# Text to speech python project

In this python project, we will write a python program that converts any text to speech.

The main aim of this python project is to change any text to speech.

You can write any text or you can copy and paste any text and this python program converts it to speech.

And to create this python program

We will see, in a detailed explanation for each line of code.

this video is all about creating a python program that converts text to speech.

Now we can start this python project.

Like other python automation projects

For this project, I also use PyCharm python IDE.

And also, I recommended you to use PyCharm IDE for this python project.

By the way, if you don't have PyCharm IDE you can use other python IDEs you want to use.

That is your option.

Ok, now I open PyCharm to start this project.

I already have a PyCharm python IDE, so I open it now.

As you see

Now I am inside this PyCharm home page.

So, I create a new file in PyCharm.

For that, I click new at the top and click python file

And after that, you can give the file name.

For this project, I give the name

text to speech

When I hit enter it opens a new blank python file

as you see this is a blank document and now, I start coding in this section.

Ok,

Let’s start now

As we say before in this python project, we create a python program which converts text to speech.

So, to start this project first I want to import important python modules, which helps us to facilitate this process.

If you search text to speech python modules you will get different python modules like pyttsx3, gTTs, or Google Text-to-Speech. Or you can get different python modules.

For this project, I use the pyttsx3 python module. Because it works offline but gTTs or google text to speech doesn't work offline, it requires an internet connection.

So, I use pyttsx3 for converting text to speech.

Ok, now you need to import this python module to your python code.

For that, I write import pyttsx3

Like this

However, if you are new to pyttsx3 you need to install this python module before importing.

So, you can use PyCharm to install this python module

For that, you can click terminal at the bottom of PyCharm.

And it opens like this and to install pyttsx3 you write pip install pyttsx3 and you hit enter it starts to download and install automatically.

For me, I already install this python module, so I don’t install it again now.

So, for me, I only import it to use for this project.

After you install you can import by writing

Import pyttsx3

```
import pyttsx3
```

This pyttsx3 is **a text-to-speech conversion library in Python**. Unlike alternative libraries, it works offline, and this pyttsx3 is compatible with both Python 2 and 3.

Ok, after that we create an object for this python module.

For that

I write

Engine = Pyttsx3.init()

```
engine = pyttsx3.init()
```

Like this

I create an object called engine.

So,

engine = pyttsx3.init()

ok, after we create an object

we need to see the voice options from our computer.

That means you need to know how many voice options and select one of them from the lists.

So, now I want to write a program to see my computer voice options, and after that I select one of them to convert text to speech.

For that, I use for loop and

So, I write

For voice in engine.getproperty()

and inside this

I write voices

Inside single or double quote.

And after that, I put a  colon at the end.

And inside this for loop

I write

print(voice).

```
for voice in engine.getProperty("voices"):
    print(voice)
```

Ok, now I run this program and it shows all voice options.

So, as you see this program shows the list of voices.

For me, it shows

Two voices

Voice name and

Gender of voice

For example, the first voice is,

Name = Microsoft Zira Desktop - English (United States)

And

The 2nd voice option is

Name = Microsoft David Desktop - English (United States)

So, I have only two voices

For that, I want to select one of them

So, the next is writing a program that gives the voice options.

For that I create a variable called voices

And

Voices = engine.Getproperty()

And I will pass voices inside this parenthesis

After that

I write

Engine.Set property ()

And inside this parenthesis

I will pass voice inside a double or single quote and I want to index voice id.

For those voices and I put the square bracket for indexing and for this I give 1 inside this square bracket and .id like this

You can also change 1 to 0

Because I only have two voices for that I only have the option index 0 and index 1

For this project, I give index 1

```
voices = engine.getProperty("voices")
engine.setProperty("voice", voices[0].id)
```

Ok, this program gives us the option for our voices.

Later we finish this code we can see the voices by changing this index to 0

For now, we can give index 1 as you like this.

Ok, now after we finish this program

the next is creating a function that helps us to convert a text to speech.

I call it text to speech function.

For that, I create a function called speak you can give any name for your function name. for this project I call it to speak, and inside this function, I use the engine object I crate in the above section,

Because this engine object helps us to create a program that converts text to speech.

So, now

I write

Def Speak ()

And inside this parenthesis, I pass the Audio parameter.

As we know to create a function in python programing language, we use the def keyword and after that, we write the function name.

Like that, I write def speak (Audio)

And at the end, I put colon for indentation

Ok, now

Inside this speak function

I write

Engine.Say()

And inside this parenthesis, I pass audio.

This

Engine dot say, the function is used to speak our program so.

We use this class from the pyttsx3 python module

After that, I write

Agin

Engine.Runandwait()

This engine. run and wait function is also inside the pyttsx3 python module and used to wait for our program for the next execution,

For that, we use this function

```
def Speak(Audio):
    engine.say(Audio)
    engine.runAndWait()
```

Now we finish the creation of our program function which helps us to convert text to speech.

The next step is writing a program that asks

the user to enter the text to convert it to speech.

Ok,

Now I create a new variable called text and I want to aske the user to inter any text, they want to convert to speech.

So, I write

Text = Input()

And inside this parenthesis, I write

Enter your text now

Like this

This input function is a python inbuilt function that is used for asking the user to input any prompt

For that I use

This input function

And this

Text = input()

Enter your text now

The program uses to accept the user text.

```
text = input("Enter your text now: ")
```

After that

Or at the end

We need to call the function we crate above to execute our program.

As we know whenever we create a function in python, we need to call them to use the function.

For that, we create a function called speak

And now we need to call it

For that

I write

Speak()

And inside this paracentesis

I pass text.

This text is a variable that stores the user text.

So

I call this function like this

Speak(text)

```
Speak(text)
```

Ok. Now we finish this program

The next is running this text and see how this program works

Ok, now I will input any text and see how this program works.

You can also copy and paste any text you need to convert to speech.

Ok, let us see different options, like changing the voices and also inputting different texts to our program.

Ok, this is all about this video,

Thanks for watching

I will see you in the next video.

Thanks again.

!!! The Full Code!!

```
import pyttsx3

engine = pyttsx3.init()
for voice in engine.getProperty("voices"):
    print(voice)

voices = engine.getProperty("voices")
engine.setProperty("voice", voices[0].id)

def Speak(Audio):
    engine.say(Audio)
    engine.runAndWait()

text = input("Enter your text now: ")
Speak(text)
```

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