# ZWCAD COM Automation Developing Guide

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### **Operating environments**

CAD platform: ZWCAD IDE: Visual studio 2010 .NET framework: .NET Framework 4.0 Development language: VB.NET or C# etc.

## Create a project and set properties

### 1. Create a project

Start Visual studio 2010. Go to menu File, and then select **File-> New Project**. Here you can select **Windows Forms Application** to produce a stand alone .exe file that allows your application to automate ZWCAD.



#### 2. Add reference

Now, at the **Solution Explorer** window, double click the project's name to go to project properties.



Select the "**References**" tab and click on "**Add**" from the project properties, and select "**Browse**". Add reference to **ZWCAD.exe** at the installation folder of ZWCAD, like the image below.

Add Reference	?	X
.NET COM Projects	Browse Recent	_
Look in: 🗁 ZWCAD+	2012 🕑 🕝 🏂 📂 🎞•	
🔊 wininet. dll	SwAuthHostFNP. dll SZWC	
🔊 WinXMLLib. dll	🚳 ZwAuthManagedWrapper. DLL 🛛 🚳 Zwc	
🔊 ZAVI. A11	🔊 ZwAuto. dll 🛛 🕥 ZwC	
🔊 ZwAcisBuilder. dll	🔊 ZwBase. dll 🛛 🕥 ZwC	
🔊 ZwAskForInput. dll	🛐 ZwBaseLib. DLL 🛛 🔐 zwc	
🔊 ZwAuthBase. dll	🌆 ZWCAD. exe 😒 ZwC	
👌 ZwAuthHost. exe	🔊 ZWCADBtn. dll 🛛 🔊 ZwC	
<		
File name: ZWCAD. exe	~	
Files of type: Component	Files (*. dll;*. tlb;*. olb;*. ocx;*. exe;*. man 💙	
	OK Cancel	

The result should be like in the following image.

Application R	eferences				Unused References Reference Paths
ompile	Reference Name	Type	Ver	Copy Local	Path
ebug	OLE Automation System	COM . NET	2.0.0.0 4.0.0.0	False False	C:\WINDOWS\assembly\GAC\stdole\7.0.3300.0_b03f5f7f11d50a3a\stdole.dll C:\Program Files\Reference Assemblies\Microsoft\Framework\.NETFramewor
eferences	System.Core System.Data System.Data DataSatExtens	. NET . NET	4.0.0.0 4.0.0.0	False False False	C:\Program Files\Reference Assemblies\Microsoft\Framework\.NETFramewor C:\Program Files\Reference Assemblies\Microsoft\Framework\.NETFramewor C:\Program Files\Reference Assemblies\Microsoft\Framework\.NETFramework
esources	System. Deployment System. Drawing	NET	4.0.0.0	False False	C:\frogram Files\Reference Assemblies\Microsoft\Framework\.NETFramewor C:\frogram Files\Reference Assemblies\Microsoft\Framework\.NETFramework
ervices	System. Windows. Forms System. Xml System. Yml Ling	. NET . NET	4.0.0.0	False False False	C:\Program Files\Reference Assemblies\Microsoft\Framework\_NETFramewor C:\Program Files\Reference Assemblies\Microsoft\Framework\_NETFramewor C:\Program Files\Reference Assemblies\Microsoft\Framework\_NETFramework
ettings	ZWCAD Type Library	COM	1.1.0.0	False	C:\Documents and Settings\XPMUser\Local Settings\Application Data\Temp
igning					
v Extensions	6				
ecurity	<u>ту</u>				Add
ıblish <u>I</u>	mported namespaces:				
	icrosoft. VisualBasic				Add User Imp <u>o</u> rt

We need to import the namespace we want to use. The code inside class1.vb will look like the following code:

Imports ZWCAD

#### 3. Specify the version of framework

Select the "Compile" tab and click on "Advance Compile Options" from the project properties. Specify the version of framework from "Target framework (all configurations)" option at the "Advanced Compiler Settings" window.

Application	Configuration: Active (Debug)
Compile	
Debug	Build output path:
References	Compile Options:
Resources	Option egplicit: Option gtrict:
Services	On (custon)
Satting	Option compare: Binary Advanced Compiler Settings
o	Warning configurations: Optimizations
Signing	Condition Remove integer overflow checks Enable optimizations
My Extensions	Late binding; call could fail at r Concrete debug info:
Code Analysis	Implicit type; object assumed
	Use of variable prior to assignmer Function returning reference type           Function returning reference type         Image: Compliation constant
	Function returning intrinsic value
	Unused local variable
	Instance variable accesses shared Generate gerialization assemblies:
	Recursive operator or property acc Auto
	Duplicate or overlapping catch blc Target CPU:
	AnyCPU
	arget framework (all configurations):
	NET Framework 2.0
	IV Generate XML documentation file NET Framework 2.0 NET Framework 3.0
	NET Framework 3.5
	. NEI Framework 3.5 Litent Frontie
	Advanced Compile Options

## Sample code

The following example program is launching ZWCAD application automatically and then creating a line in the drawing.

Steps:

- 1. Follow the steps above to create a project and add reference. And then add a button control to the Form1.
- 2. Copy and paste the bellow codes to the Class1.vb file. Overwrite the original code.

#### Imports ZWCAD

```
Public Class Form1
```

Private Sub Button1\_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button1.Click

Dim myDoc As ZcadDocument Dim ss As ZcadApplication Dim myspace As ZcadModelSpace ss = CreateObject("ZWCAD.application") myDoc = ss.ActiveDocument myspace = myDoc.ModelSpace ss.Visible = True Dim myline As ZcadLine Dim startpoint(2) As Double startpoint(0) = 0 : startpoint(1) = 0 : startpoint(2) = 0 Dim endpoint(2) As Double endpoint(0) = 10 : endpoint(1) = 200 : endpoint(2) = 0 myline = myspace.AddLine(startpoint, endpoint) myline.Update() ss.ZoomExtents()

#### End Sub

End Class

3. Go to menu File, and then select Debug->Start Debugging to debug the project.

🗠 COMapp - Microsoft Visual Studio	)				<b>90</b> CC	■app (Running)	- Ticroso	oft Visual Studi	io	
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i 🧼 🖀 ಶ 💐 💕 🔹 🐀 🏡 🖉 🖕		Start Debugging	F5		: 🏟	🖀 🏓 🐢 💉 🐂 🖞	) Yac 🖻 📮			
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Pouble · ·	Ç.	Step Over	Shift+F	8		Duble	•			🗶 mi -t
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		Toggle Breakpoint	F9							
Public Class Form1		New Breakpoint		•		-Public Class For	1			
Private Sub Button1_Click(ByV	<b>"</b>	Delete All Breakpoints	Ctrl+Sh	ift+F9		<ul> <li>Private Sub I</li> </ul>	at 💀 For	<b>a</b> 1		yVal e As Syste
Dim myDoc As ZcadDocument		<u>I</u> ntelliTrace		•		Dim myDoo	Buttor	n1		
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myDoc = ss.ActiveDocument myspace = myDoc.ModelSpac		Im <u>p</u> ort DataTips				myDoc = : myspace =	S			
ss.Visible = True		Options and Settings			Ι.	ss.Visib	.e			
Dim myline As ZcadLine Dim startpoint (2) is Doub	10				1	Dim mylin Dim start	ne Tho			
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ss. ZoomExtents()						ss. ZoomEx	rte			
End Sub						End Sub				
End Class						End Class				_

4. ZWCAD application will be launched after clicking the button on the window.