

Macro Interface Compiler™ User Guide

“*DEMO version*”



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Part Number 020612012-01

Worldwide Technical Support and Product Information

www.manualends.com

ManualEnds.com
ManualEnds.com



For further support information, see the [Technical Support Resources](#) appendix.
To comment on the documentation, send e-mail to

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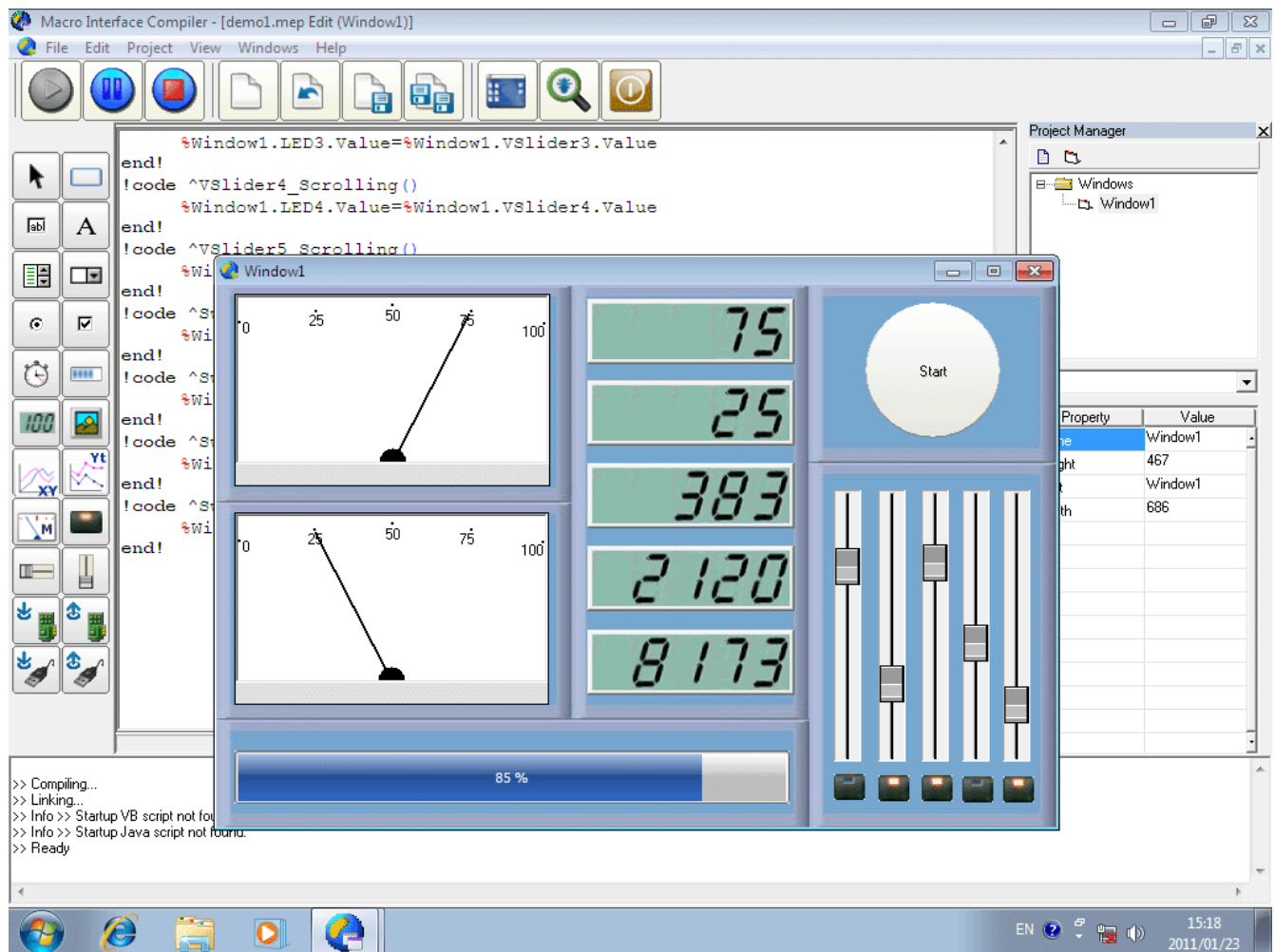
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1 What is Macro Interface Compiler?

Macro Interface Compiler is a data acquisition programming language used to create software applications ranging from small to large and complex. You use **Macro Interface Compiler** Integrated development environment (IDE) to write programs using the **Macro Interface Compiler** language. Those programs consist of functional pieces such as command button, text box, timer, I/O interface, and graphics display that are known as objects. You connect all the objects together using the **Macro Interface Compiler** programming language in the **Macro Interface Compiler** development environment

Figure 1.1 Macro Interface Compilers IDE.



Features

Programming in **Macro Interface Compiler** is a combination of visually arranging components or controls on a form, specifying attributes and actions of those components, and writing additional lines of code for more functionality. Major features included:

- Easy to learn Visual BASIC-like syntax.
- Create Visual Instrument, Graphical User Interfaces (GUIs).
- Interact with standard windows controls.
- Create executable (.EXE) files.
- Convert JavaScript and VBScript into EXE.
- Compatible with Windows 98SE / ME / NT4 / 2000 / XP / 2003 / Vista / 2008 / Windows 7.
- Works with Windows API.
- Easy to learn, it is not necessary to be the programmer to create program.
- All compiled .exe files royalty-free.

2. Getting Started

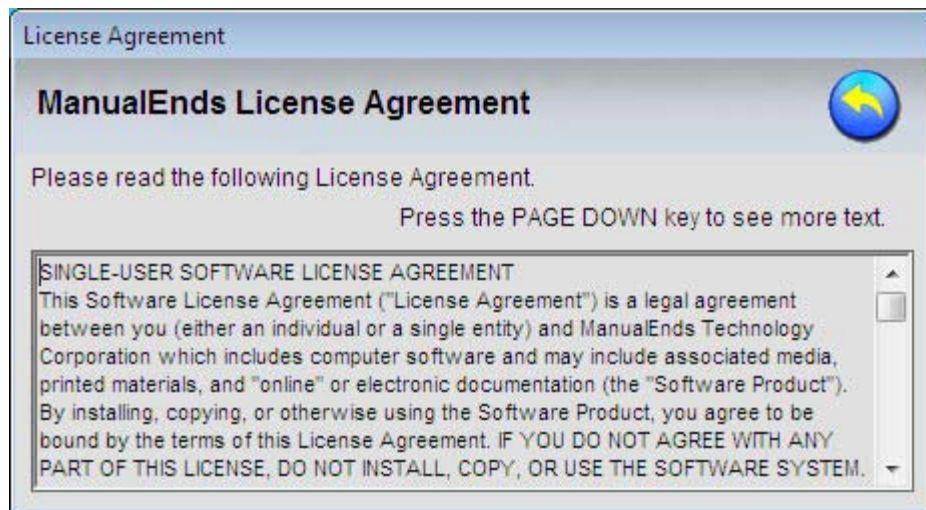
This chapter describes the system requirements for the Macro Interface Compiler software and contains installation instructions.

System Requirements

Make sure you have the following minimum components in place before you attempt to install and use Macro Interface Compiler:

- Pentium class PC running at 266 MHz or faster
- 128 MB RAM (256MB recommended)
- Windows 7/Vista/2008/2003/XP with .NET 2.0, or later
- 20 MB of local hard disk space
- Another 15 MB (or more) free disk space (depending on how much data you intend to log to the internal database)
- Your computer must have Sounds, Audio Devices, High Speed Network card and TCP/IP installed and functioning

License Agreement



Install Macro Interface Compiler

CD

- Before you install Macro Interface Compiler, make sure you have shut down all applications.
- Insert the Macro Interface Compiler compact disc in the CD-ROM drive.
- Use the appropriate command in your operating environment to run the setup program, which is available in the root directory on the compact disc.
- Select Read Me for update information.
- Select **Program Installation**. (For All Windows) or **Program Installation (2000/XP/2003/2008/Vista/7)**. (For Windows 2000/XP/2003/2008/Vista/7). Note: If your Windows Operation is Windows 98, please select and run **W98 Pre-Installation** before **Program Installation**.
- Follow the setup instructions on screen.

Download from Internet (www.manualends.com)

- Before you install Macro Interface Compiler, make sure you have shut down all applications.
- Select **MEMICvr3.exe** (For all Windows) or **MEMICvr2X.exe (2000/XP/2003/2008/Vista/7)**. (For Windows 2000/XP/2003/2008/Vista/7). Note: If your Windows Operation is Windows 98, please select and run **W98Run.exe** before installation.
- Follow the setup instructions on screen.

Note:

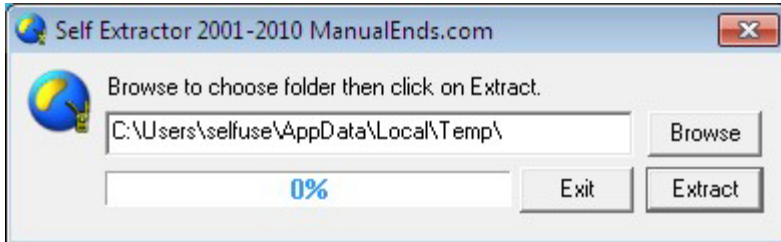
MEMICvr3.exe is for English Operation System.

MEMICvr2X.exe is for English Operation System

Installation under Windows 2000/2003/XP/2008/Vista/7

- The **MEMICvr2X.exe** is Self-Extracting Archive program developed by ManualEnds Technology.
- For Vista and Windows 7, please select program icon, Click on Mouse **Right** Button and select "**Run as Administrator**".

Figure 2.1 ManualEnds Self-Extracting Archive program



- Click on the **Browse** path to extract setup files for Installation.
- Select the destination path or input path name as following: (Default: Temp\ directory of your Windows Operation)
- Click on the Extract button to start unzip the files.
- It will take few seconds to unzip all files to the directory.
- When completed the unzip files, the Start program screen will start automatically.

Figure 2.2 ManualEnds Start program screen



- When completed loading files, the Setup program screen will start automatically.

Figure 2.3 ManualEnds Setup program screen

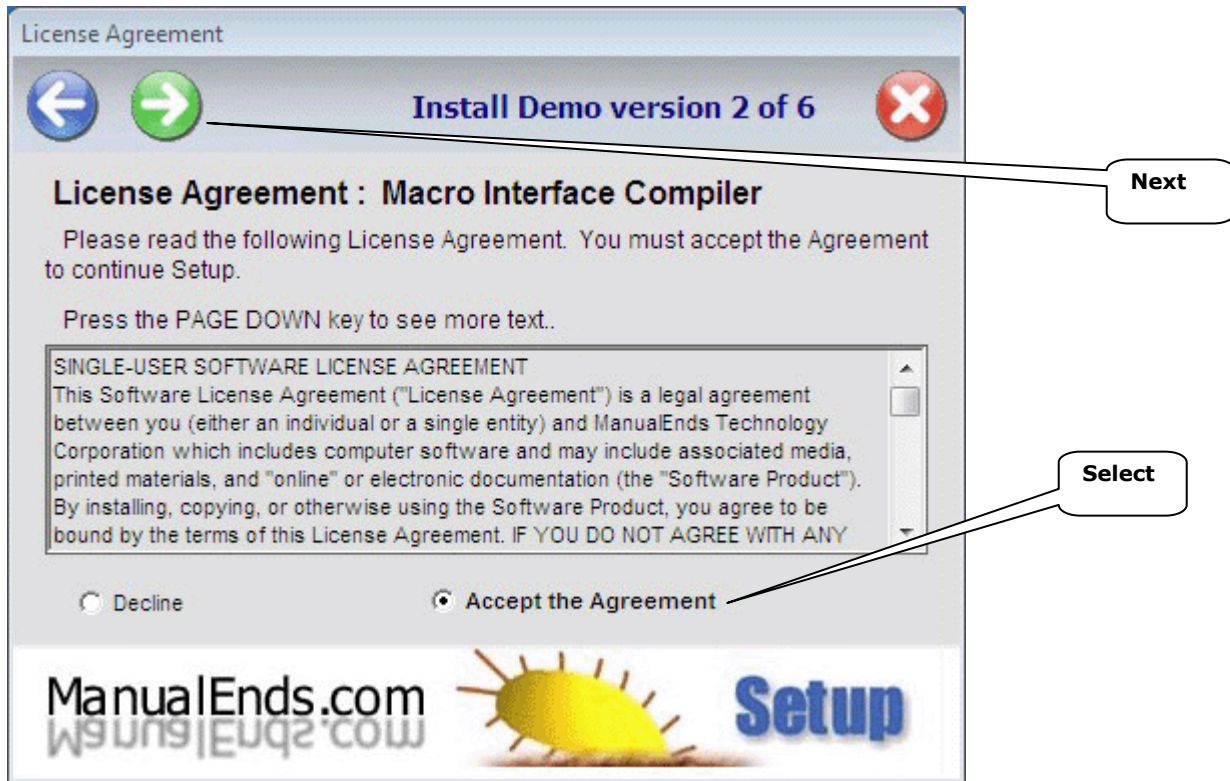


(Note: If Setup program screen could not start automatically, please close all Anti-Virus/Firewall programs and try it again.)

- Please read **ReleaseNote.htm** file for additional information about Macro Interface Compiler.

- **Read License Agreement** and select **Accept the Agreement** for next step. The Next button will be enabled for Click on.

Figure 2.4 Read and select “Accept the Agreement”



- Select the Destination Directory for Macro Interface Compiler (Default: **Program Files\ManualEnds\MEMIC**).
- Select the destination path or input path name. The setup program will create directory automatically.
- Select the program Folder name (Default: **MEMIC**)
- Confirm the data and Click on “Next” to start copy files.
- It will take few seconds to copy all files to your system.
- Please **Wait** setup program crates program group and then Click “Exit” to finish the setup program.

- The program group will contain two program files, Uninstaller.exe (Uninstall Macro Interface Compiler) and MEMIC.exe. (Check the location of MEMIC.exe and Uninstaller.exe are inside the program task bar).

Figure 2.5 Setup completed



Starting Macro Interface Compiler

When you run the Setup program, it allows you to place the program items in an existing program group or create a new program group and new program items for Macro Interface Compiler in Windows. You are then ready to start Macro Interface Compiler from Windows.

To start Macro Interface Compiler from Windows

- Click **Start** on the Task bar
- Select **Programs**, and then **MEMIC**.

–or–

Click **Start** on the Task bar. Select **Programs**. Use the **Windows Explorer** to find the MEMIC executable file (MEMIC.exe).

- Double-click the MEMIC icon.
- For Vista and Windows 7, please select program icon, Click on Mouse **Right** Button and select "**Run as Administrator**".

You can also create a shortcut to MEMIC, and double-click the shortcut. When you first start MEMIC, you see the welcome screen of ManualEnds Technology, as shown in Figure 2.6.1

Figure 2.6.1 The welcome screen of Macro Interface Compiler



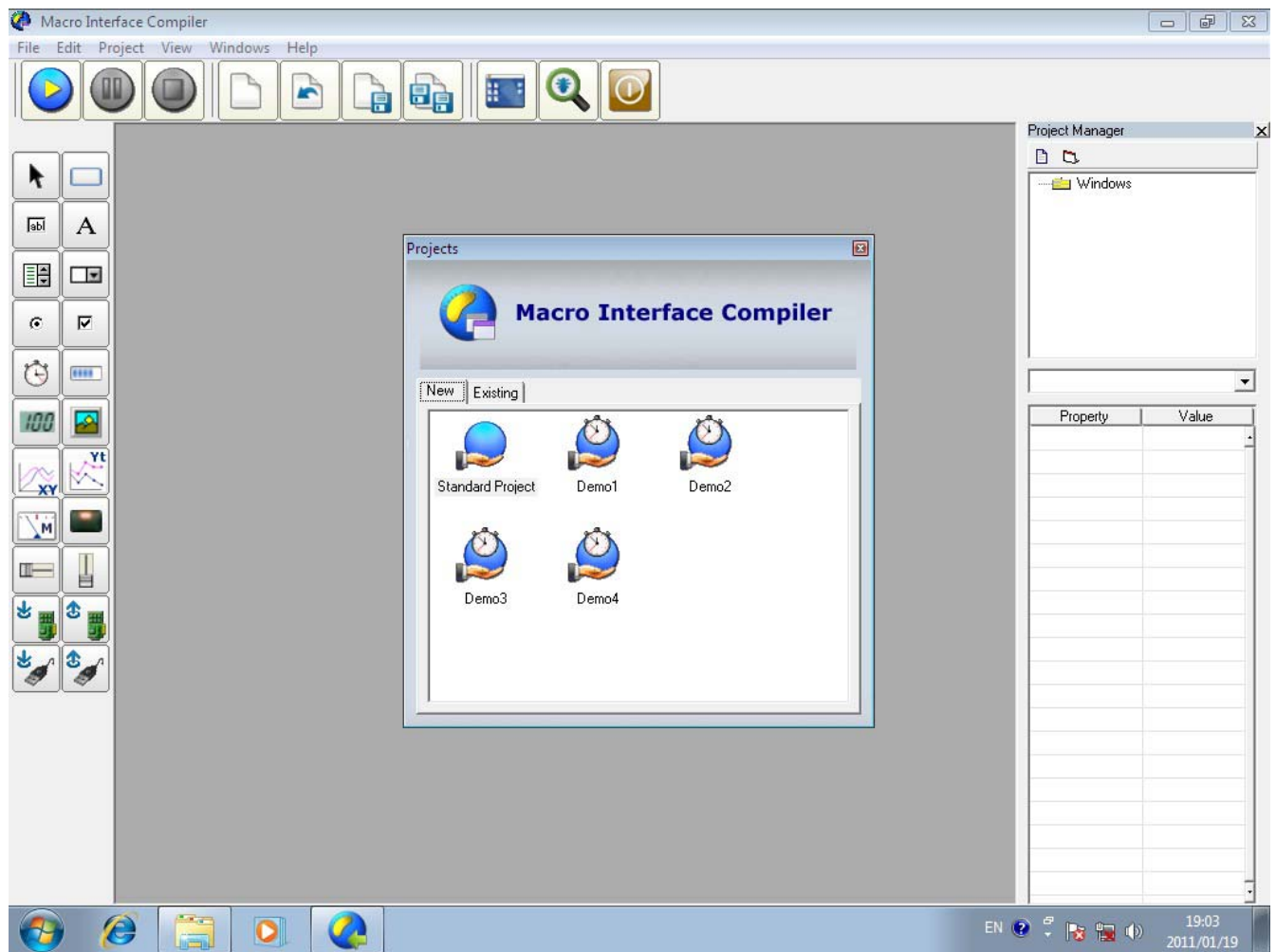
Figure 2.6.2 Demo version Limitation



Note:

Once you have purchased a product, ManualEnds will email you a "Fully Licensed Version".

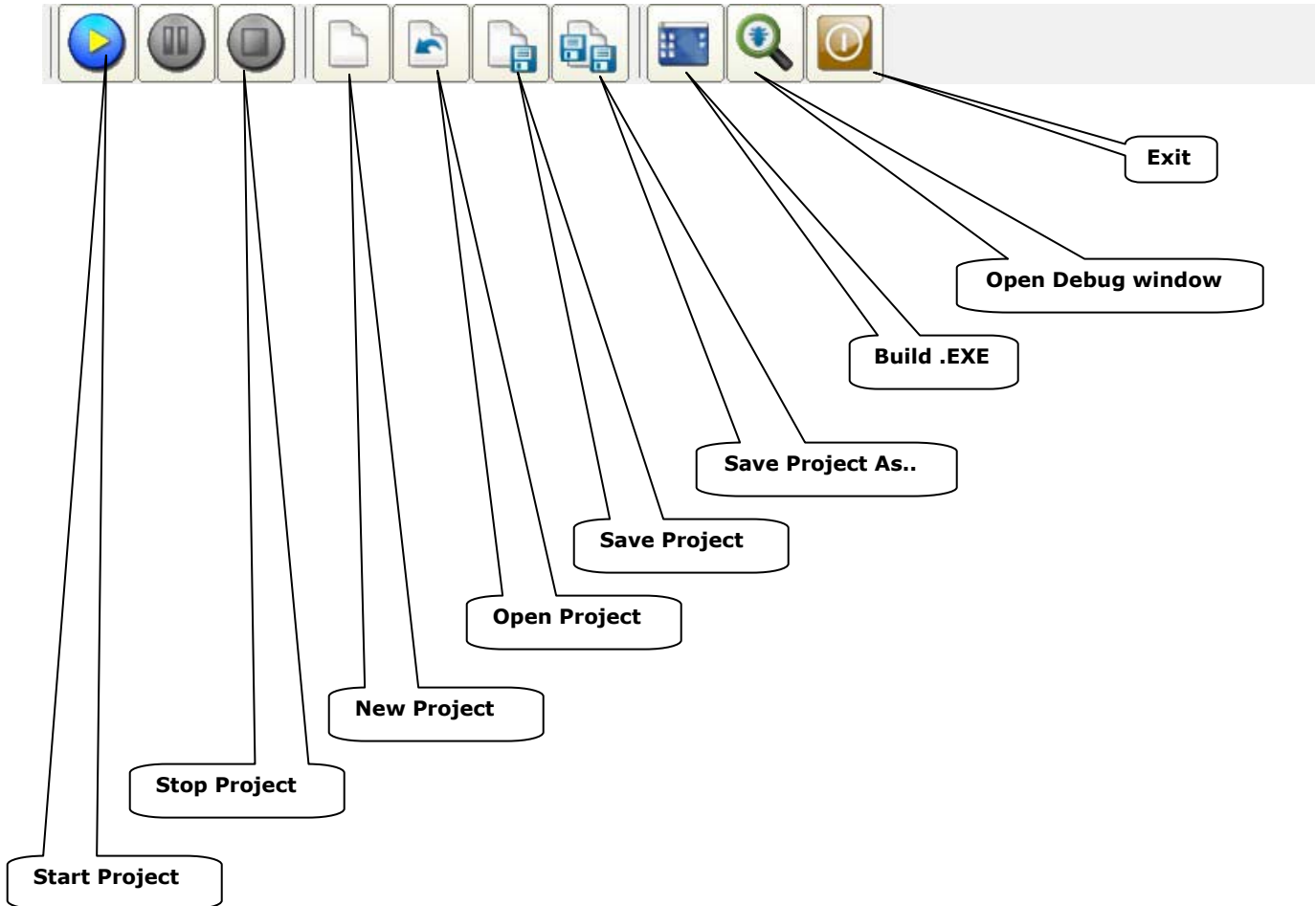
Figure 2.8 The Macro Interface Compiler startup dialog box



Menu Bar

The Menu Bar displays the commands that are required to build an application. The main menu items have sub menu items that can be chosen when needed. The toolbars in the menu bar provide quick access to the commonly used commands and a button in the toolbar is clicked once to carry out the action represented by it.

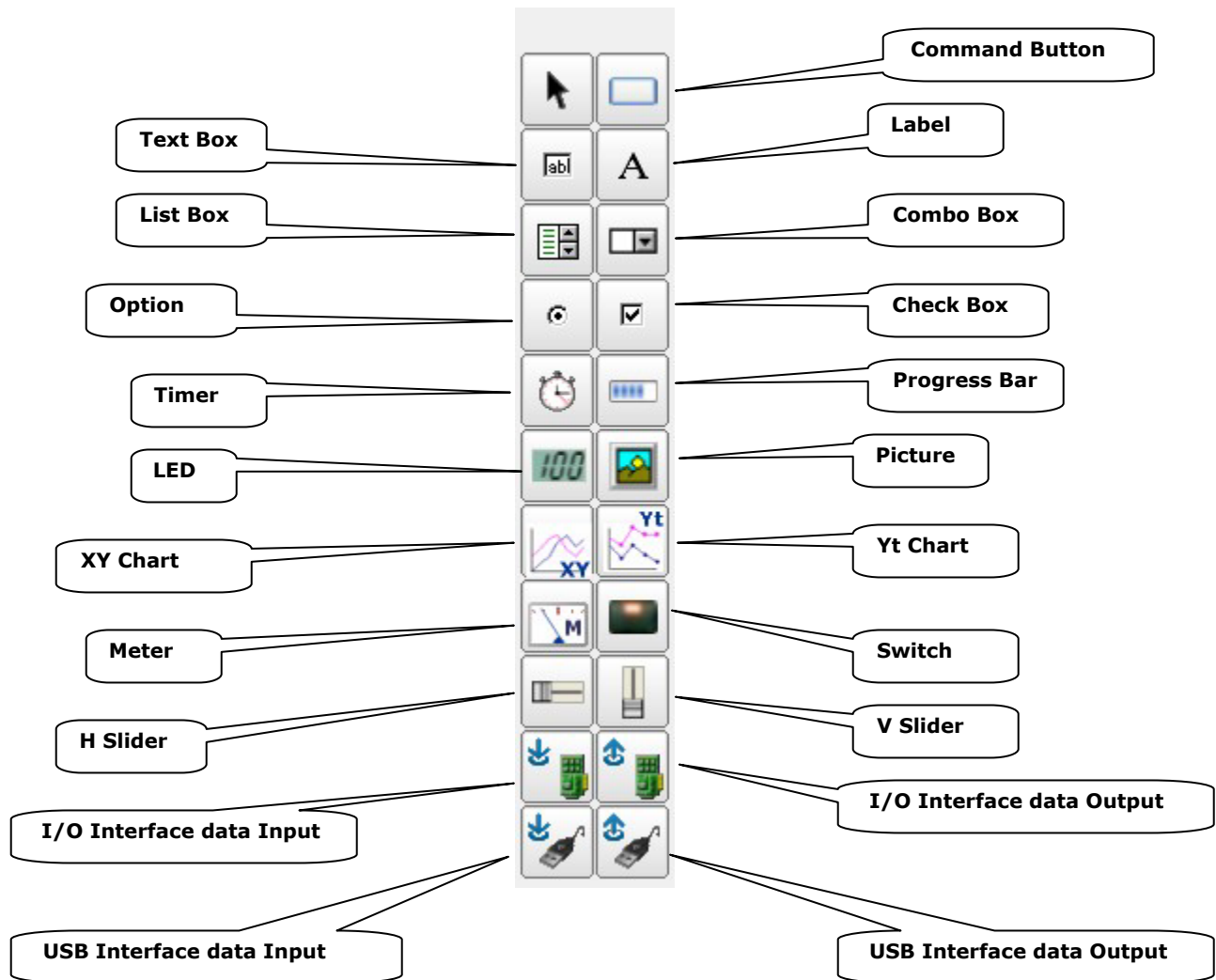
Figure 2.9 Menu Bar



Toolbox

The Toolbox contains a set of controls that are used to place on a Form at design time thereby creating the user interface area. Additional controls can be requested from ManualEnds.

Figure 2.10 Toolbox windows



<u>Control</u>	<u>Description</u>
Pointer	To move and resize the controls form.
Command Button	Used to carry out the specified action when the user clicks on it. ButShape: 0 ~ 6, ButStyle: 0 ~ 7, ButType 0 ~ 2
Text Box	Display message and enter text.
Label	Displays a text.
List Box	Displays a list of items.
Combo Box	Contains a Text Box and a List Box.
Option	Allows selecting only one option even it displays multiple choices.
Check Box	Displays a True/False option.
Timer	Executes the timer events at specified intervals of time.
Progress Bar	Displays progress status in %. BarStyle: 0 ~ 1, 0 (horizontal), 1 (vertical). BarType: 0 ~ 9, 0~9 (support horizontal BarStyle), 0~2 (support vertical BarStyle).
LED	Create numeric seven-segment LED display.
Picture	Displays bitmaps or picture files.
X Y Chart	Display function $y=f(x)$, (x, y) is a point of X-Y coordinate system.
Y t Chart	Illustrate comparisons between t-time and Y vertical axis value.
Meter	Visual graphic gauge interface.
Switch	Display ON/OFF toggle switch.
H Slider	Graphically adjust a horizontal value.
V Slider	Graphically adjust a vertical value.
I/O Input	Used to read data output from Hardware Interface I/O port.
I/O Output	Used to write data to Hardware Interface I/O port.
USB Input	Used to read data output from USB Interface I/O port.
USB Output	Used to write data to USB Interface I/O port.

Control Code Sample

Command Button

```
!code ^Button1_Click()  
    Run(notepad.exe)  
end!
```

Text Box

```
%Window1.TextBox1.text="1234567890"
```

Label

```
%Window1.Label1.text="abcdefghijkl"
```

List Box & Combo Box

```
!code ^Button1_Click()  
    var $i=0  
    while($i<51, *, $i++)  
  
        %Window1.ComboBox1.add=($i)  
        %Window1.ListBox1.add=($i)  
  
    loop(*)  
end!  
!code ^ComboBox1_Click()  
    %Window1.LED1.Value=%window1.ComboBox1.listindex  
    %Window1.LED2.Value=%window1.ComboBox1.text  
end!  
!code ^ListBox1_Click()  
    %Window1.LED1.Value=%window1.ListBox1.listindex  
    %Window1.LED2.Value=%window1.ListBox1.text  
end!  
!code ^Button2_Click()  
    %Window1.ListBox1.clear  
end!
```

Option

```
!code ^Option1_Click()  
    %Window1.Button1.Enabled=True  
end!  
!code ^Option2_Click()  
    %Window1.Button1.Enabled=False  
end!
```

Check Box

```
%Window1.Button1.Enabled=%Window1.CheckBox1.Value
```

Timer

```
!code ^Timer1_Timer()  
    MsgBox(Hello World !)  
end!  
!code ^Button1_Click()  
    %Window1.Timer1.Enabled=True  
end!  
!code ^Button2_Click()  
    %Window1.Timer1.Enabled=False  
end!
```

Progress Bar

```
!code ^Button1_Click()  
    var $i=0  
    while($i<851, *, $i++)  
        %Window1.ProgressBar1.Value=($i)  
    loop(*)  
end!
```

LED

```
!code ^Button1_Click()  
    var $i=0  
    while($i<851, *, $i++)  
        %Window1.LED1.Value=($i)  
    loop(*)  
end!
```

Picture

```
!code ^Button1_Click()  
    %Window1.Image1.Picture=demo.jpg  
end!
```

XY Chart

```
Equation: COS(X)  
!code ^Button1_Click()  
    %window2.xychart1.datavalue  
end!
```

Y t Chart

```
!code ^Button1_Click()  
    %window3.ytchart1.datavalue=2  
end!
```

```
!code ^Button2_Click()  
    %window3.ytchart1.savechartimg=c:/t1.bmp  
end!
```

Meter

```
!code ^VSlider1_Scrolling()  
    %Window1.Meter1.Value=%Window1.VSlider1.Value  
end!
```

Switch

```
!code ^Switch2_Click()  
    %Window1.Button1.Enabled=%Window1.Switch2.Value  
end!
```

H Slider

```
!code ^HSlider1_Scrolling()  
    %Window1.Meter1.Value=%Window1.HSlider1.Value  
end!
```

V Slider

```
!code ^VSlider3_Scrolling()  
    %Window1.LED3.Value=%Window1.VSlider3.Value  
end!
```

I/O Interface data Input

Please contact ManualEnds for more Hardware Interface information.

I/O Interface data Output

Please contact ManualEnds for more Hardware Interface information.

USB Interface data Input

Please contact ManualEnds for more USB Interface information.

USB Interface data Output

Please contact ManualEnds for more USB Interface information.

Procedure

Standard

```
!code sample()
```

```
end!
```

Pass strings

```
!code sample($MyString)  
        msgbox($MyString)
```

```
end!
```

Return strings

```
!code sample()  
        return("MyString")
```

```
end!
```

Show windows

```
!code ^Button3_Click()  
        showwin("Window1")
```

```
end!
```

```
!code ^Button4_Click()  
        showwin("window2")
```

```
end!
```

Calling Procedure

```
!code ^Button1_Click()  
    &sample("Hello World !")  
end!
```

```
!code sample($MyString)  
    msgbox($MyString)  
end!
```

VB and Java Script

At program start up

```
_vb_start_up()  
... (Your VB Script Code here)  
_vb_start_end
```

```
_jb_start_up()  
...(Your Java Script Code here)  
_jb_start_end
```

Trigger by Object

```
_vbscript()  
...(Your VB Script Code here)  
_vend
```

```
_jvscript()  
... (Your Java Script Code here)  
_jend
```

Example:

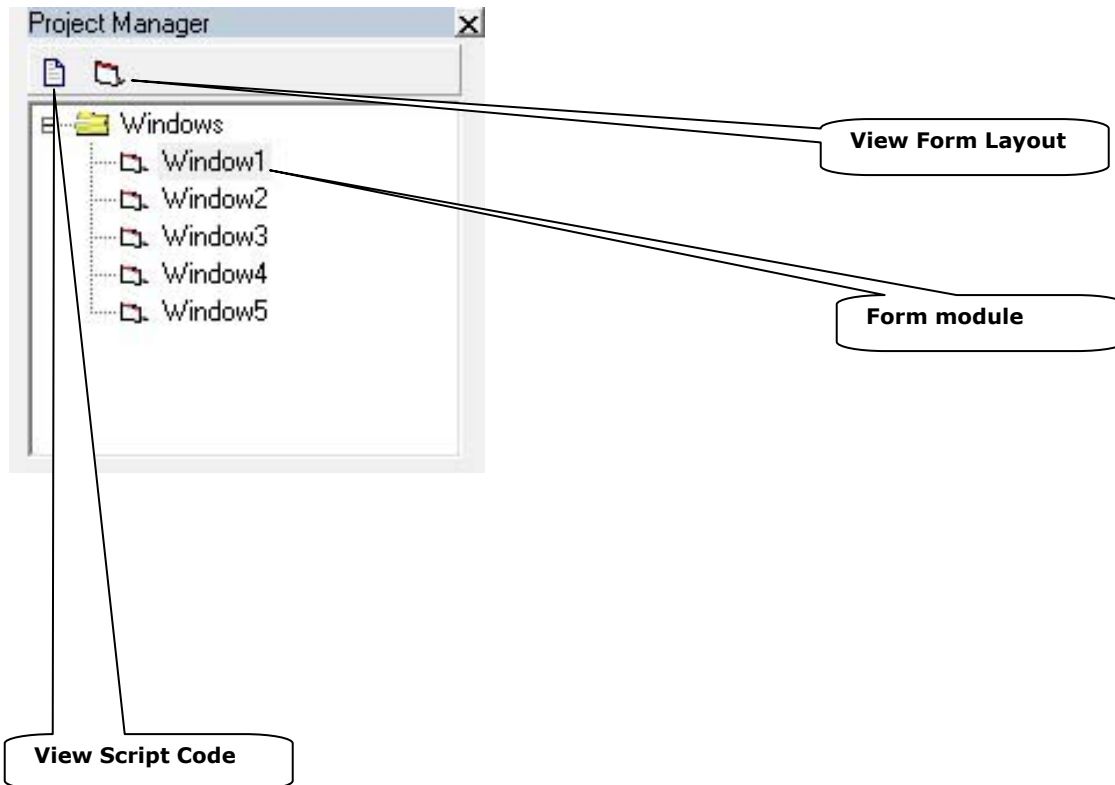
```
!code ^Button1_Click()  
    _vbscript()  
        ret=msgbox("Hello,press yes or no",vbyesno+vbinformation,"Yes/No")  
        if ret=vbYes then  
            msgbox "You pressed yes"  
        else  
            msgbox "You pressed no"  
        end if  
    _vend  
  
end!  
  
_vb_start_up()  
    ret=msgbox("Start up VB Script",vbinformation,"OK")  
_vb_start_end
```

Project Explorer

Docked on the right side of the screen is the Project Explorer window.

All of the objects that make up the application are packed in a project. A simple project will typically contain one form, which is a window that is designed as part of a program's interface. It is possible to develop any number of forms for use in a program, although a program may consist of a single form.

Figure 2.11 Project Explorer



Properties Window

The Properties Window is docked under the Project Explorer window. The Properties Window exposes the various characteristics of selected objects. Each and every form in an application is considered an object. Now, each object in Macro Interface Compiler has characteristics such as value, type, or size. Other characteristics affect not just the appearance of the object but the way it behaves too.

All these characteristics of an object are called its properties. Thus, a form has properties and any controls placed on it will have properties too. All of these properties are displayed in the Properties Window.

Figure 2.12 Properties Window

Property	Value
Name	Meter1
Left	6
Height	156
Top	13
Value	0
Visible	True
Width	256

Property Menu

The Properties Menu is located at "Project" top menu bar - "Startup Object" button. The Properties Menu provides additional selections of starting window, form back color, and form background picture.

Figure 2.12 Properties Window

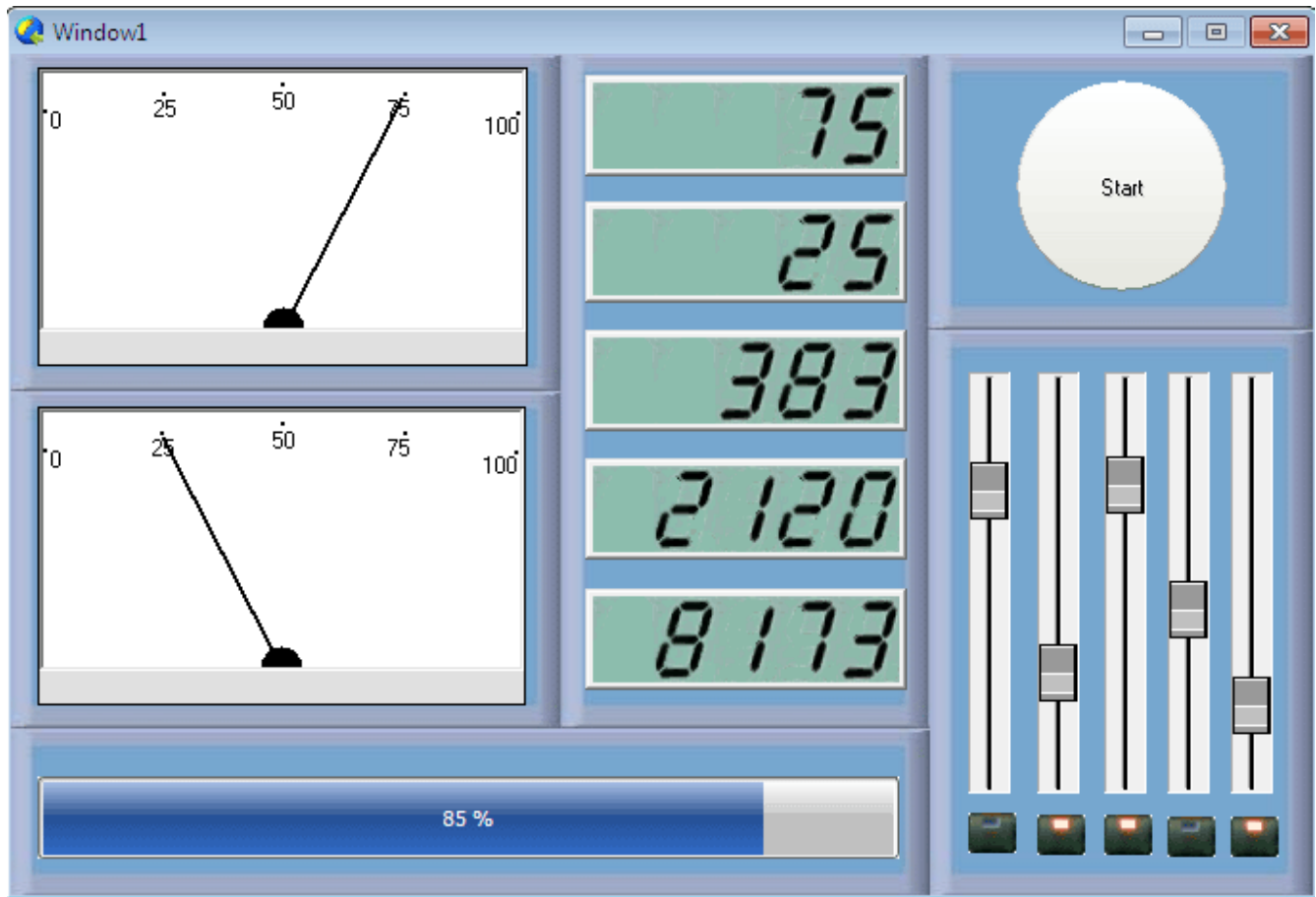
The screenshot shows a window titled "Property" with three main settings:

- Startup Object:** A dropdown menu currently showing "Window1". To its right is a blue circular button with a yellow arrow pointing left.
- Form Back Color:** A text input field containing the hexadecimal value "-2147483633". To its right is a small white square color swatch and a blue circular button with a yellow circular arrow.
- Form Picture:** A text input field containing "N/A". To its right is a small icon of a folder with a picture and a blue circular button with a yellow circular arrow.

Form Layout Window

You can click on Toolbar control icon and add it to your Form Layout Window.

Figure 2.13 Macro Interface Compilers IDE.



Script Code

You can add **Macro Interface Compiler** programming language to Script Code window.

Figure 2.14 Macro Interface Compilers IDE.

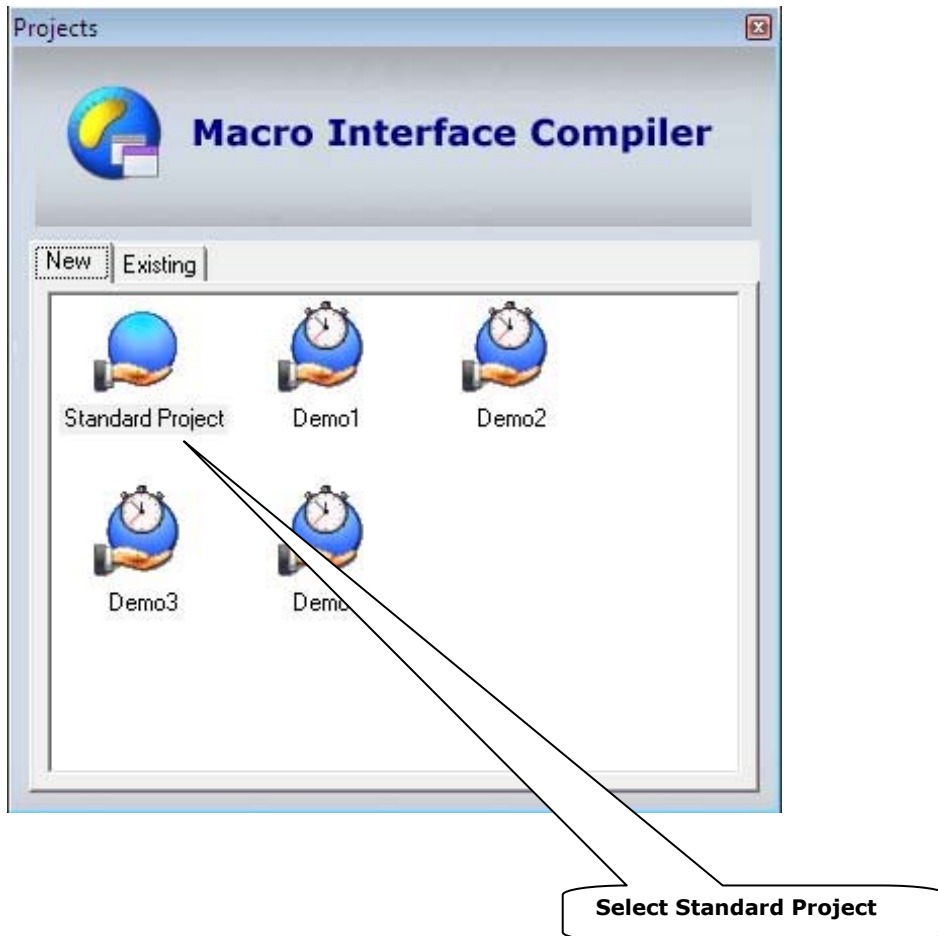
```
!code ^Button1_Click()
    %Window1.Button1.Enabled=False
    var $i=0
    while($i<851, *, $i++)
        %Window1.LED1.Value=($i)
        %Window1.ProgressBar1.Value=($i)
    loop(*)
    %Window1.Button1.Enabled=True
end!
!code ^VSlider1_Scrolling()
    %Window1.LED1.Value=%Window1.VSlider1.Value
    %Window1.Meter1.Value=%Window1.VSlider1.Value
end!
!code ^VSlider2_Scrolling()
    %Window1.LED2.Value=%Window1.VSlider2.Value
    %Window1.Meter2.Value=%Window1.VSlider2.Value
end!
!code ^VSlider3_Scrolling()
    %Window1.LED3.Value=%Window1.VSlider3.Value
end!
!code ^VSlider4_Scrolling()
    %Window1.LED4.Value=%Window1.VSlider4.Value
end!
!code ^VSlider5_Scrolling()
    %Window1.LED5.Value=%Window1.VSlider5.Value
end!
!code ^Switch2_Click()
    %Window1.Button1.Enabled=%Window1.Switch2.Value
end!
!code ^Switch3_Click()
    %Window1.VSlider3.Enabled=%Window1.Switch3.Value
end!
!code ^Switch4_Click()
    %Window1.VSlider4.Enabled=%Window1.Switch4.Value
end!
```

Your First Macro Interface Compiler Demo

This tutorial explains how to build an executable program and automate the opening of Notepad.

- First select a Standard Project

Figure 2.15 Project Open Window



- Click on Toolbox icon “Command Button”.

Figure 2.16 Form Layout Windows

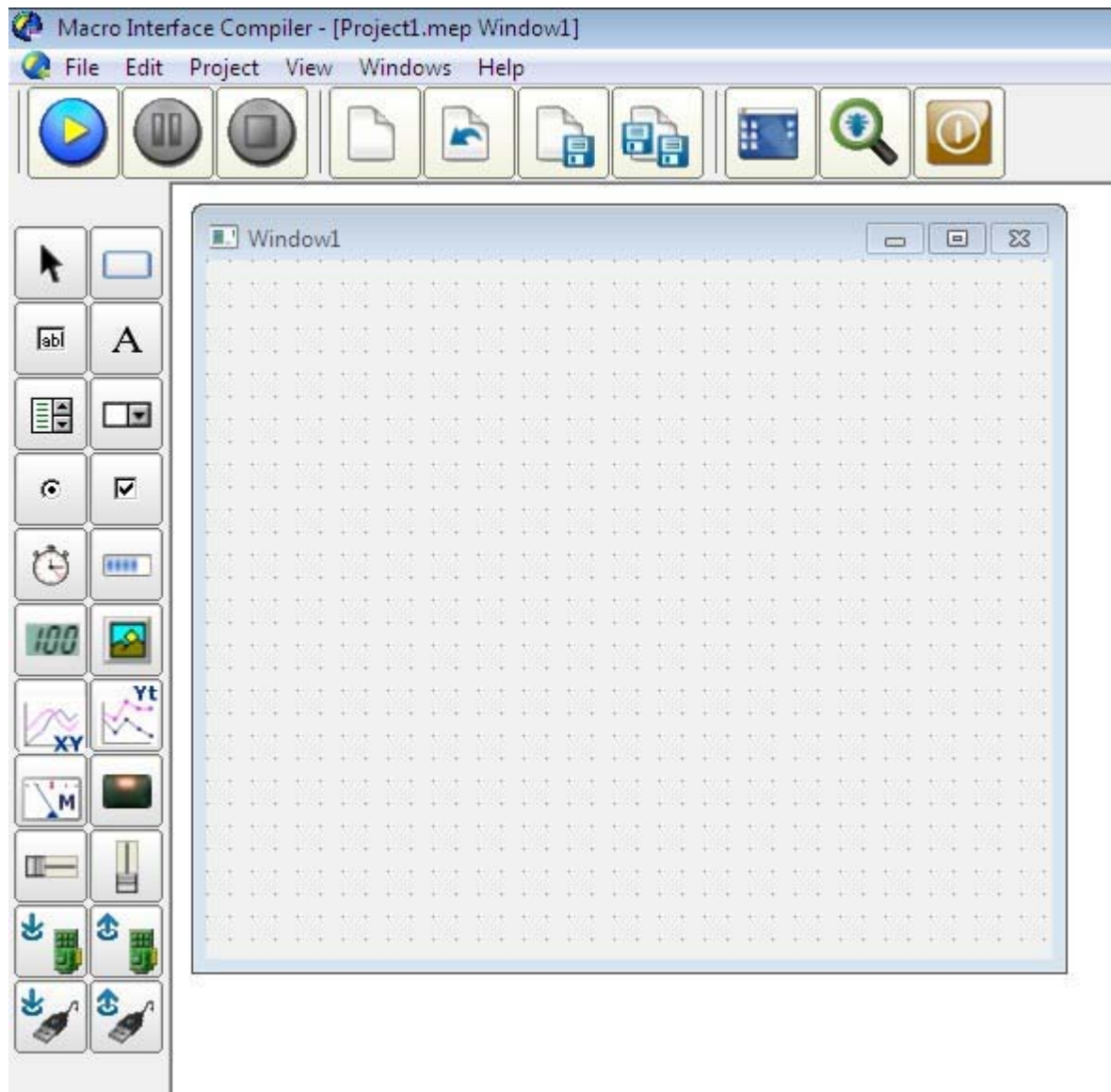


Figure 2.17 Toolbox Window

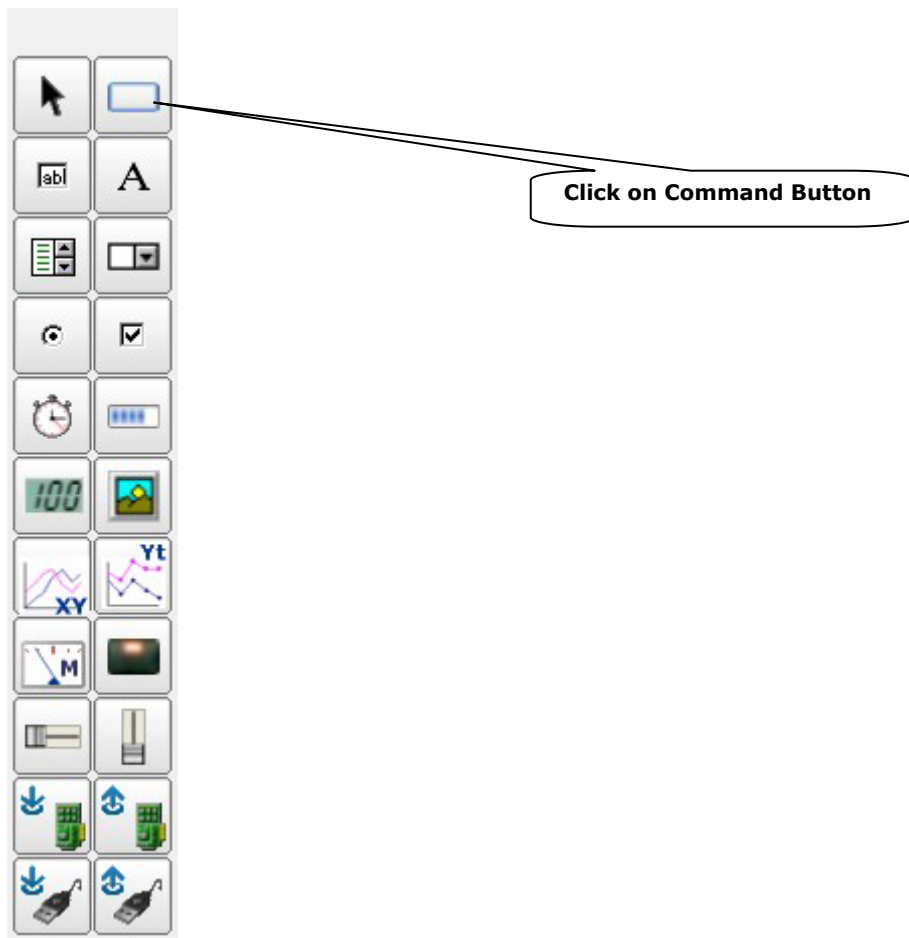
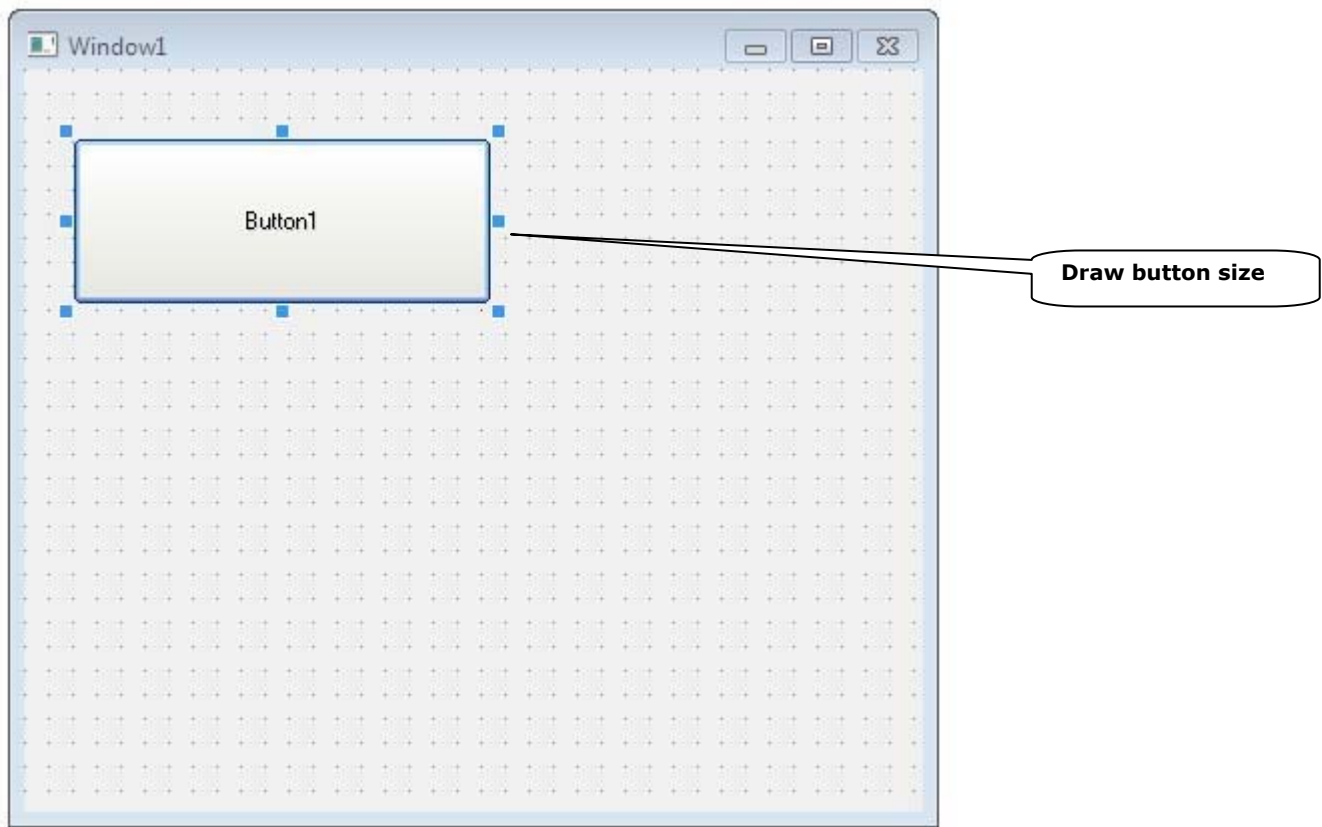
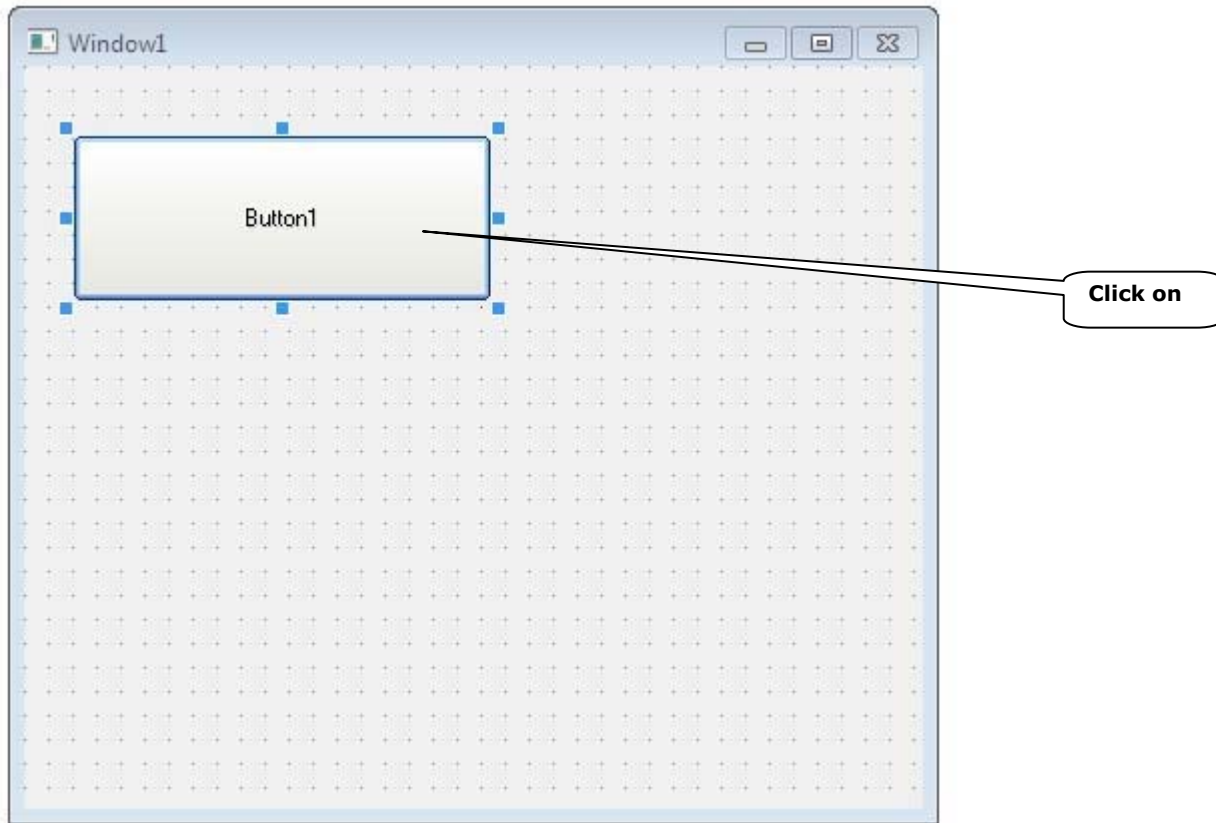


Figure 2.18 Add Command Button to From Layout window



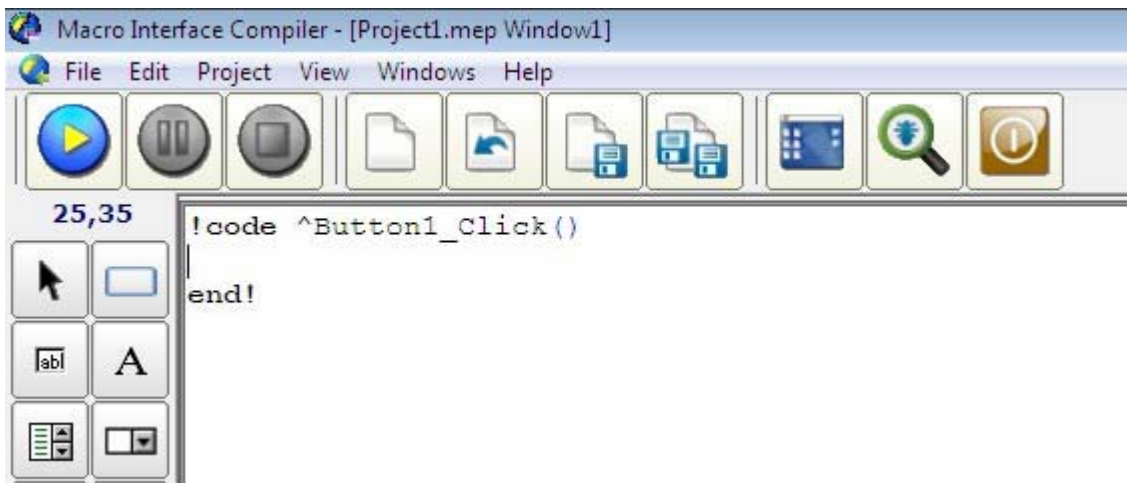
- Click on Command Button object

Figure 2.19 Double click on Command Button



- Preparing to add Macro Interface Compiler programming language to Script Code window

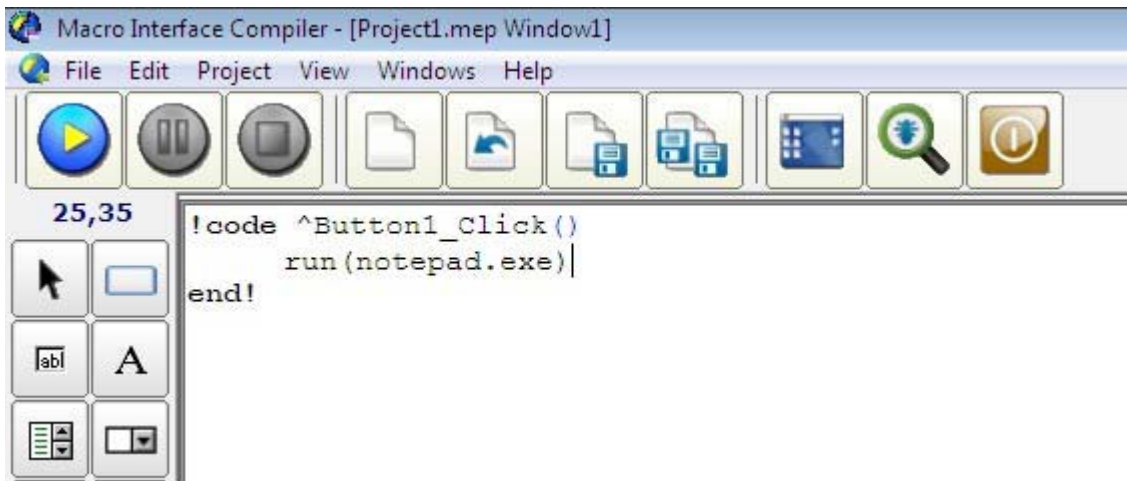
Figure 2.20 Script Code Window



- The first thing we need to know is the name of the Notepad executable. It is “notepad.exe”. Type in the first line of script as:

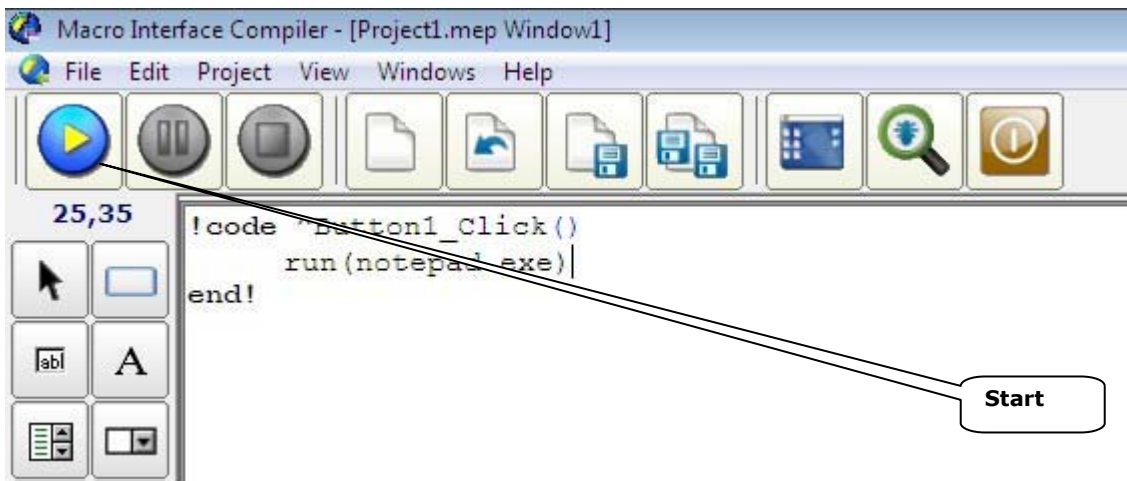
run(notepad.exe)

Figure 2.21 Form Layout Windows



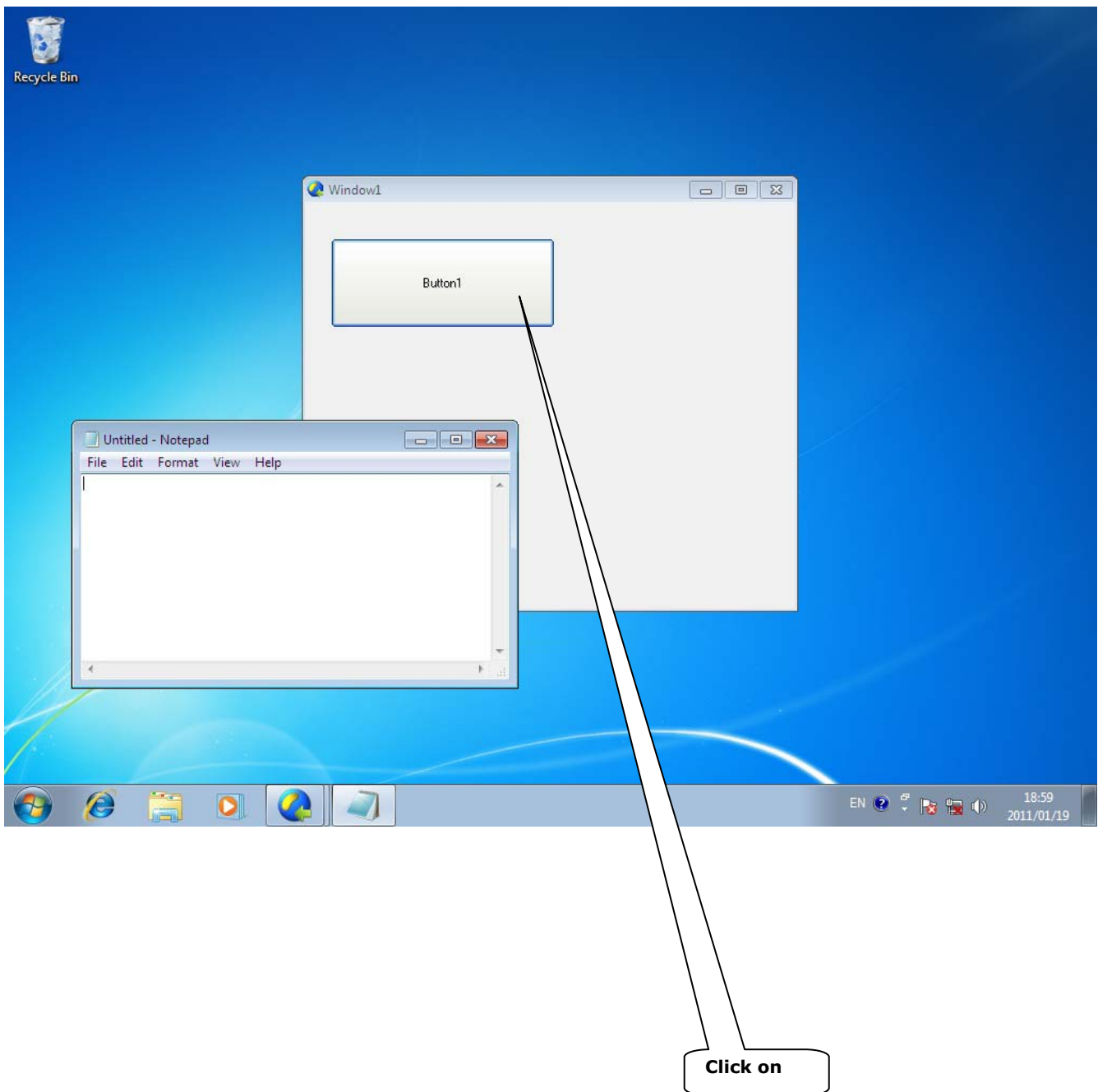
- Click on Start icon to run the project.

Figure 2.22 Form Layout Windows



- Click on Button to start a new instance of Notepad.

Figure 2.23 Form Layout Windows



3 Where to Go from Here

This section describes how to uninstall your Macro Interface Compiler software, and introduces you to the demonstration processes and additional features included with your Macro Interface Compiler software. It also includes information to help you contact ManualEnds Technology to learn more about Macro Interface Compiler and other ManualEnds Technology Automation products.

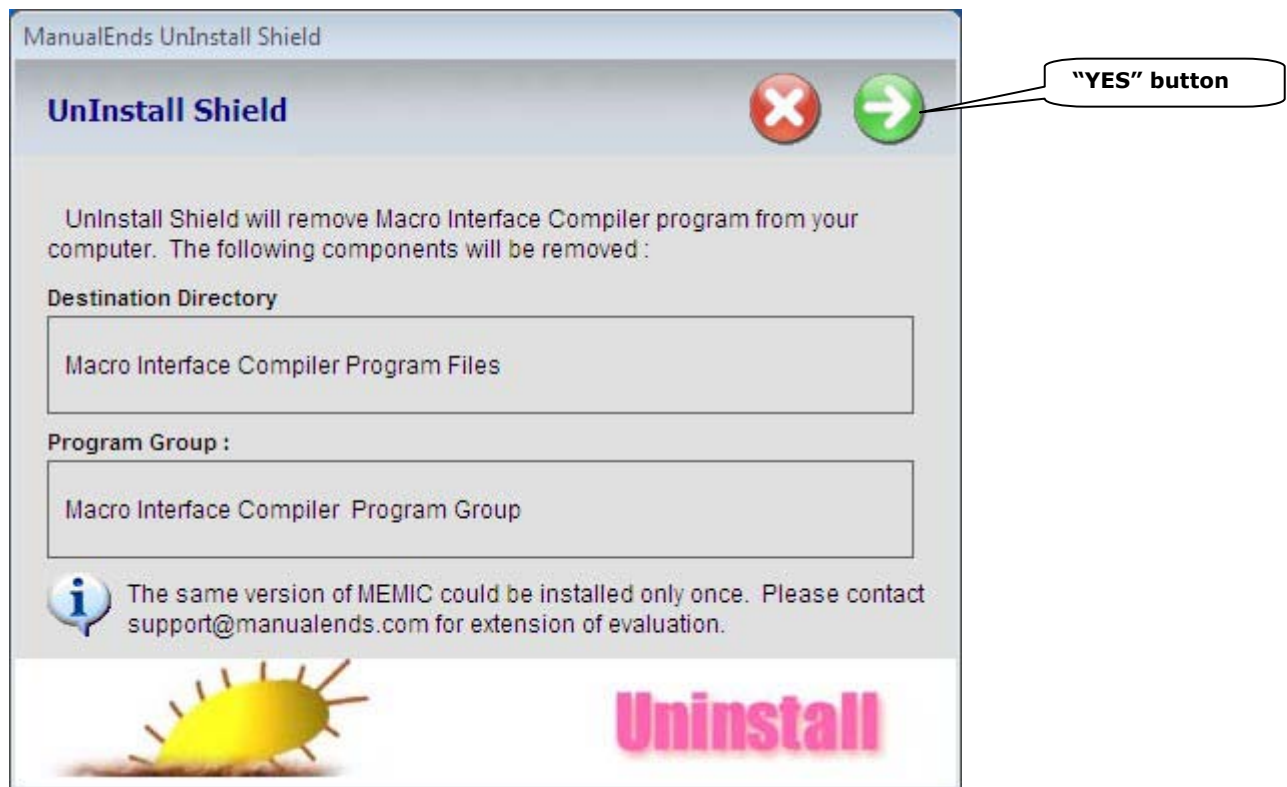
Uninstalling ManualEnds Macro Interface Compiler Software

To uninstall your copy of Macro Interface Compiler, please select

Start » Programs » MEMIC » Uninstall Macro Interface Compiler

, and follow the on screen directions. When the uninstall process is completed, you **might** receive a message that some components could not be uninstalled. These files will be located in your Macro Interface Compiler directory. You can delete these files manually if you choose.

Figure 3.1 Click on **Yes** button to start “Uninstall” Macro Interface Compiler program



Feature on Macro Interface Compiler

There are many more features in Macro Interface Compiler than are addressed in this user guide. Some of the other major capabilities of Macro Interface Compiler are the, file transfer, sequential process management, and Artificial Intelligent. Other features such as macro automation, advanced security across networks, and connectivity with other ManualEnds Technology software makes Macro Interface Compiler very powerful software packages available on the market.

Where to learn more about ManualEnds

Automation Solution (Millipede PC – Supercomputer)

For more information about Macro Interface Compiler and other ManualEnds Technology automation, and supercomputer products, visit the ManualEnds Technology web site at <http://www.manualends.com> .

You can also e-mail your questions to support@manualends.com.

Your local ManualEnds Technology representative can supply information tailored to your needs. If you are not already in contact with a representative for your area, contact ManualEnds Technology at support@manualends.com to have your questions answered.

Thank you for using Macro Interface Compiler.

Worldwide Technical Support and Product Information

www.manualends.com



A ■ Technical Support Resources

This appendix describes the comprehensive resources available to you in the Technical Support section of the ManualEnds Technology Web site and provides technical support telephone numbers for you to use if you have trouble connecting to our Web site or if you do not have internet access.

ManualEnds Web Support

To provide you with immediate answers and solutions 24 hours a day, 365 days a year, ManualEnds Technology maintains extensive online technical support resources. They are available to you at no cost, are updated daily, and can be found in the Technical Support section of our Web site at

www.manualends.com

Software-Related Resources

- **Example Programs Database**—a database with numerous, non-shipping example programs for ManualEnds Technology programming environments.
- **Tested Software Library**—a Macro Interface Compiler report lists with tested results of other application software.

Hardware-Related Resources

- **Application Database**—a database with application note for ManualEnds Technology automation and supercomputer systems.

Online Problem-Solving and Diagnostic Resources

- **Troubleshooting**—step-by-step guides lead you through common problems and answer questions about our entire product line.
- **Product Help**—a comprehensive, searchable library of the latest editions of ManualEnds Technology hardware and software product helps.
- **Application Notes**—a library addressing specific topics such as windows environment, developing your own automation solution, and applications between platforms and operating systems.

Worldwide Support

You can access these Web sites from www.manualends.com. If you have trouble connecting to our Web site, please contact the source from which you purchased your ManualEnds Technology product(s) to obtain support.

B ■ Error Message

This appendix describes the Error Message and the solution during Installation, and Uninstall program. If any unknown Error Message appears, please inform ManualEnds Technology imminently.