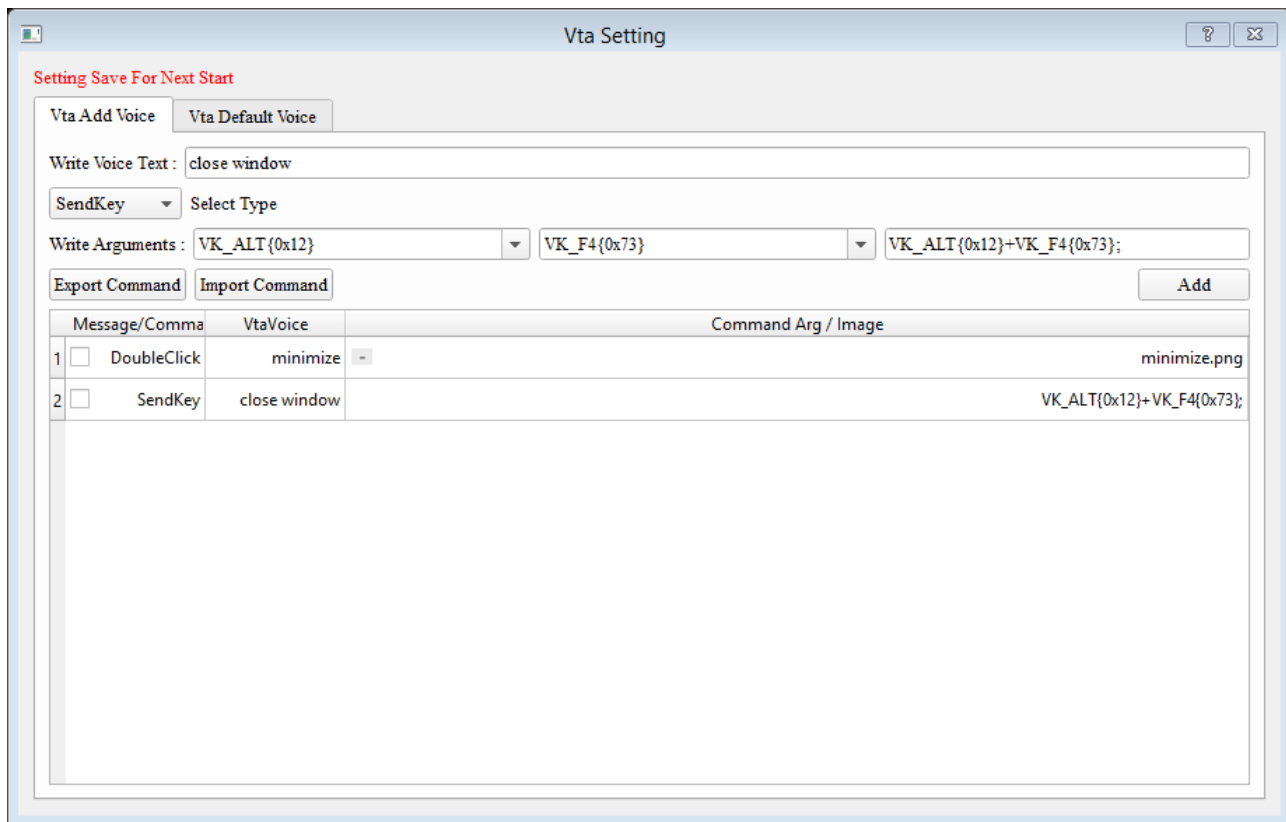
VK\_ALT{0x12}+VK\_F4{0x76};VK\_ALT+;VK\_LCONT{0x23}+V;.....

VK\_ALT+ for single key command.

VK\_LCONT{0x23}+V for double key command;

all command sepreted by ';'.

Picture :



## ADD ONE MOUSE COMMAND:-

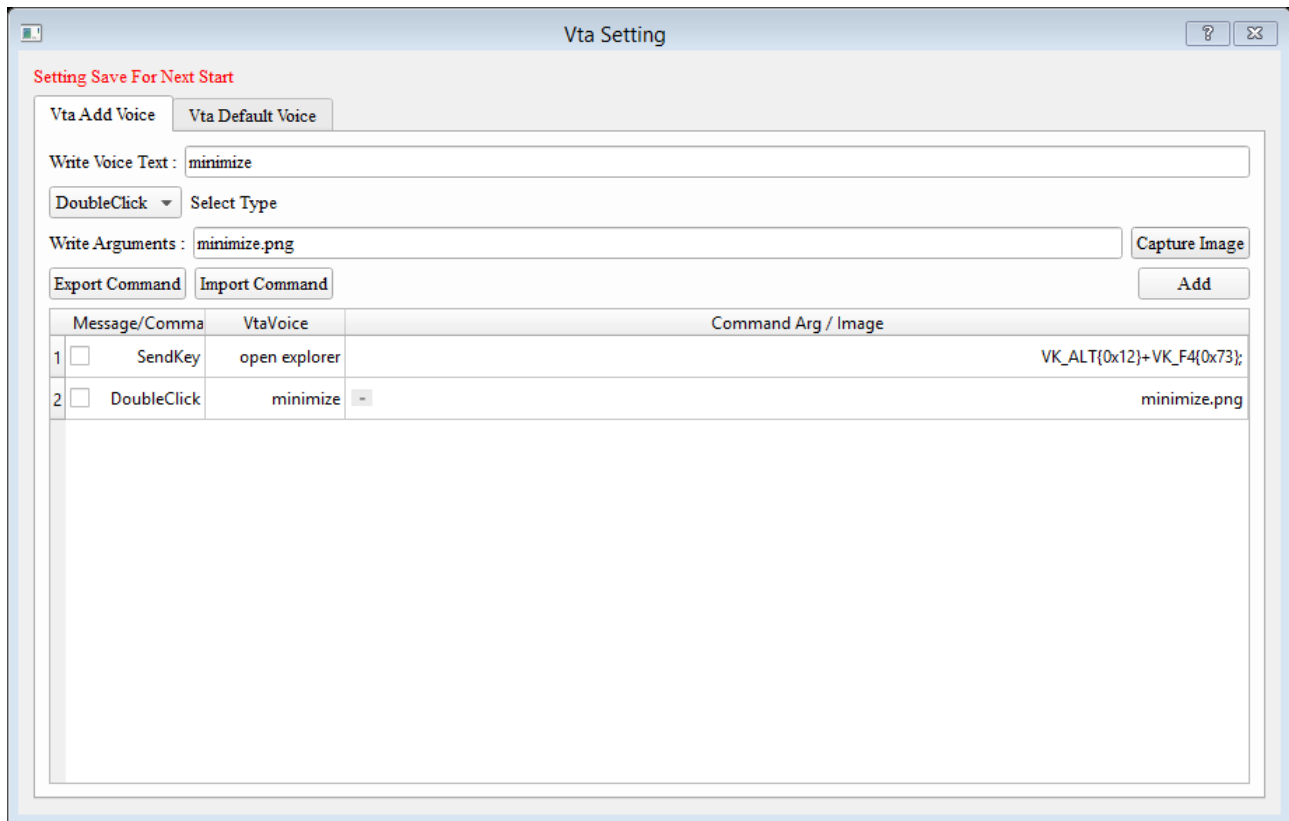
### DoubleClick :

1. Write Voice Text : minimize // this is voice recognize text
2. Select Type : DoubleClick
3. Write Arguments : minimize // name of image
4. click Capture Image button
5. move Image Capture Box to Minimize image and press enter key.

**Note :** when you speak minimize Vta send Mouse double click command in active window .

### SingleClick :

Send Single click mouse command in captured image.



## ADD ONE CMD COMMAND :-

2. Select Type : ToCMD // following command send to cmd

3. Write Arguments : explorer // or explorer C:\ or notepad.exe // you can pass argument also

5. click add button.

6. your command save for next start or start your application again.

In following command : if you speak open explorer Vta send command to CMD

( As you work in windows cmd ) explorer .

Picture :

?
✕

Setting Save For Next Start

Vta Add Voice
Vta Default Voice

Write Voice Text :

ToCMD
Select Type

Write Arguments :

Export Command
Import Command
Add

#	Message/Comma	VtaVoice	-	Command Arg / Image
1	<input type="checkbox"/> DoubleClick	minimize	-	minimize.png
2	<input type="checkbox"/> SendKey	close window		VK_ALT{0x12}+VK_F4{0x73};
3	<input type="checkbox"/> ToCMD	open c explorer		explorer c:\

## SET VTA PROPERTY

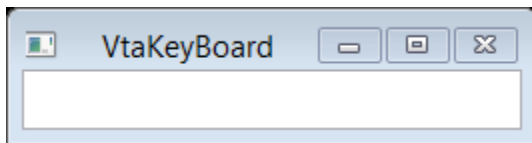
- 1) Set Hindi Typing Txt : Set The Word which you speak then hindi typing Software Start .
- 2) Set English Typing Txt : Set The Word which you speak then English typing Software Start
- 3) Set Dictionary Start txt : Set the word which you speak then english to hindi convertor start.
- 4) Time to sleep :Set second to sleep Vta . After tis second Vta go to sleep or Vta Command not work
- 5) Get Up txt : set the text which you then Vta get up from sleep and all command work .
- 6) Sleep Text : this is sleep Vta Text . when you say this word Vta go to sleep immidently.
- 7) Auto Start Checkbox : set checked then Vta start autometric when computer on.
- 8) Off Recognize CheckBox : If this checkbox is checked then Hindi , English ,dictionary start command not Recognize.

## START TYPING

If Hindi typing Started Then Open a Notepad , Word..... and Start Speak.

## START DICTIONARY

When Dictionary is start , Type english word in Textbox hindi convirion show auto select hindi word and press enter.



## START CHAT

Write Question in Vta Text Box and press enter.