

Name: \_\_\_\_\_

We'll use the laptops in the cart (or your own laptop) to explore Visual Studio. You may work individually or in pairs. It would be a good idea if you always use the same laptop.

One-time setup steps to follow:

1. Select Start | All Programs | Microsoft Visual Studio 2008 | Microsoft Visual Studio 2008
2. Select Visual Basic Development Settings as the default environment
3. To configure Visual Basic like the textbook select Tools | Options and under the Projects and Solutions select General. For the Visual Studio projects location choose the Desktop
4. Still in the Tools | Options under Projects and Solutions select VB Defaults and change the settings to:
  - Option Explicit: On
  - Option Strict: On
  - Option Compare: Binary
  - Option Infer: Off <You'll see this using your Express version with the textbook>
5. Click the "OK" button

Creating a new project:

1. Select File | New Project
2. In the Project types (right) pane select Visual Basic | Windows (under Express skip this step)
3. In the Templates (left) pane select Windows Application (under Express select Windows Forms Application)
4. Change the default WindowsApplication1 name to Tutorial 1-4 and then click the "OK" button
5. Select File | Save All and check that the Name and Location look correct. Modify if necessary and Save

Set Visual Studio's Options:

1. Select Tools | Options and under Text Editor | Basic make sure that **all** the options are checked
2. Still in Tools | Options but under Windows Forms Designer set
  - the Grid Size to **8, 8**
  - LayoutMode to **SnapLines**
  - ShowGrid to **True**, and
  - SnapToGrid to **True**.
3. Click "OK"

Now you can explore on your own with this project.

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The general steps for developing a Visual Basic application include

Understanding the problem

1. Clearly define what the application is to do: purpose, inputs, processing, outputs

Design screens

2. Visualize application running and design its user interface – sketch it on paper
3. Make a list of the controls needed, decide on their names, and write a description
4. Define the values of each control's relevant properties

Design actions behind buttons

5. Make a list of methods needed for each control (user actions they must respond to)
6. Create a flowchart or write pseudocode for each method
7. Check the code for errors by walking through its execution (sketch screens and

trace variables)

Build screens

8. Start Visual Studio and create forms and other controls

Write code for actions

9. Write code for event procedures and other methods of step 5

Test correctness

10. Attempt to run the application and correct syntax errors

Repeatedly run the program with test data as input and correct any run-time or logical errors

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Perform steps 1 to 6 on the following programming problem.

Design an application that gets from the user the starting balance of a savings account, the total dollar amount of the deposits, and the total dollar amount of withdrawals. The application should calculate the ending account balance.