VISUAL BASIC I

CC111
INTRODUCTION TO COMPUTERS

Intended Learning Objectives

- Familiar with the Generation of computer Languages.
- High level of languages translation
- Familiar with the Visual Basic Environment.

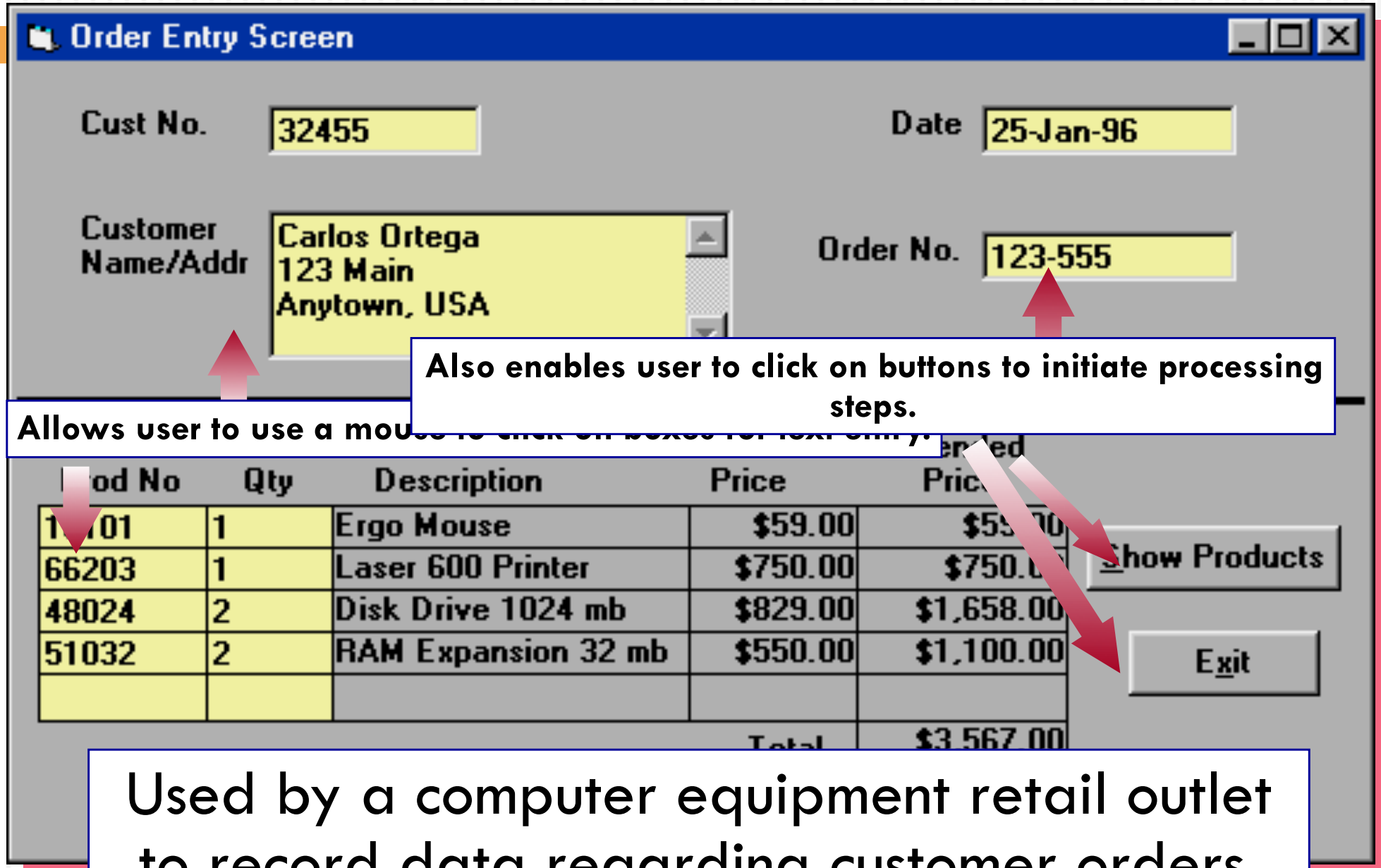
What is Visual Basic?

- High Level 4th Generation Programming Language
- Object and Event Driven
- Visual - Windows Based
- Integrated Development Environment (IDE)

What is VB Used For?

- Most Popular Programming Language
- Stand alone programs
- Customized specialized Applications
  - E- Commerce
    - Web based shopping forms and inquiries
- User friendly Interface to applications

Example Order Entry Screen



Used by a computer equipment retail outlet to record data regarding customer orders.

Generations of Computer Languages

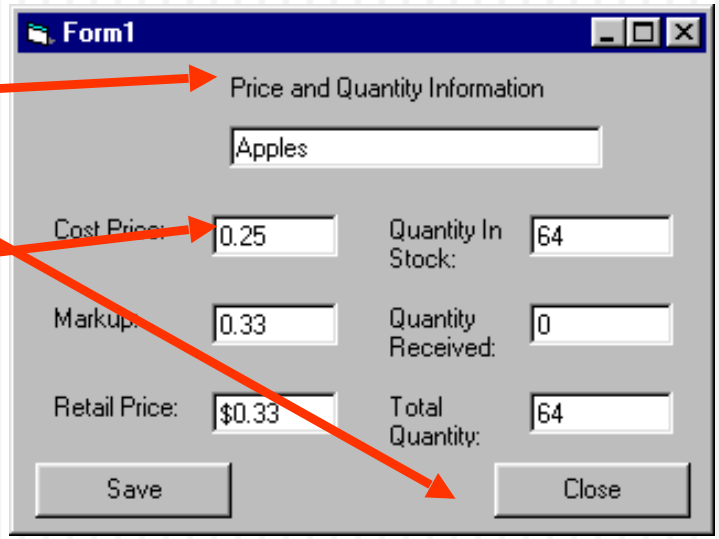
- 1st - Machine language - 0110 0011 1000
- 2nd - Procedure-oriented languages
  - FORTRAN - 1954 for scientists and engineers
  - COBOL - 1959 for business applications
  - C - 1972 - for UNIX operating systems
- 3rd - Object-oriented languages
- 4th - Event-driven languages. Example: **VB**
- 5th - Natural languages

Compiler Vs Interpreter

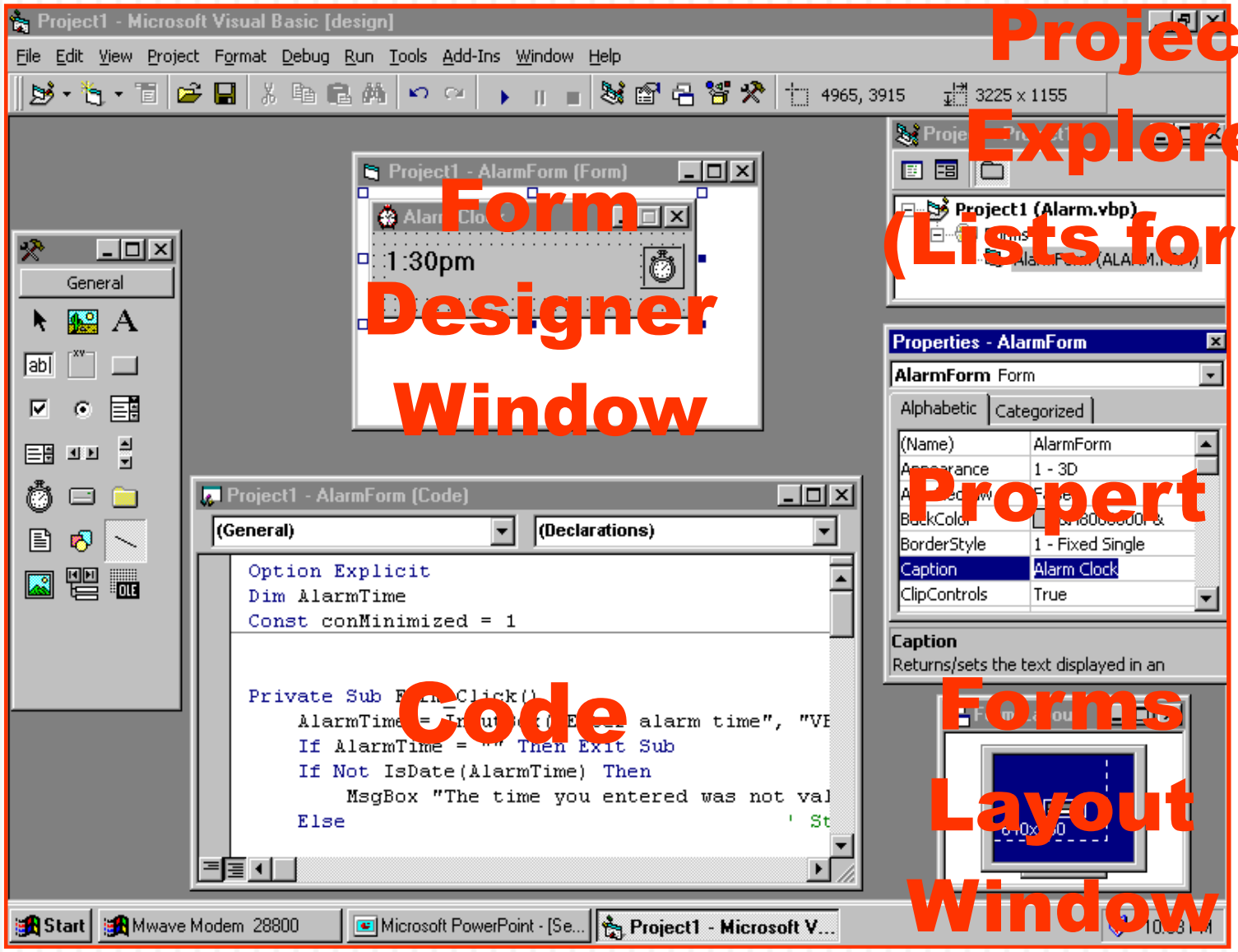
- Higher Languages are translated to Machine Language by:
  - **Interpreter**
    - Translates instructions to machine code line-by-line.
    - BASIC, Quick Basic, **Visual Basic**
  - **Compiler**
    - Translates the entire program to machine code before running it.
    - Fortran, C, C++, **Visual Basic** is also a compiler

What are the Objects in VB?

- **Pre-programmed** Code for:
  - Command Buttons
  - Labels
  - Pictures
  - Text Boxes
- Have both data and procedures wrapped together



What is the Integrated Development Environment (IDE)?



Visual Basic Environment

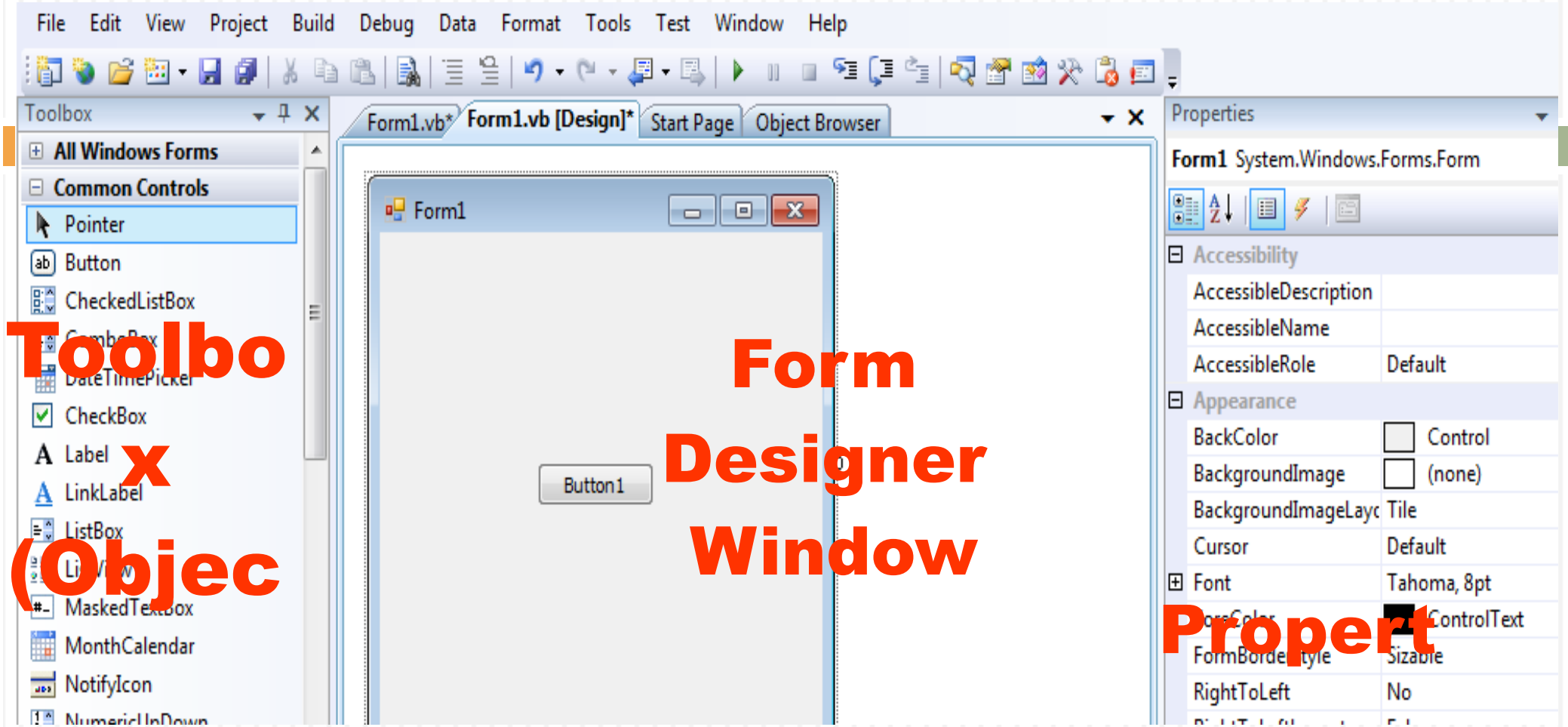
GUI (Graphical User Interface) - forms and windows that the user sees

Property - a characteristic or attribute of an object such as color and size

Event - a user action such as clicking a button

Code Editor window - editor specially designed to help you when writing code

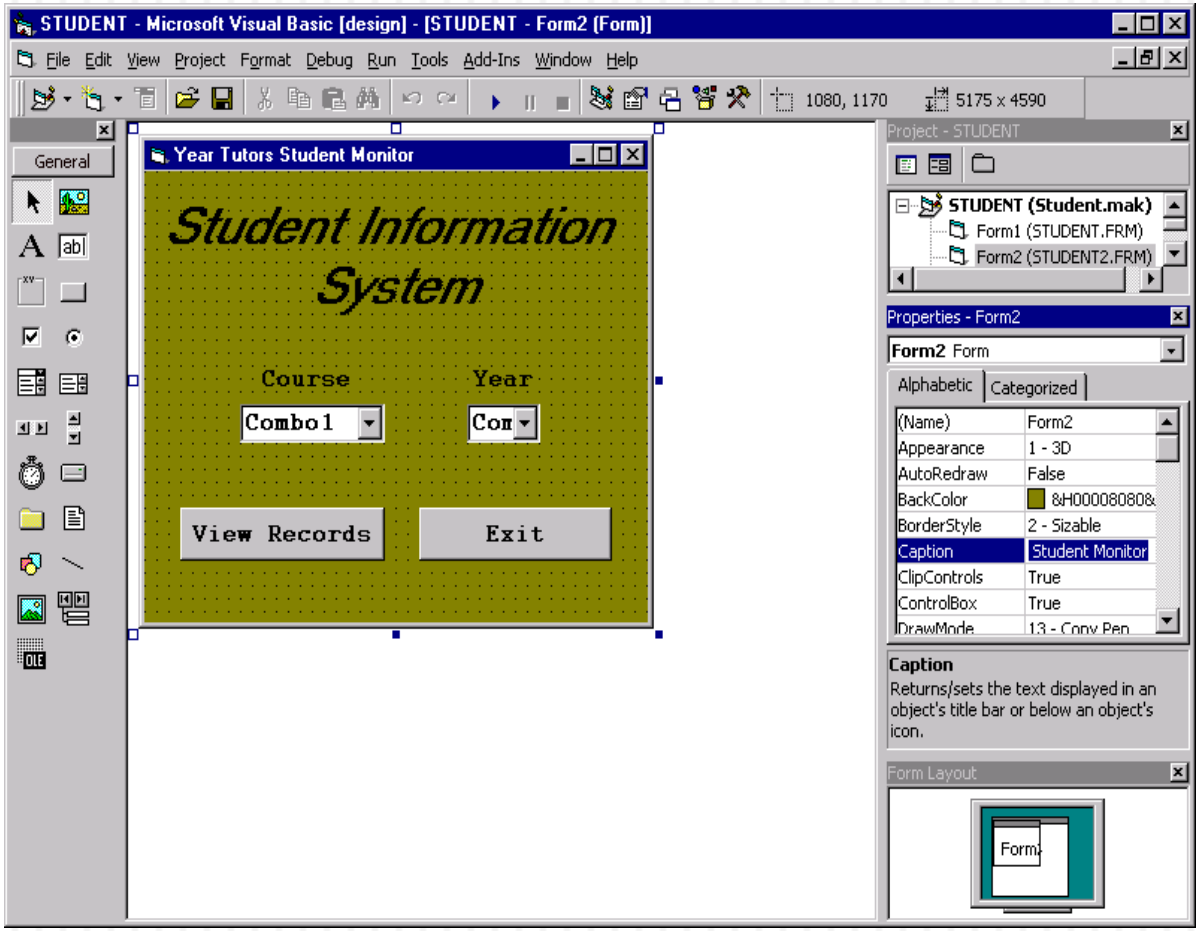
Visual Studio 2008 IDE Environment



- The Form Designer Window show the GUI application
- The Toolbox is used to drag and drop components to your forms
- The Properties window show the value od of the properties of each selected component(Object)

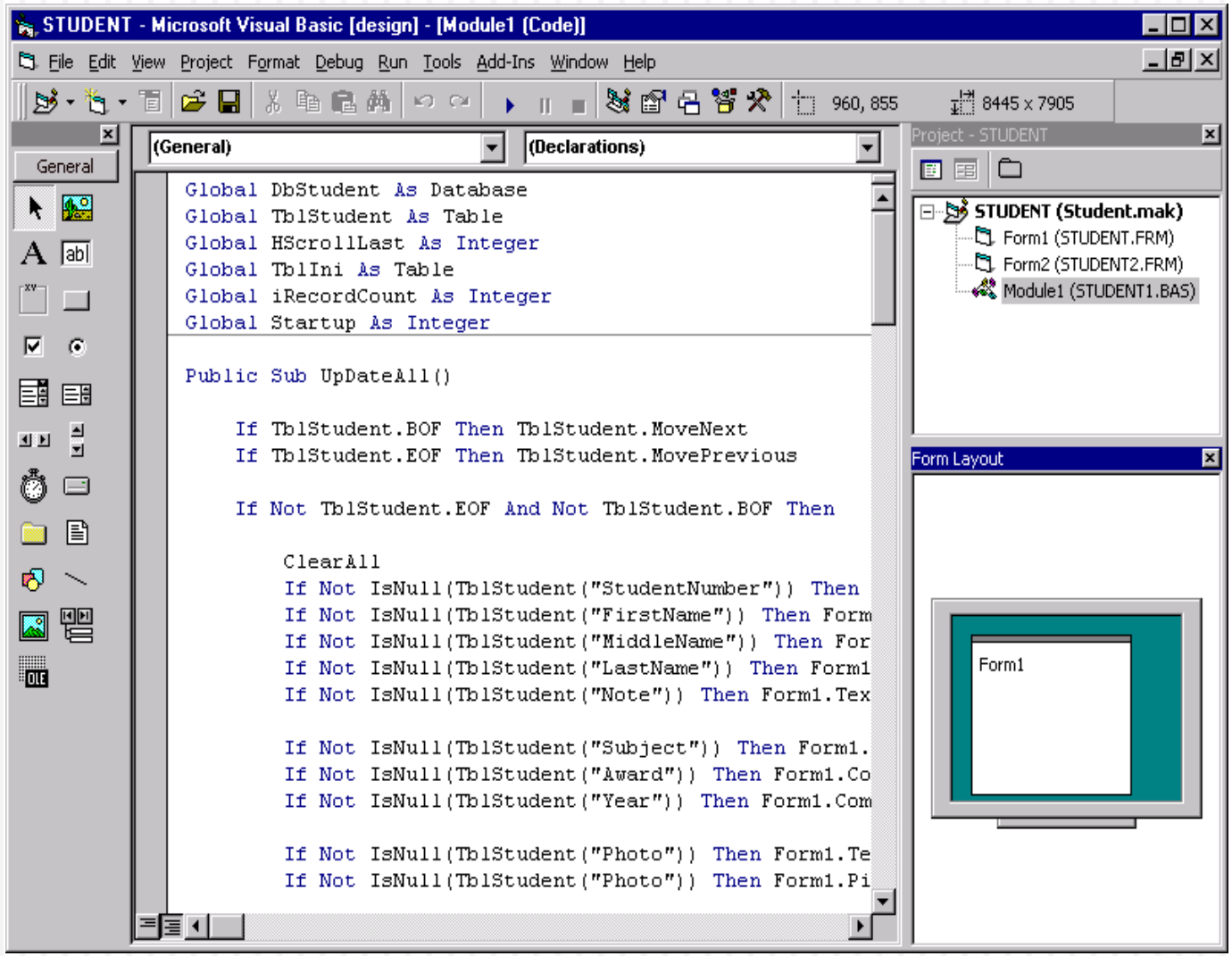
Visual Basic Environment

- Components of the VB design environment (Form view)

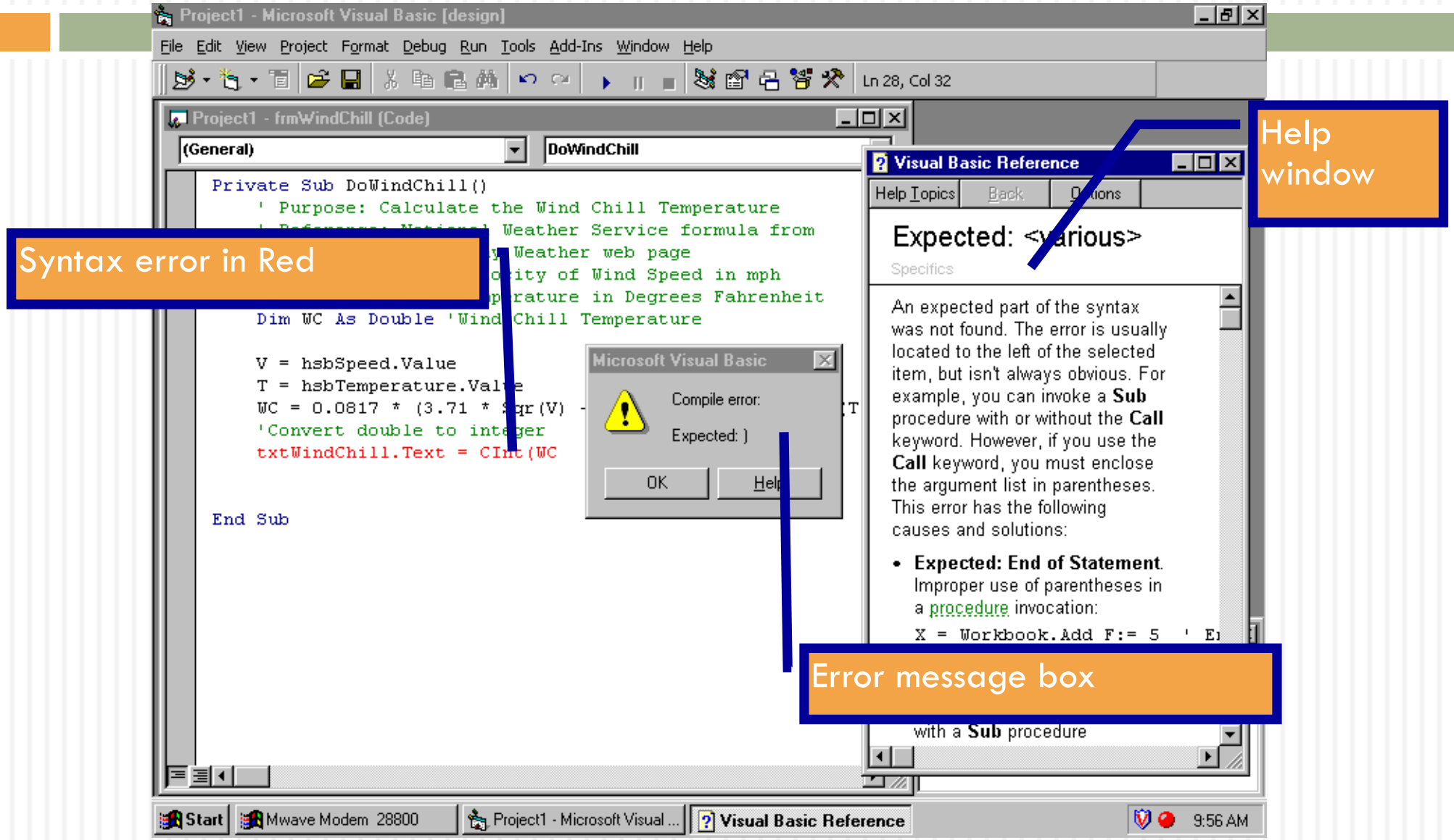


Visual Basic Environment

- Components of the VB design environment (Code view)

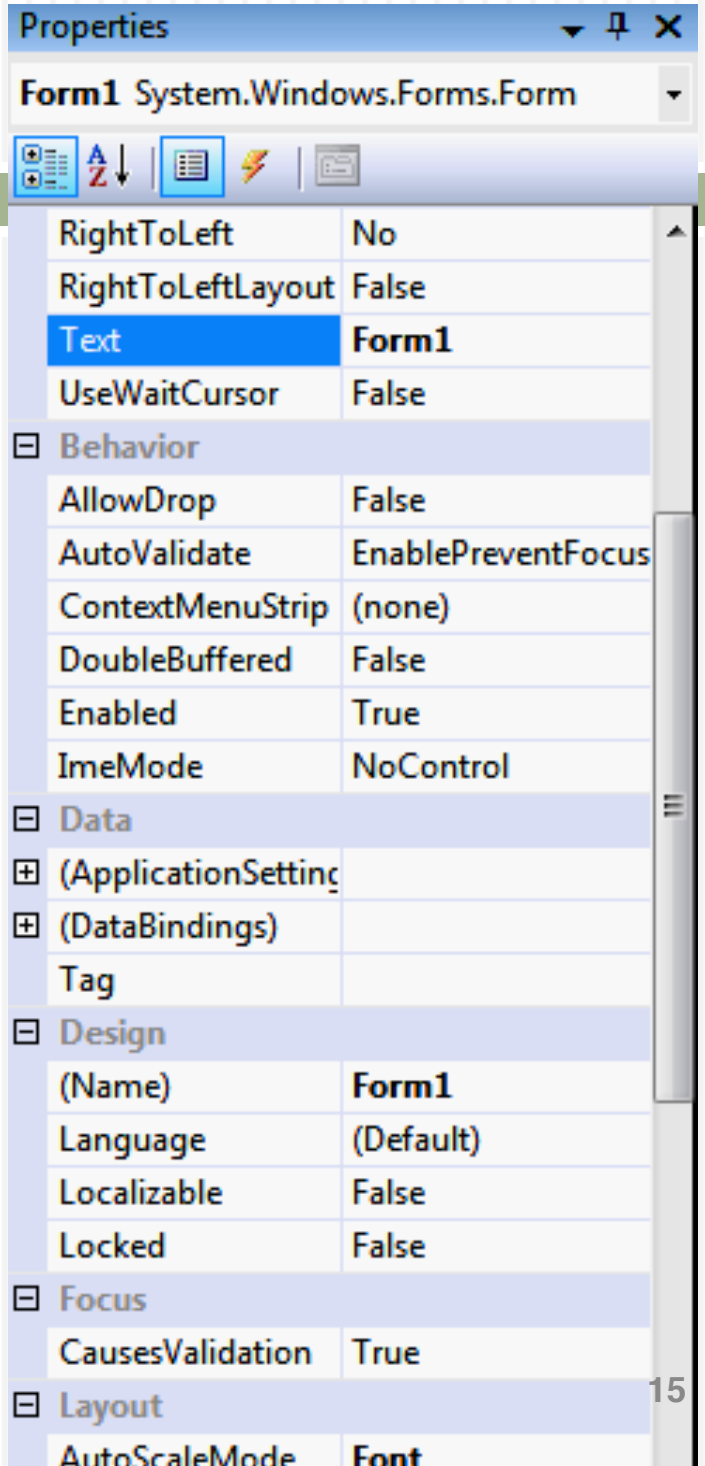


The Code Editor Window



Properties Window

- Used to set how a control looks and behaves
- Holds its default values



Control Toolbox

Pointer
Label
Group Frame
Check Box
Combo Box
Horizontal Scroll Bar
Timer
Directory List Box
Shape
Image
OLE

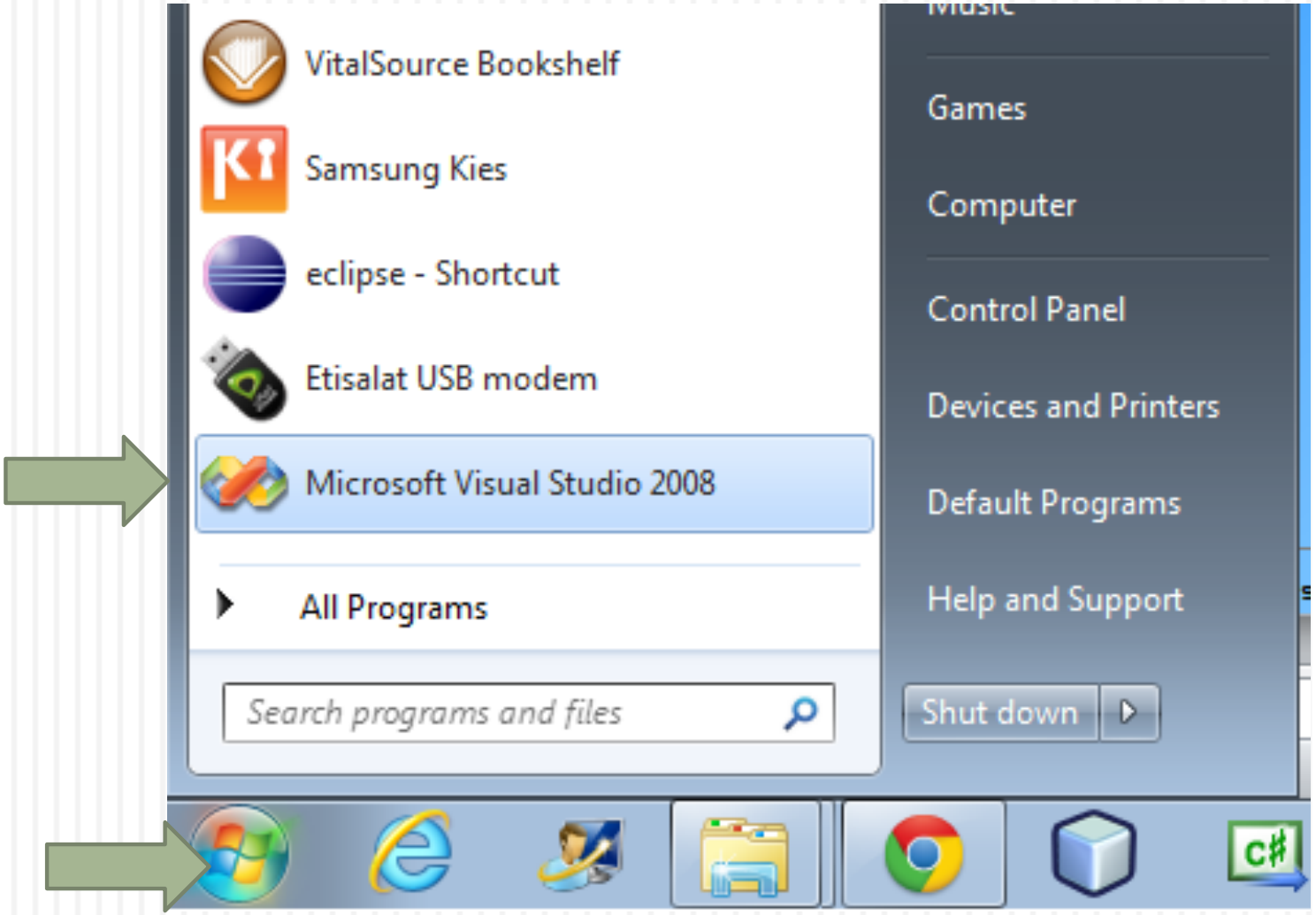
Picture
Text Box
Command Button
Option/Radio Button
List Box
Vertical Scroll Bar
Drive List Box
File List Box
Line
Data Control

Building Your First Application

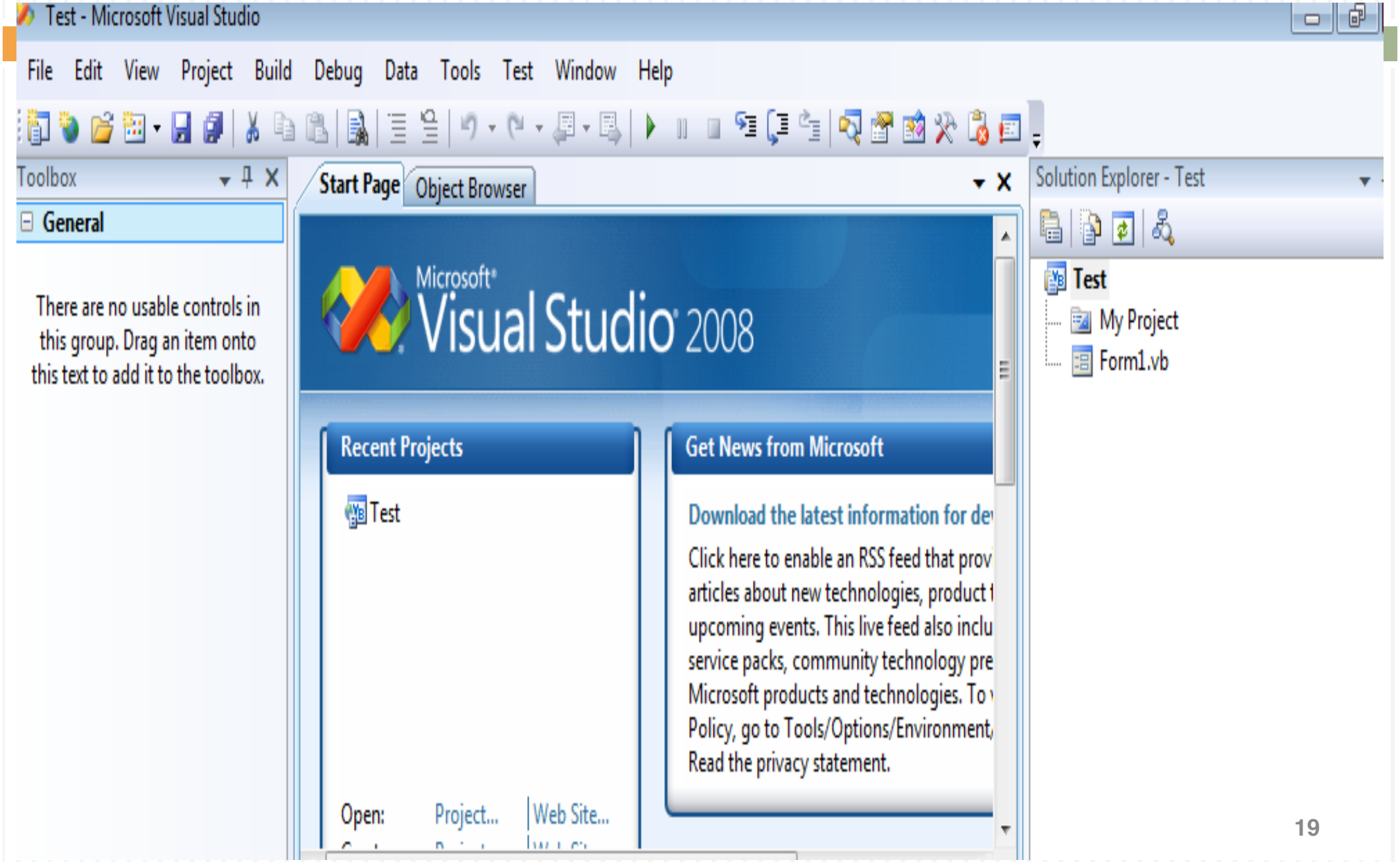
- There are three primary steps in building a Visual Project:
  - Place (or draw) controls on the form.
  - Assign properties to the controls.
  - Write event procedures for the controls.

WelcomeApplication.exe

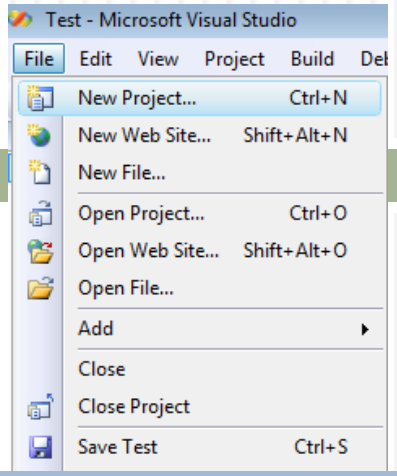
Starting Visual Basic

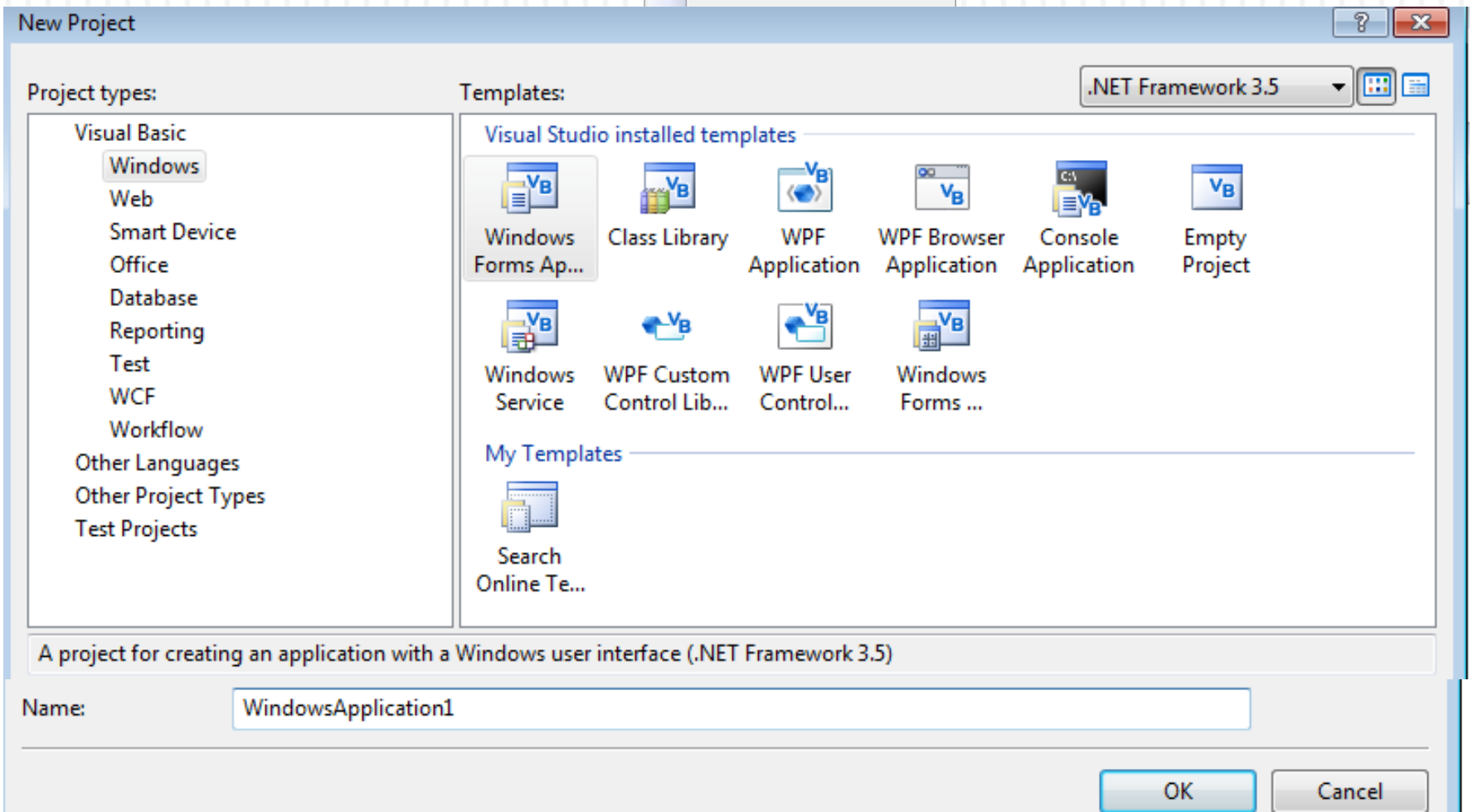


Starting Visual Studio 2008

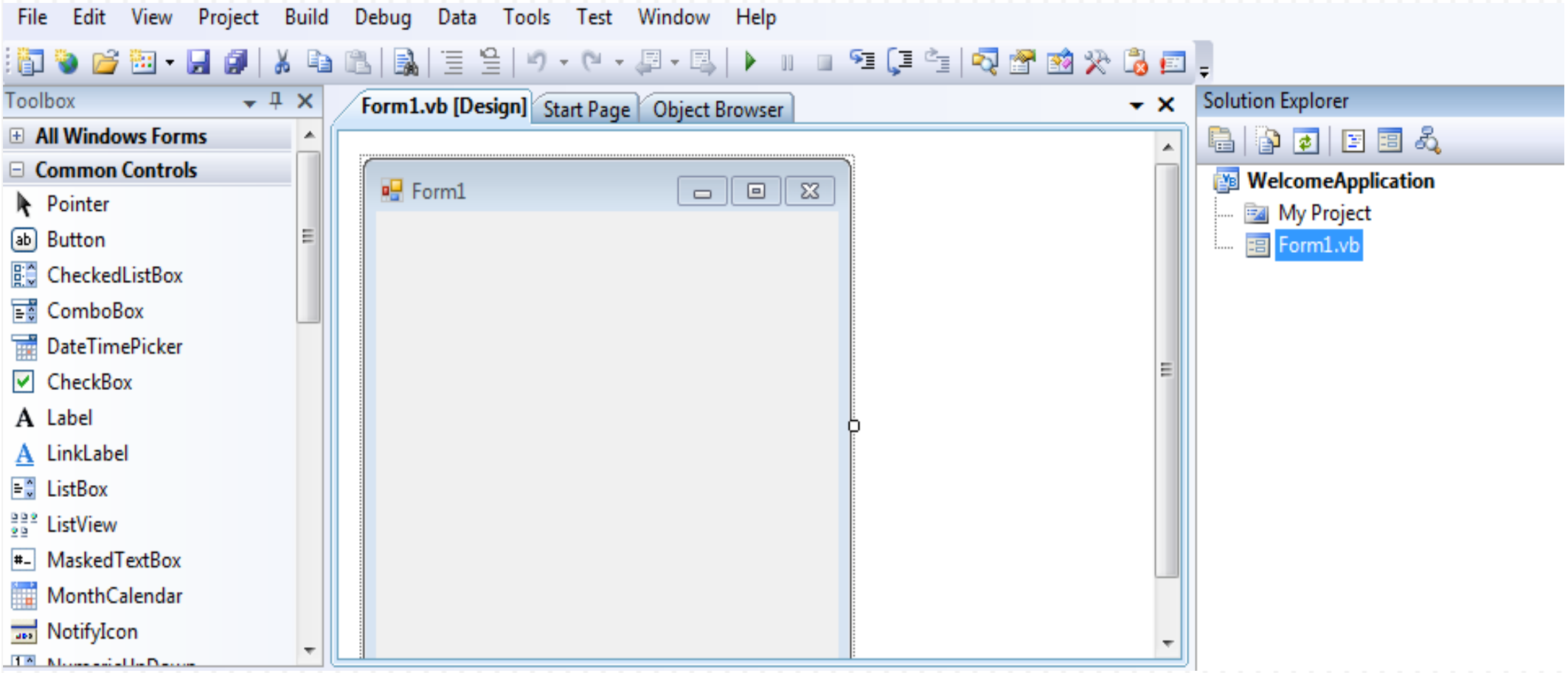


Creating New Project

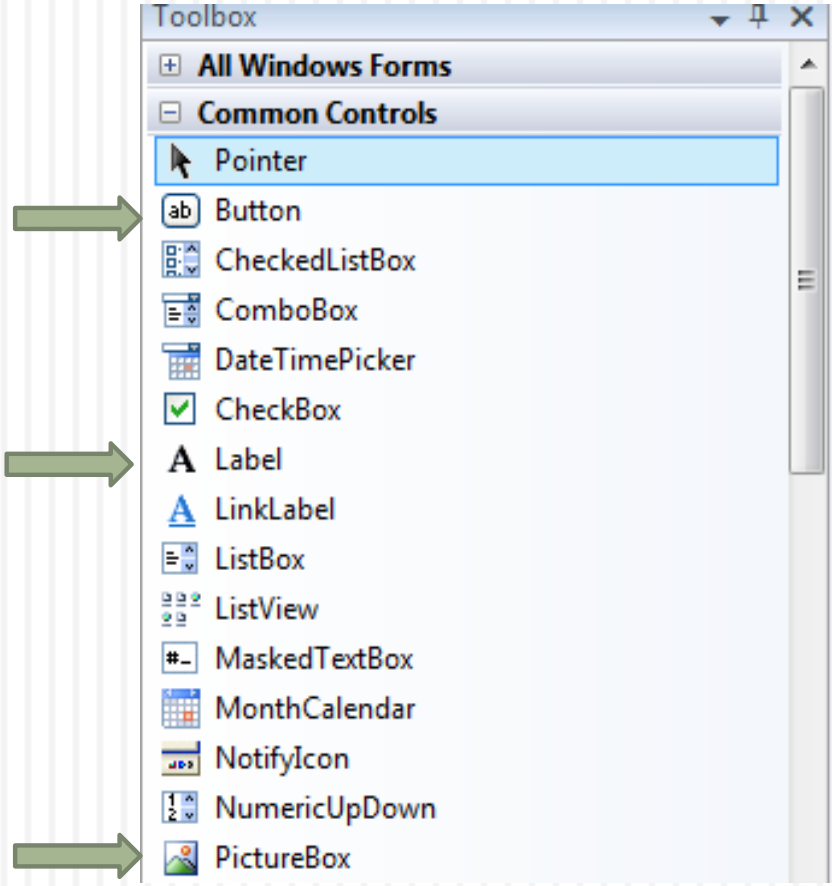




Project initial interface

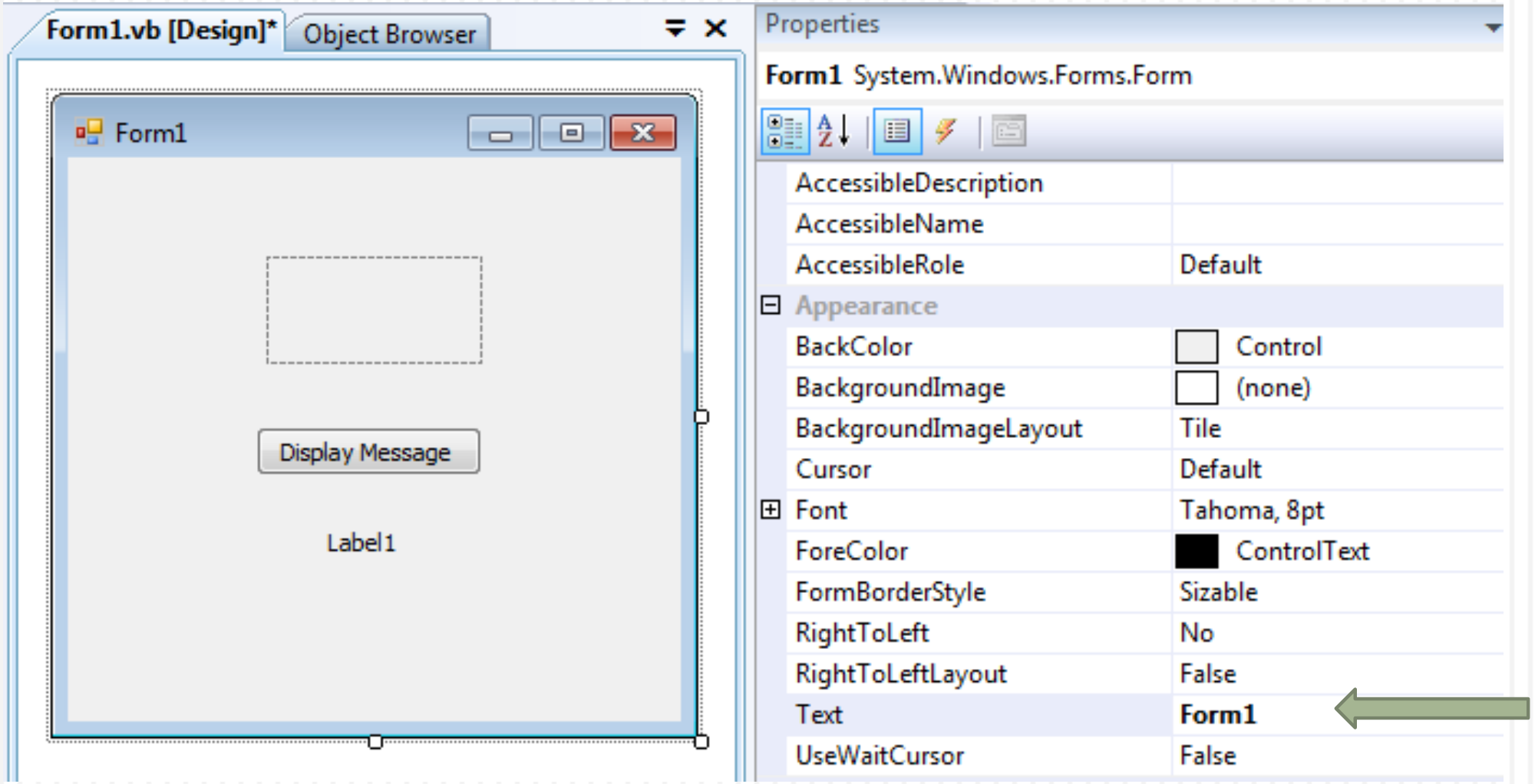


Step1 :Draw your controls

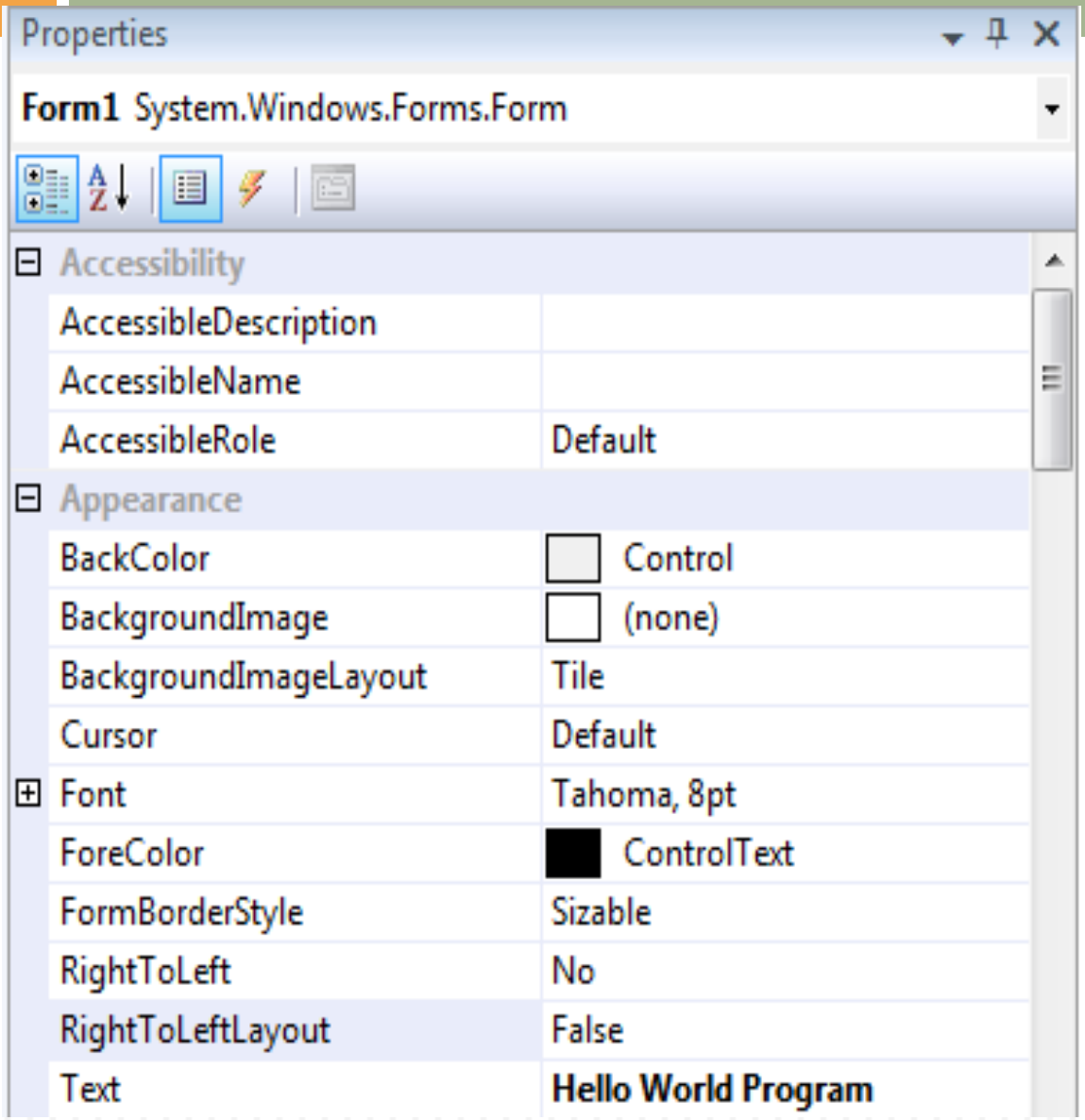


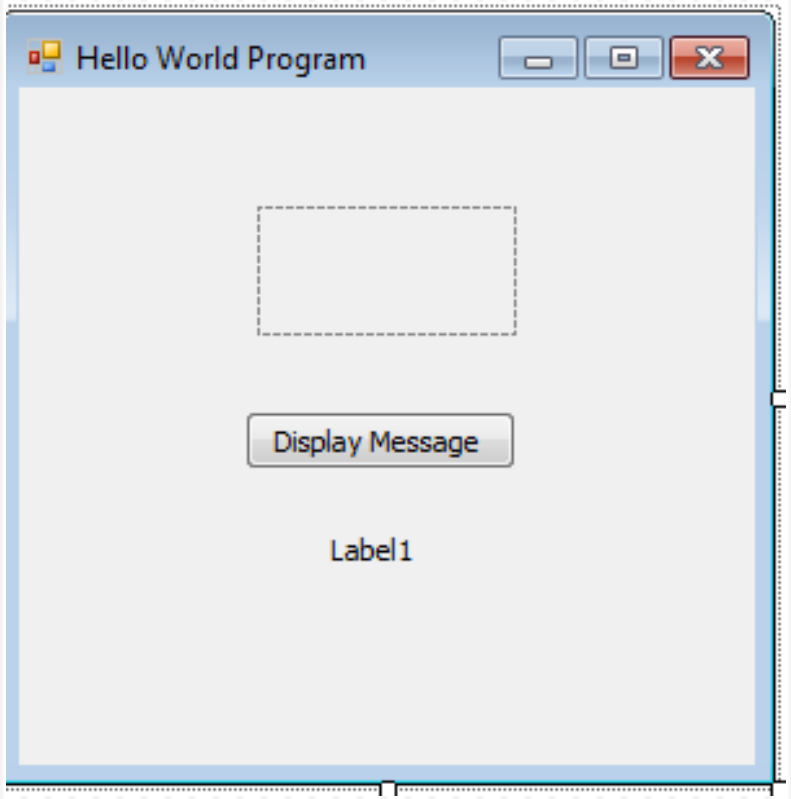
Step 2 : Assign Properties

Changing the Form Title

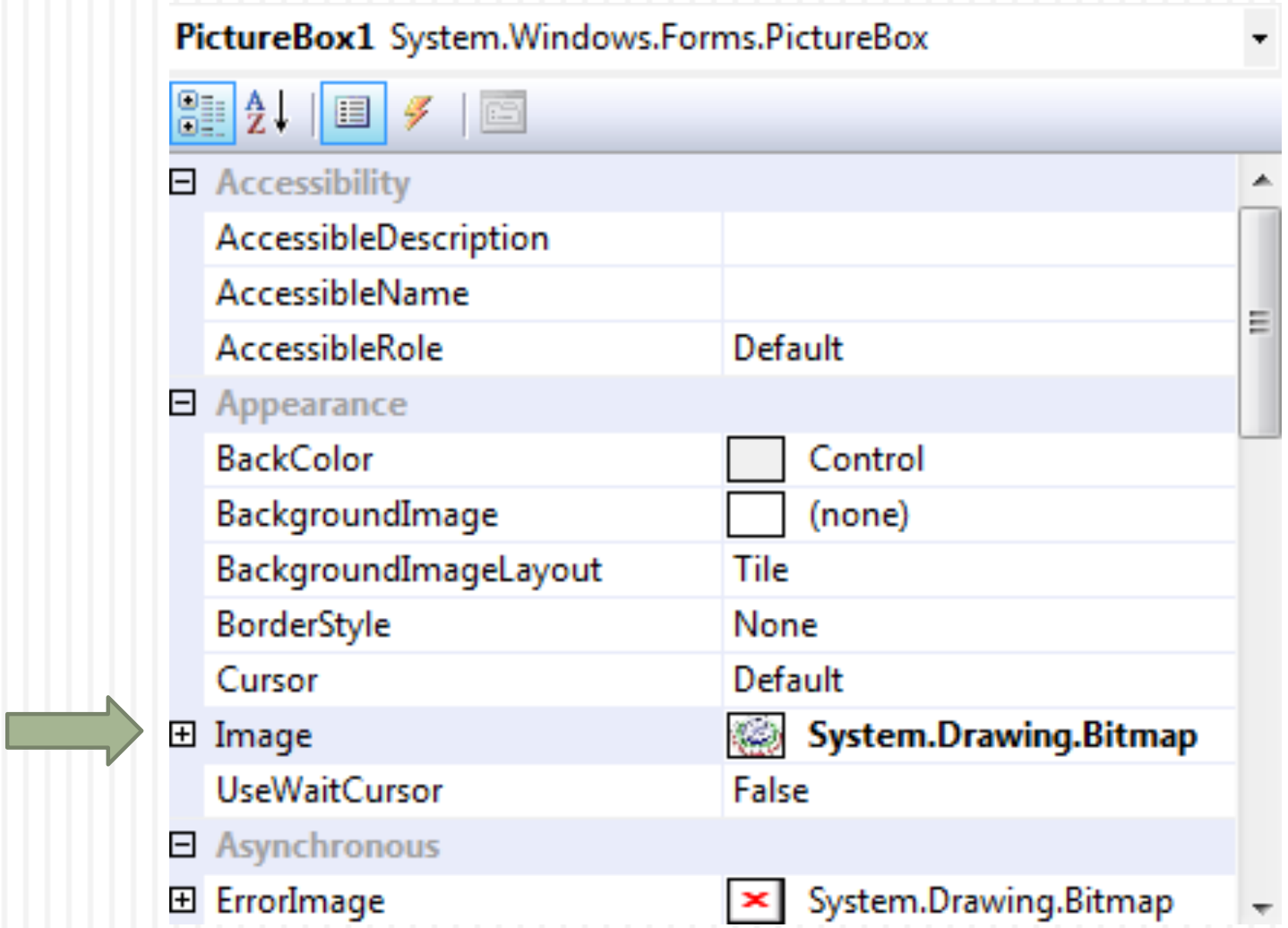


Changing the Form Title……

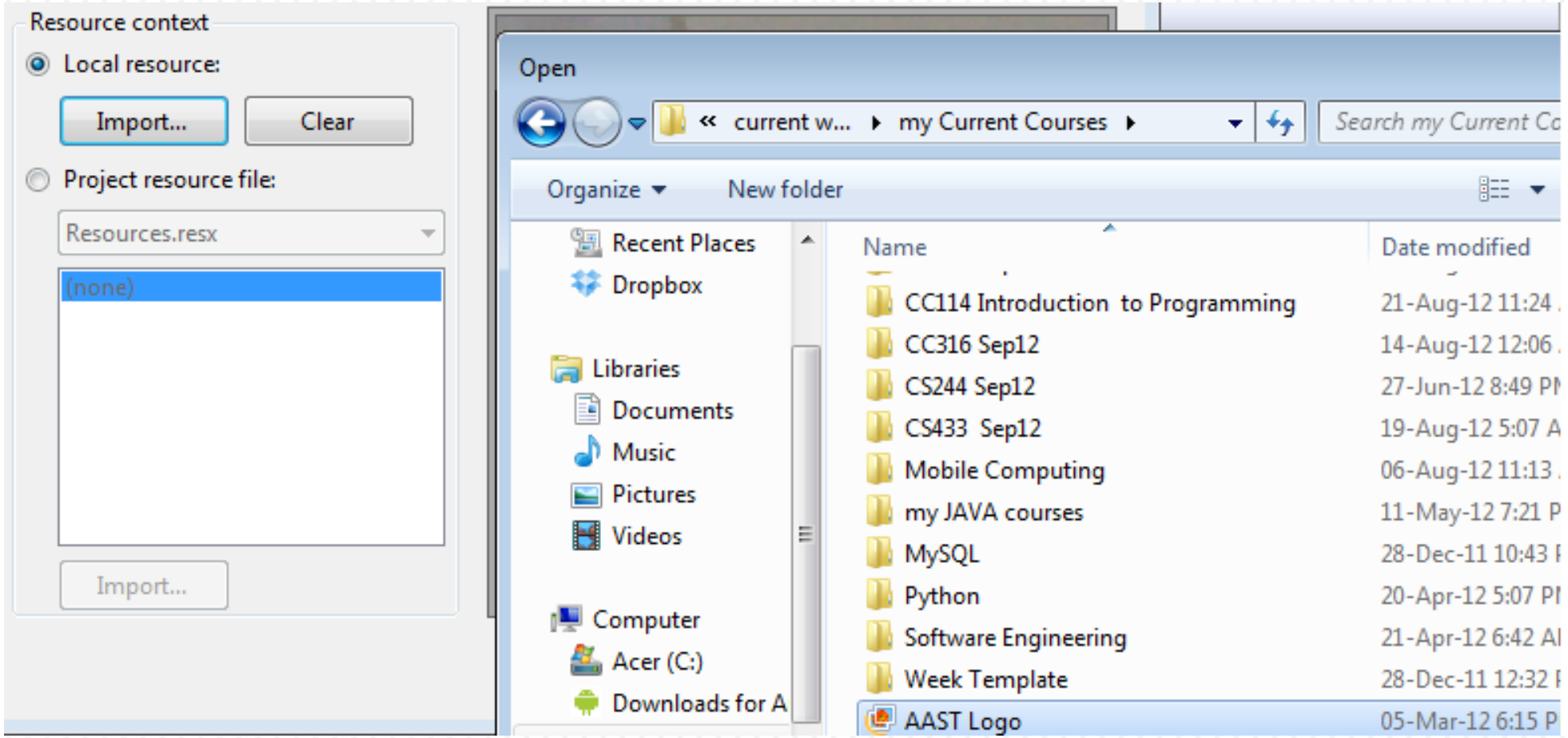




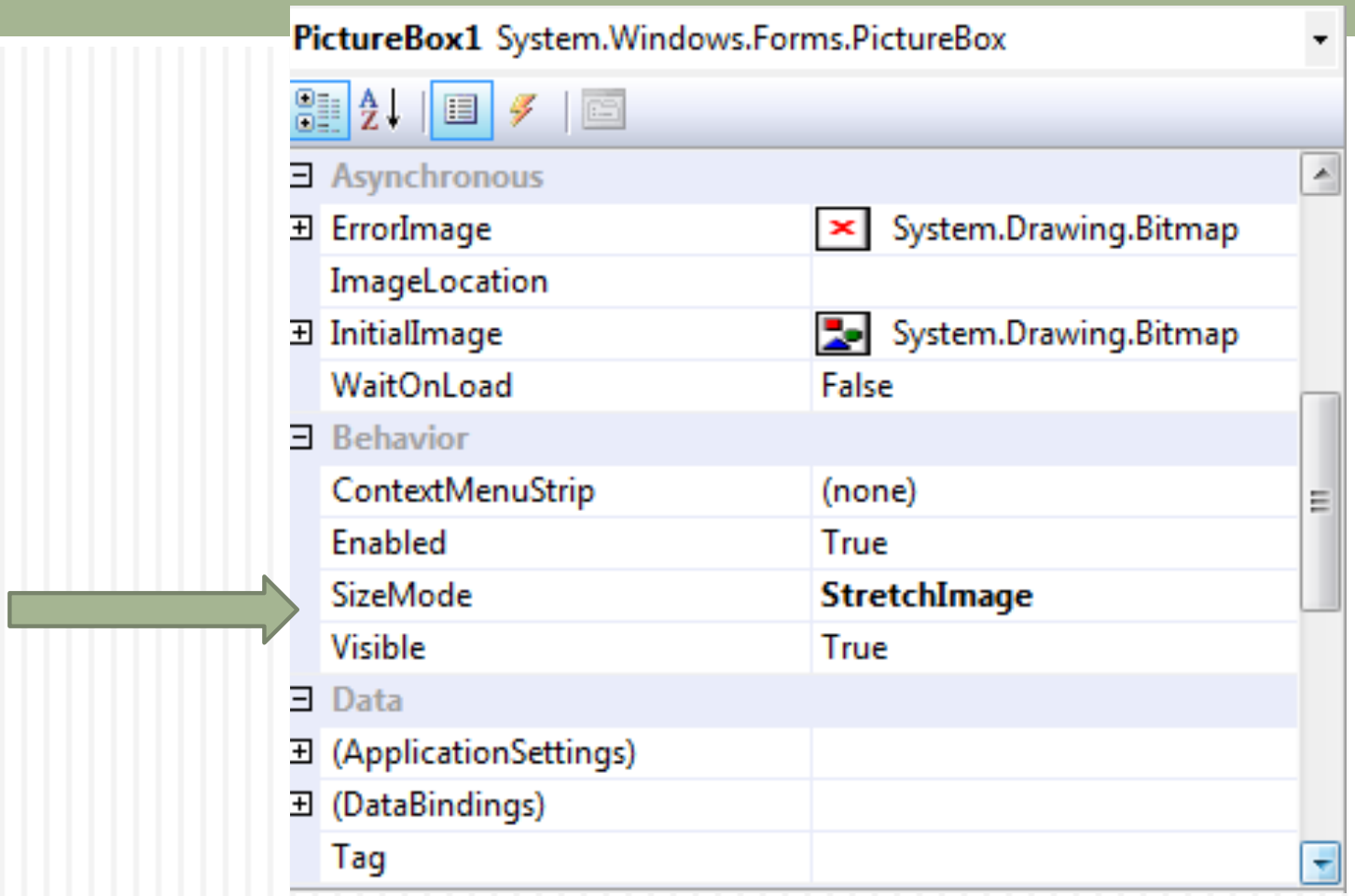
Edit Image Properties



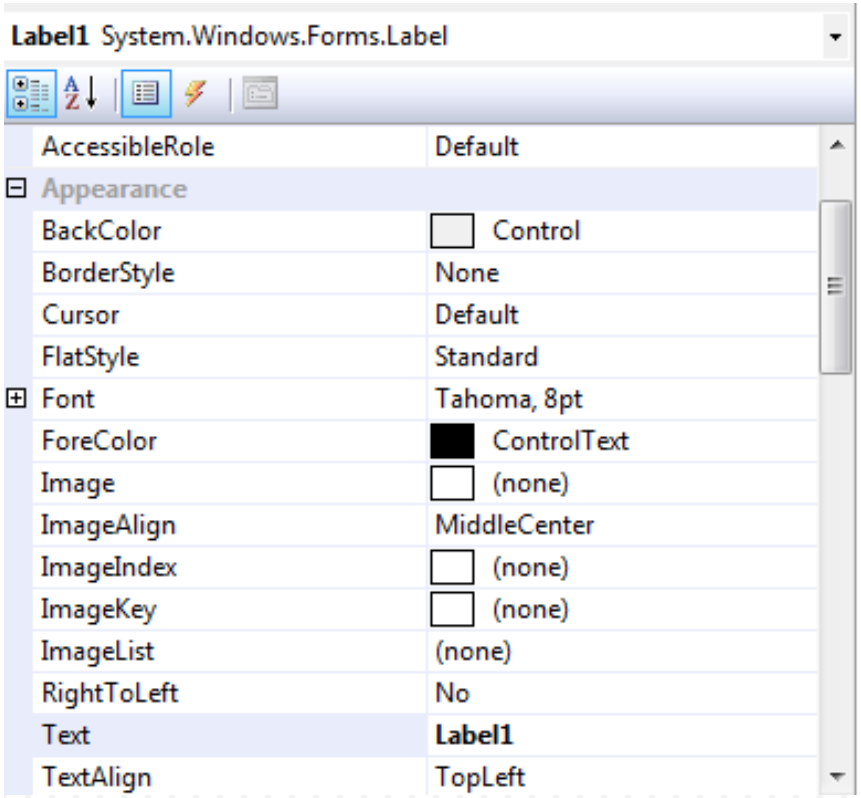
Browse for an Image

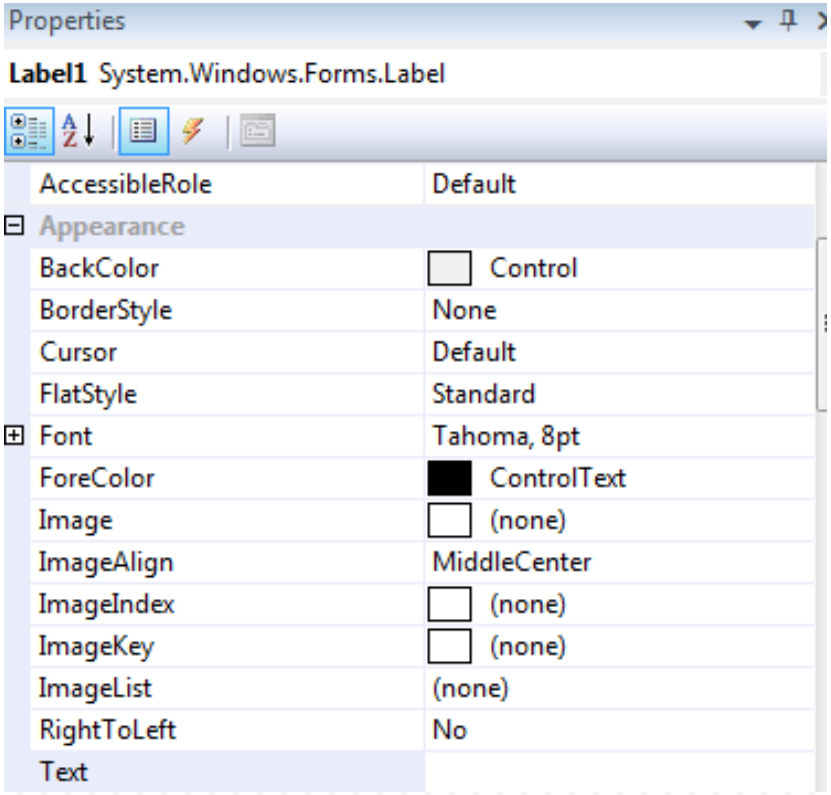


Edit the SizeMode property of the PictureBox



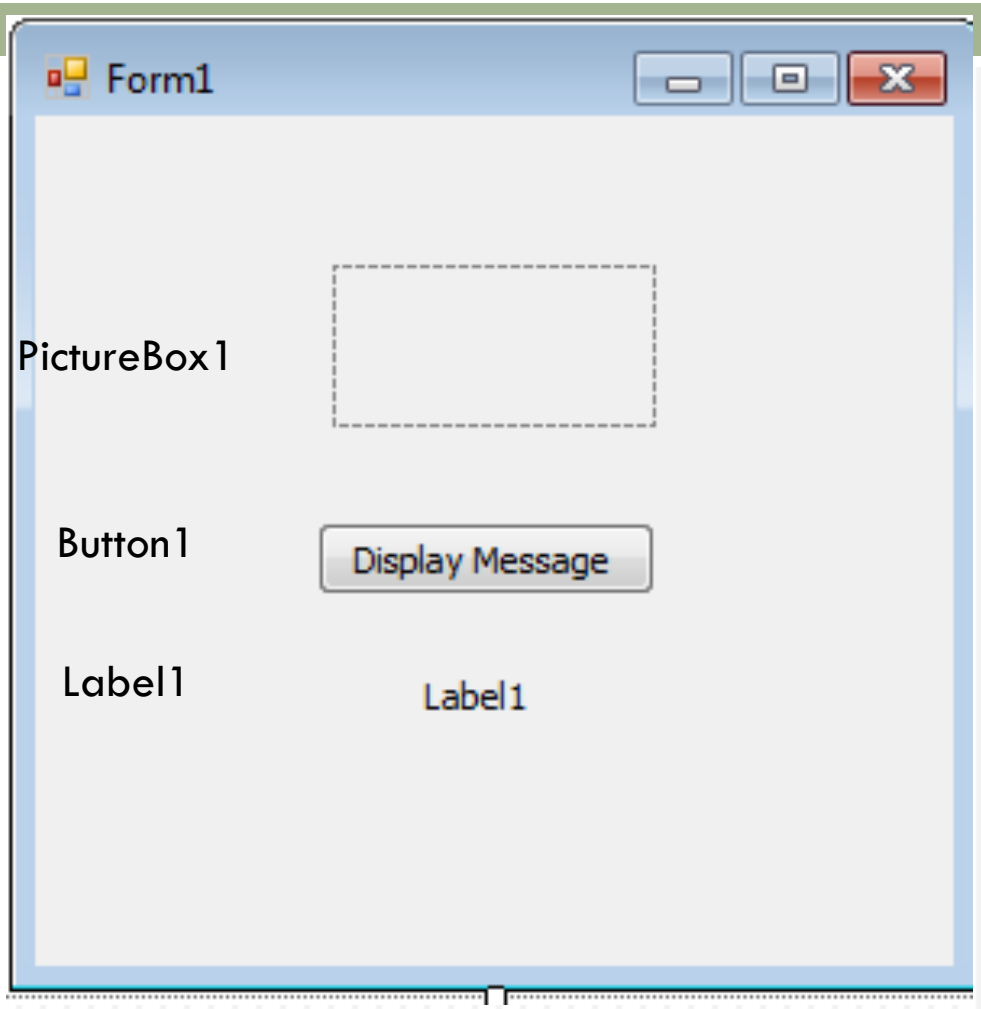
Edit the Text Property of Label1





The Text Property is changed to “ “

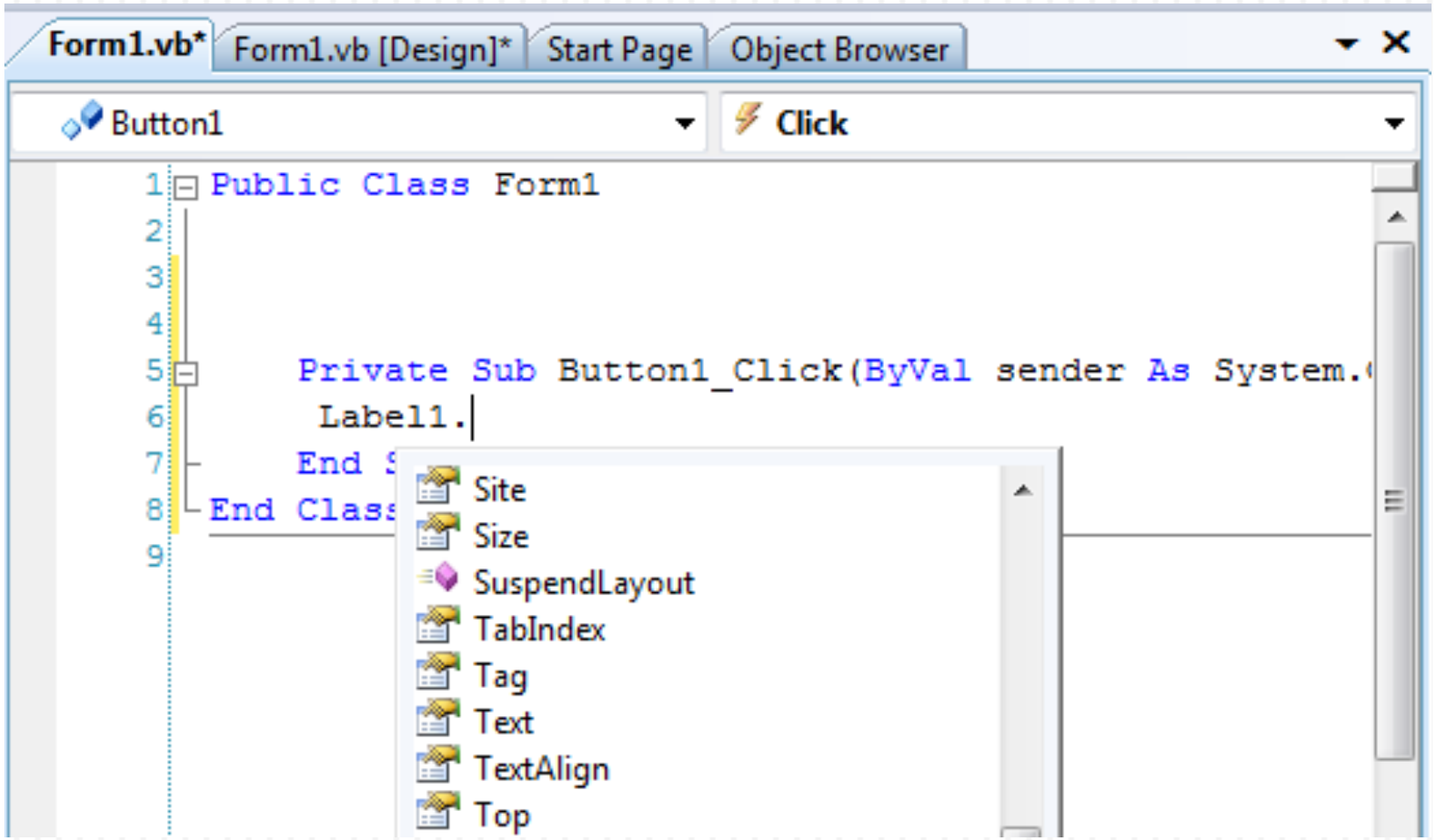
Accessing components properties from code



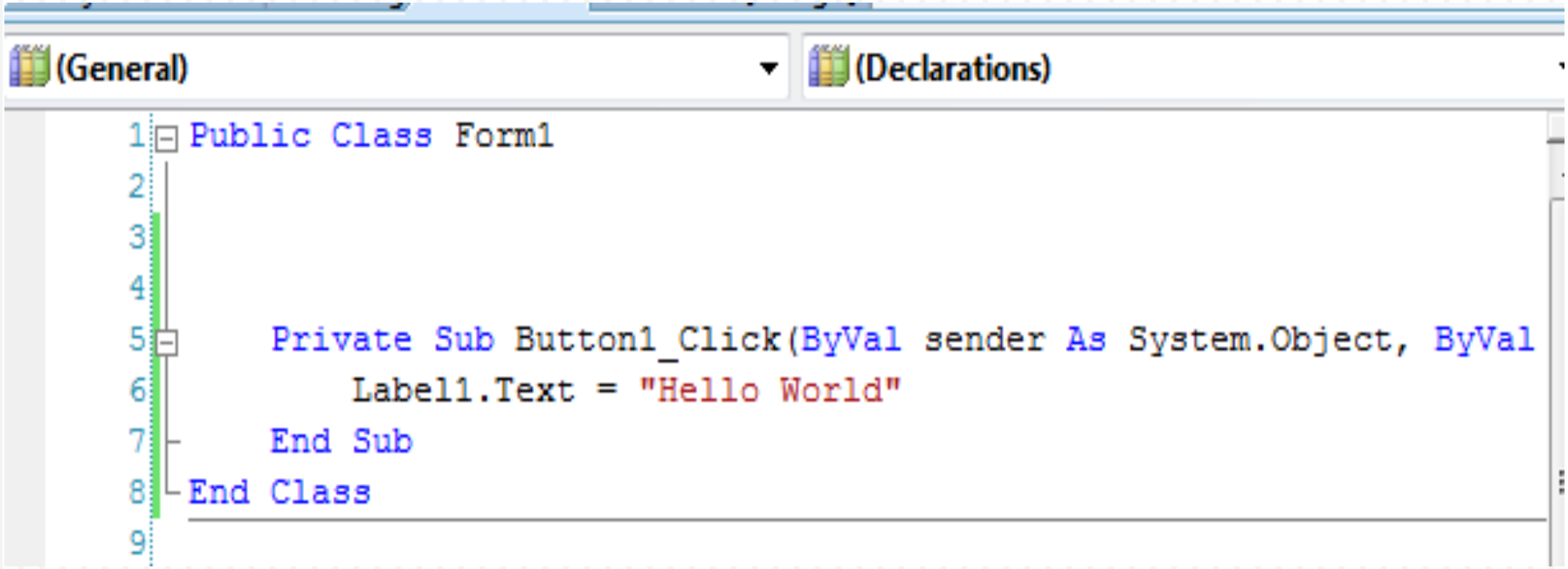
Each Component has a name, you access its property by: **componentName.PropertyName**

Step 3:Writing the Code (Events)

Double click on the Button then write your code



Writing the Code (Events)



Running the Application