

# Forum:[Hack Forums](#)

Thread: [Voice Recognition](#)

**SIM-1456245** - February 21, 2013, 9:59 am

This tutorial is about Voice Recognition using "Microsoft Speech SDK 5.1". It will listen for your voice from a microphone, and then it will check if the recorded voice is similar to the given words, if yes then it does something, in this case you say a color and the background color of the form will change accordingly(sorry no MsgBox tutorial today, or at least not here, in this tutorial).

1. Download and install the Microsoft Speech SDK :

NOTE: The link is from Microsoft, so I almost can guarantee that it is safe to download.

<http://www.microsoft.com/en-us/download/details.aspx?id=10121>

2. First thing is first, we need to make a new project :

You need to have Framework 3.0 or 3.5, not 4.0 or 4.5 because this SDK is a bit old.

3. As you can see, we don't need to add anything to the form. You also don't need to edit any properties.

4. Lets add the Speech library to our program :

Project > Add Reference > .NET (tab) > System.Speech (select from the list).

5. And now to the code:

First we need to import the SDK to the code :

Code Imports System.Speech

Now lets declare the class that we are using here, in this case System.Speech:

Code Dim WithEvents listen As New Recognition.SpeechRecognizer

Here we set up some stuff, this needs to be in the Form Load sub:

Code Dim gram As New Recognition.SrgsGrammar.SrgsDocument

Dim rule As New Recognition.SrgsGrammar.SrgsRule("word") '(ID) - This is used to tell the program what are you detecting, but for general use you can leave it as it is. For number(number), For colors(color)

Dim list As New Recognition.SrgsGrammar.SrgsOneOf("Red", "Green", "Blue", "White", "Black", "Gray", "Yellow", "Pink", "Purple", "Orange", "Gold", "Silver") ' Add the word that you want to use later in the program.

rule.Add(list)

gram.Rules.Add(rule)

gram.Root = rule

listen.LoadGrammar(New Recognition.Grammar(gram))

This is the sub that actually detects when you say something and then it recognizes what you

sat.

```
Code Private Sub speech(ByVal sender As Object, ByVal e As  
System.Speech.Recognition.RecognitionEventArgs) Handles listen.SpeechRecognized
```

```
End Sub
```

In the newly created sub add the following code, it will just change the color of the form We are using here a Select Case statement, but you can use If as well.

```
Code Select Case (e.Result.Text)
```

```
Case "Red"
```

```
Me.BackColor = Color.Red
```

```
Case "Green"
```

```
Me.BackColor = Color.Green
```

```
Case "Blue"
```

```
Me.BackColor = Color.Blue
```

```
Case "White"
```

```
Me.BackColor = Color.White
```

```
Case "Black"
```

```
Me.BackColor = Color.Black
```

```
Case "Gray"
```

```
Me.BackColor = Color.Gray
```

```
Case "Yellow"
```

```
Me.BackColor = Color.Yellow
```

```
Case "Pink"
```

```
Me.BackColor = Color.Pink
```

```
Case "Purple"
```

```
Me.BackColor = Color.Purple
```

```
Case "Orange"
```

```
Me.BackColor = Color.Orange
```

```
Case "Gold"
```

```
Me.BackColor = Color.Gold
```

```
Case "Silver"
```

```
Me.BackColor = Color.Silver
```

```
End Select
```

And that was actually it, see a very simple thing. Now double check your code and run it, it should change the color of the form accordingly on that what you say on the microphone.

Here is the final code:

Code 'Code by: Electroalek <<http://www.electroalek.blogspot.com/>>, 2013

```
Imports System.Speech
```

```
Public Class Form1
```

```
Dim WithEvents listen As New Recognition.SpeechRecognizer
```

```
Private Sub Form1_Load(ByVal sender As System.Object, ByVal e As System.EventArgs)
```

```
Handles MyBase.Load
```

```
Dim gram As New Recognition.SrgsGrammar.SrgsDocument
```

```
Dim rule As New Recognition.SrgsGrammar.SrgsRule("word")
```

```
Dim list As New Recognition.SrgsGrammar.SrgsOneOf("Red", "Green", "Blue", "White", "Black",  
"Gray", "Yellow", "Pink", "Purple", "Orange", "Gold", "Silver")
```

```
rule.Add(list)
```

```
gram.Rules.Add(rule)
```

```
gram.Root = rule
```

```
listen.LoadGrammar(New Recognition.Grammar(gram))
```

```
End Sub
```

```

Private Sub speech(ByVal sender As Object, ByVal e As
System.Speech.Recognition.RecognitionEventArgs) Handles listen.SpeechRecognized
Select Case (e.Result.Text)
Case "Red"
Me.BackColor = Color.Red
Case "Green"
Me.BackColor = Color.Green
Case "Blue"
Me.BackColor = Color.Blue
Case "White"
Me.BackColor = Color.White
Case "Black"
Me.BackColor = Color.Black
Case "Gray"
Me.BackColor = Color.Gray
Case "Yellow"
Me.BackColor = Color.Yellow
Case "Pink"
Me.BackColor = Color.Pink
Case "Purple"
Me.BackColor = Color.Purple
Case "Orange"
Me.BackColor = Color.Orange
Case "Gold"
Me.BackColor = Color.Gold
Case "Silver"
Me.BackColor = Color.Silver
End Select
End Sub
End Class

```

I hope you liked it ?

[img]http://electroalek.comoj.com/ElectroalekLogo.gif[/img]

**iDuL** - February 21, 2013, 10:04 am

Looks like an incredible Tutorial, thank you for the contribution!!

**tweety** - February 21, 2013, 10:09 am

(Feb 21, 2013 10:59 AM)Electroalek Wrote: [\[CITE\]](#) Now lets declare the the recognition sub :

Code Dim WithEvents listen As New Recognition.SpeechRecognizer

That's not a sub, it's a declaration of the class your using.

Also you didn't really explain what your doing to be honest, nevertheless, decent tutorial.. Just about.

**SIM-1456245** - February 21, 2013, 10:19 am

(Feb 21, 2013 11:09 AM)Tweety. Wrote: [\[CITE\]](#) That's not a sub, it's a declaration of the class your using.

Also you didn't really explain what your doing to be honest, nevertheless, decent tutorial.. Just about.

Ooops, mistake. Fixed. You don't really need to explain much more.

Please replay to keep this thread up.

**Xvi Beta IvX** - February 21, 2013, 2:00 pm

I will test this out later. Thanks  
/thirtyfivechar

**Cait Snow** - February 21, 2013, 2:01 pm

Great tutorial, OP!  
Thanks for sharing this to the community!

PunkoHead ?

**SIM-1456245** - February 21, 2013, 2:45 pm

Thanks a lot :)

Tomorrow I will post a tutorial for a speech program(the program says something to you). And later on I will combine them together and make something cool, because this SDK is very cool. And I just realized that Microsoft Speech SDK 5.1 is a bit outdated. There are newer versions of it, maybe in the near future I will make something else.

**Foursenal** - February 21, 2013, 6:46 pm

Very detailed tutorial. Easy to go through as well.  
Nice tutorial.

**Meteen** - February 22, 2013, 4:46 am

Got an error: "System.PlatformNotSupportedException" on this line: "listen.LoadGrammar(New Recognition.Grammar(gram))"

Please help?

**Support.** - February 22, 2013, 5:14 am

I like this but I've found SpeechRecognitionEngine better with bigger projects. Would make a good tut with good explaining of Grammar, GrammarBuilder, Choices, Confidence & how easy it is to get devices like your phone to work with it sending wav recordings.

**x2SiKJaYzZ** - February 22, 2013, 5:49 am

Very HQ tutorial , well explained and not that much to read , and with photo's haha. thanks

**Xyzo** - February 22, 2013, 6:41 am

Nice tutorial, will try it out now! :)

**4RG0S** - February 22, 2013, 9:57 am

Thanks for the Tut, looks great. I will try it :)

**SIM-1456245** - February 22, 2013, 2:24 pm

(Feb 22, 2013 05:46 AM)Meteen Wrote: [\[CITE\]](#) Got an error:  
"System.PlatformNotSupportedException" on this line: "listen.LoadGrammar(New Recognition.Grammar(gram))"

Please help?

LOL, I had the same error, but I fixed it. The funny thing here is that I don't remember how. If I

remember I will post.

Have you installed all of the files from the SDK ?

Have you done everything as it says ?

Try downloading and installing this: [http://activex.microsoft.com/activex/controls/agent2/tv\\_enua.exe](http://activex.microsoft.com/activex/controls/agent2/tv_enua.exe)  
(This is not a virus, it can solve your problem. I downloaded it, it is clean, but if you don't trust me don't download it. Not my server, Microsoft website.)

**Debroski** - February 23, 2013, 5:32 pm

Instead of having a huge switch case, why not just

```
Code Me.BackColor = Color.FromName(e.Result.Text)
so you don't have to continuously add as you want more colors.
```

**deiski** - February 23, 2013, 5:35 pm

That's actually incredible, will use this.

**Boss\_Mustang** - February 24, 2013, 12:03 am

Great Information buddy. Thanks for sharing it !

**SIM-1456245** - February 24, 2013, 9:54 am

(Feb 23, 2013 06:32 PM)\_\_\_Angel Wrote: [\[CITE\]](#) Instead of having a huge switch case, why not just

```
Code Me.BackColor = Color.FromName(e.Result.Text)
so you don't have to continuously add as you want more colors.
```

LOL, the point here isn't to change the form's color, the select case function can be used for every thing, like displaying msgboxes, sending data to the internet and so on and so forth.

**Debroski** - February 24, 2013, 10:48 am

(Feb 24, 2013 10:54 AM)Electroalek Wrote: [\[CITE\]](#) LOL, the point here isn't to change the form's color, the select case function can be used for every thing, like displaying msgboxes, sending data to the internet and so on and so forth.

so can using what i used lol?

Code MessageBox.Show(e.Result.Text);still no need for huge switch case :P. All you do is take the text and then if text = this form of text which is already declared, then do something with it. You can skip that entire part no matter what you are using it for

**k@\$f** - April 15, 2013, 10:20 am

is there any way i can hide the speech control that the sdk opens when im running my application ? also how can i make it to autoconfigure itself everytime i start my program and set the speech recognition OPEN ! finally what if the computer that runs my program hasnt this sdk ? how can i install it ?

please help me ... as i need those answers as fast as possible :)  
as always thank you :)

**SIM-1456245** - April 15, 2013, 1:00 pm

This will automatically start listening for commands from the microphone once the form loads and after that it will just change the backcolor of the form accordingly.

You just need to install the SDK, but you can try to install the application on another PC and see if it will work(it might). If not try just adding the "System.Speech.dll" file to your application folder or System32 folder.

**LUOldeRentA** - May 2, 2015, 9:29 am

Oh my god, thank you so much for this. I had no idea you could even do this in vb.net... I always forget about the SDK..

**Odus** - May 2, 2015, 9:42 am

In your SpeechRecognized event, you could replace the entire switch with:

```
Code Me.BackColor = Color.FromName(e.Result.Text)
```

Right? Thread already b'pd so I figured I'd ask.