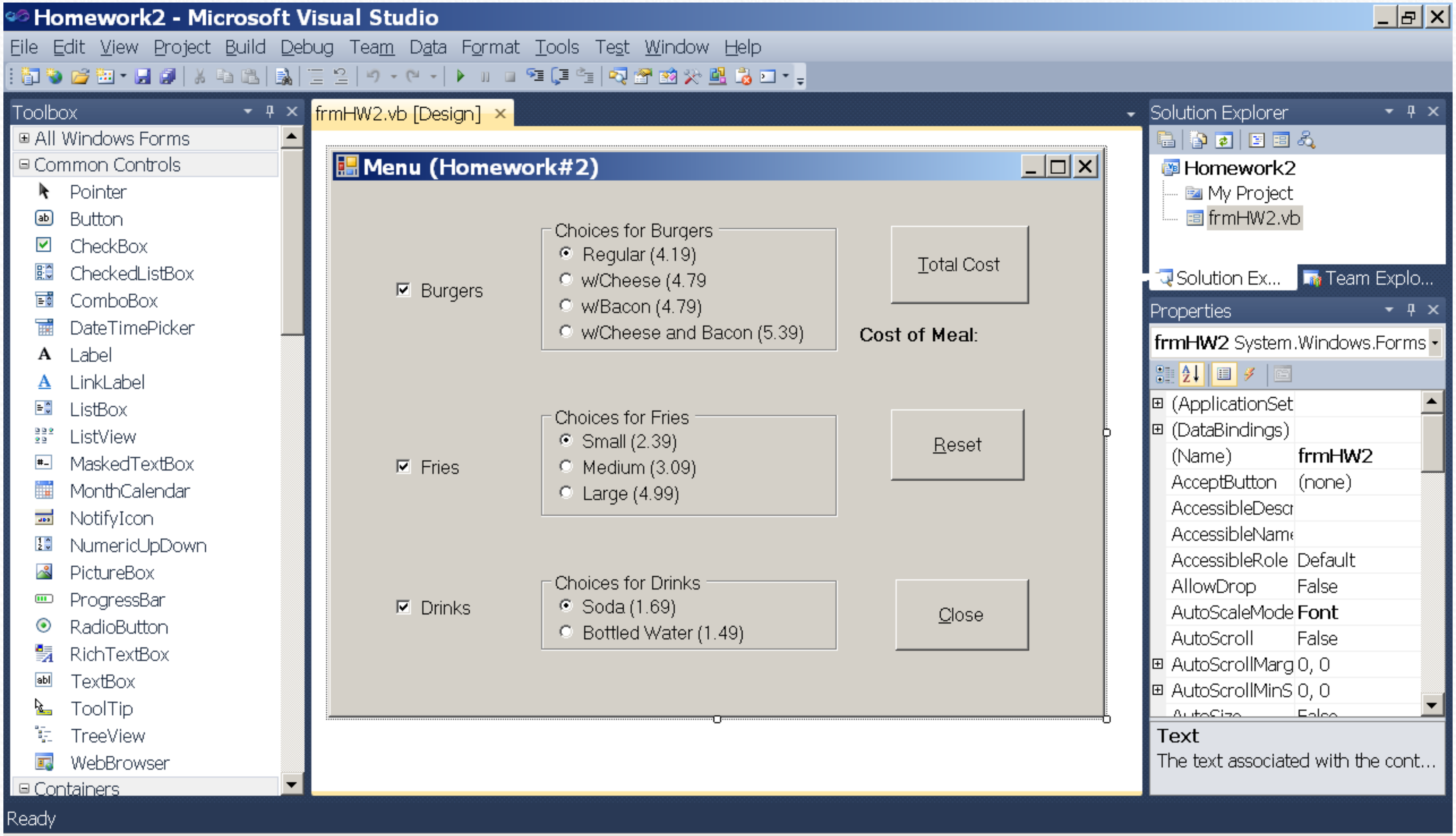
The Beginning

1. IDE – Interactive Development Environment
2. Forms, Controls, Properties, Events
3. Syntax and Semantics of a Language
4. Style and Standards
5. A Few Standards
6. Activities – 4-5 per Section
7. Projects (1-4)

The IDE has 3 modes: Design (shown here); Running; and Debugging (Break) modes

1. IDE: Very Customizable



Menu (Homework#2)

☑ Burgers

Choices for Burgers
● Regular (4.19)
○ w/Cheese (4.79
○ w/Bacon (4.79)
○ w/Cheese and Bacon (5.39)

Total Cost

Cost of Meal:

☑ Fries

Choices for Fries
● Small (2.39)
○ Medium (3.09)
○ Large (4.99)

Reset

☑ Drinks

Choices for Drinks
● Soda (1.69)
○ Bottled Water (1.49)

Close

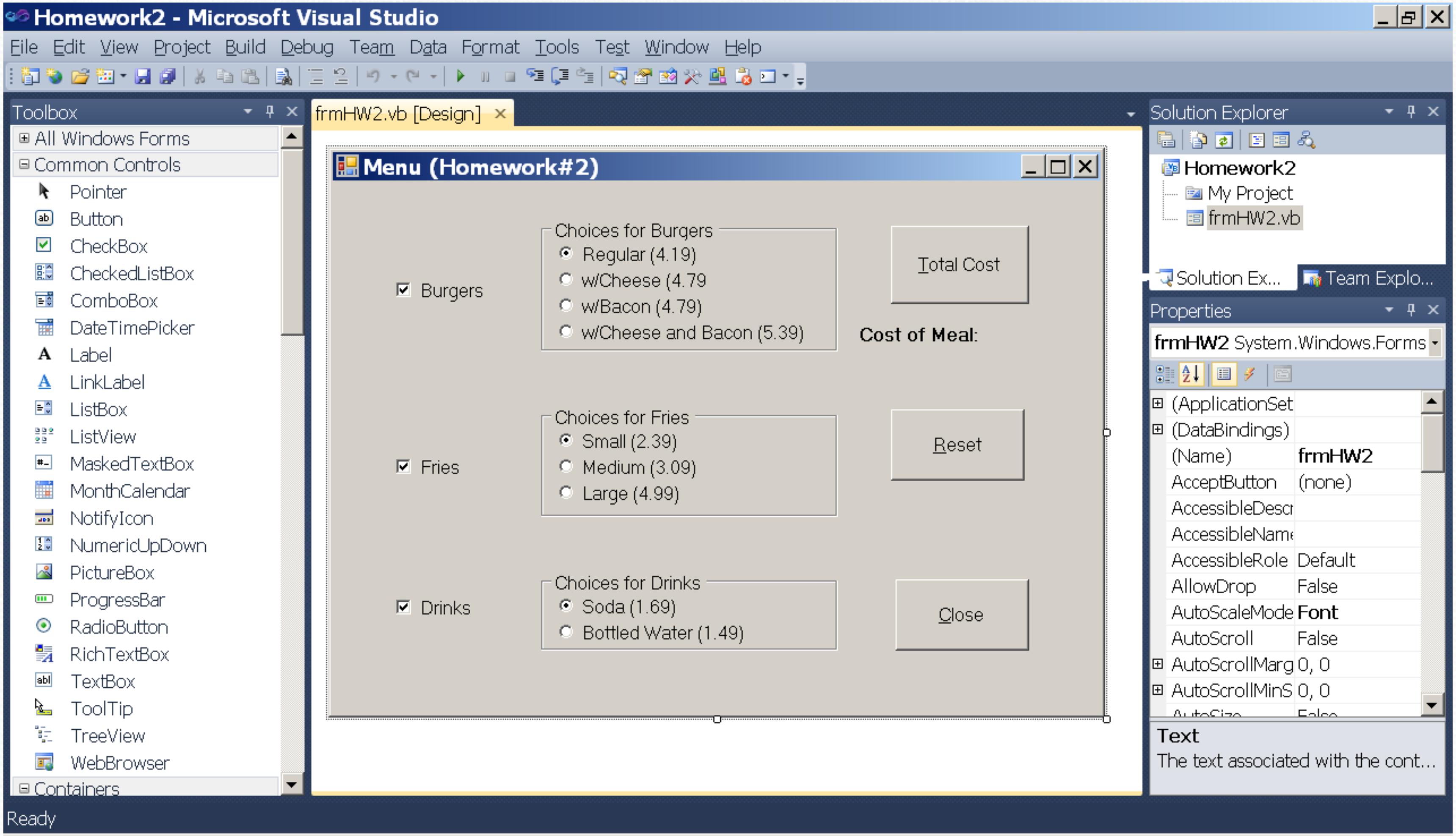
frmHW2 System.Windows.Forms

(ApplicationSet	
(DataBindings)	
(Name)	frmHW2
AcceptButton	(none)
AccessibleDescr	
AccessibleName	
AccessibleRole	Default
AllowDrop	False
AutoScaleMode	Font
AutoScroll	False
AutoScrollMarg	0, 0
AutoScrollMinS	0, 0
AutoSize	False

Text
The text associated with the cont...

Tool Box on the Left has all the controls that can be placed on the form. It's "tacked" open currently.

1. IDE: Very Customizable



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Choices for Drinks
- ● Soda (1.69)
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Cost of Meal:

frmHW2 System.Windows.Forms

⊞ (ApplicationSet	
⊞ (DataBindings)	
(Name)	frmHW2
AcceptButton	(none)
AccessibleDescr	
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AccessibleRole	Default
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⊞ AutoScrollMarg	0, 0
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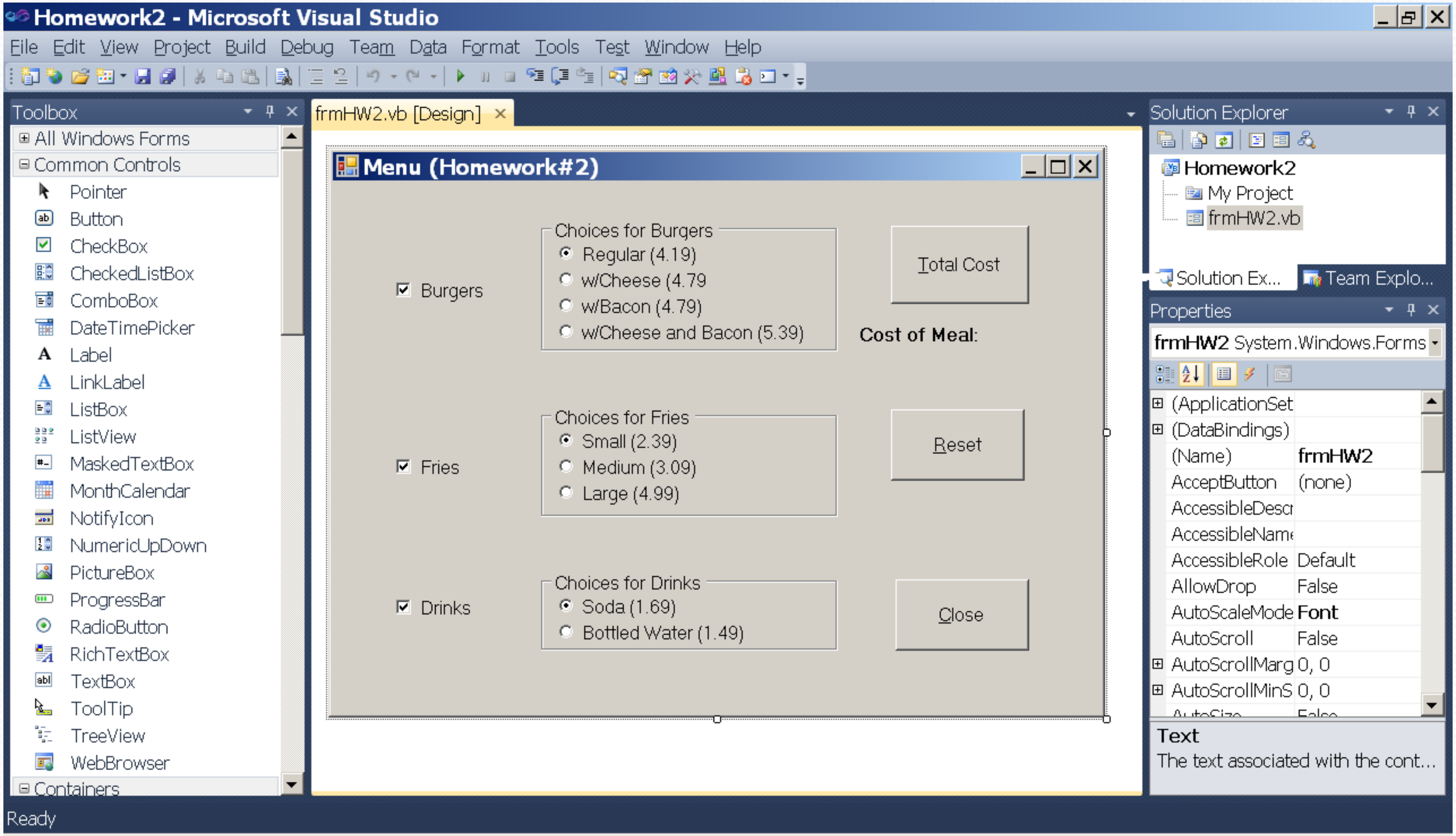
AutoSize	False

Text
The text associated with the cont...

Solution Explorer Window shows frmHW2 which is opened. Form is shown in Design View; Also, the Form's Properties Window is Displayed.

1. IDE: Very Customizable



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Text
The text associated with the cont...

2) Forms, Controls, Properties, Methods, and Events

- Form: An Object which is ends up as a Window.
- Control: The Tool Box holds controls to be placed on a form.
  - Examples: Textbox, Label, Button
- Property: Forms and Controls have properties which are either Set or Read at Design Mode or at Run Mode.
  - Example: Label1.Text = "Name: "
- Method: Objects have methods which are invoked and typically pass parameters to it.
  - Example: lstPresidents.Items.Add("George Washington")
- Event: Objects have events which are implemented as code.
  - Example: Form_Load event occurs when Form is first loaded.

3. Syntax and Semantics

- The syntax of a language is the structure. IE: How to use the symbols of the language to get the desired results.
- The semantics of the language is the meaning of what those symbols produce.
- Example:
  - intIncrease += 1
    - This is a correct syntax in VB.Net.
    - The semantics of this statement means increment the variable intIncrease by one.
  - intIncrease := Add 1
    - This is incorrect syntax in VB.Net.
    - The semantics of this statement makes no sense.

4. Style and Standards

- Style is a way of writing the syntax of the language.
- These 3 style examples all perform the same semantics:

  -
    ```
    intIn = intIn + 1
    ```

  -
    ```
    intIn += 1
    ```

  -
    ```
    intIn = _
        intIn + _
        1
    ```
- Style is different in each of the above. So, standards are created when there are different ways of doing a thing. Standards are usually created by the organization that you are writing your code for. If they don’t have any, bring your standards to them.

5. A Few Standards

1. Standard: Create a Block Comment at the beginning of the main form or program to identify the program function.

```
Public Class FrmMain
 '**********************************************************
  '* Name    : EncryptDecrypt Program
  '* Author  : Art Linn
  '* Purpose: Encrypt or Decrypt any data file
  '* Prompts: Prompts user for file names to use
  '* Updated:
  '**********************************************************
…
End Class
```

2. Every Sub or Function needs to have at least one comment at beginning of routine stating the purpose of that routine.

```
Private Sub StartUp()
  'Initializes to start or Restart program
…
End Sub
```

5. A Few Standards (continued)

3. Standard: Object naming conventions - The Name property.

Project Related:	
Frm	Form
Prj	Project
Bas	Bas Module
Cls	Class Module

Note: FileName should be same

Controls (Used Frequently):			
Btn	Button	Txt	TextBox
Chk	Checkbox	Tvw	TreeView
Cbo	ComboBox	Ttp	ToolTip
Lbl	Label	Containers:	
Lst	ListBox	Grp	GroupBox
Pic	PictureBox	Tbc	TabControl
Rad	RadioButton	Tbp	TabPage

Menu & Tools:	
Mnu	Menu
Cmu	ContextMenu
Sst	StatusStrip
Tls	ToolStrip

DialogBoxes:	
Ofd	OpenFileDialogBox
Sfd	SaveFileDialogBox
Cdl	ColorDialogBox
Fdl	FontDialogBox

5. A Few Standards (continued)

4. Standard: Naming convention of variables

Variable Types:		Examples:
Bol	Boolean	BolDone
Chr	Char	ChrValueRead
Dbl	Double	DblAmountOfLoan
Dte	Date	DteStartOfLoan
Int	Integer	IntCounter
Lng	Long	LngInputRead
Obj	Object	ObjValue
Sng	Single	SngPercentOfLoan
Str	String	StrAddressLine1

Ary	Array	AryIntAge()

con	Constant (Name in CAPS)	conMAXSIZE

5. A Few Standards (continued)

5. Standard: Definition of Variables should have comments following the definition that describe what that variable does.

```
'Encryption algorithm
    Dim I As Integer               ‘Loop counter
    Dim IntSFH As Integer          'File handle for SourceFilename
    Dim IntTFH As Integer          'File handle for TargetFilename
    Dim StrIn As String            'Read up to Max at one shot
    Dim IntPSWLen As Integer       'Length of the password
    Dim AryIntCodeAsc() As Integer 'Keeps the password ASCII values
    Dim IntNewCode As Integer      ‘New calculated ASCII number
    Dim LngOutCnt As Long          'Bytes written -should be same as read
    Dim StrOut As String           'Byte written out
```

Even though this is syntactically correct, avoid using this style.

```
'Encryption algorithm
    Dim IntSFH, IntTFH as integer ‘File Handles for S/T
    Dim StrIn, _
        StrOut as integer         ‘Input/output strings
```

7. Activities (18)

- Example: 2.2(1;[3,4,5];[6,7,8];[20,21,23];35)
- The Solution Folder will be 2_2
- It will contain 5 Projects named:
  - 2_2_1;
  - 2_2_3_5;
  - 2_2_6_8;
  - 2_2_20_23;
  - 2_2_35
- Using Word or WordPad – copy and paste any code
  - Copy the Program working window (Alt+PrintScrn)
  - Paste that picture into Word

8. Projects (4)

- Each Project has these components.
  - Project from the book
  - Project#.exe: An executable example
    - One from each version
  - Auxiliary documents or files

- To submit Compress the solution folder
  - Zip Up Solution Folder
  - Upload it to be graded

8. Project Folder Structure

Solution Folder:
Project Folder:

Bin Folder
Contains:
Debug which will
Contain the EXE
and **Your Files.**

My Project has the
Assemby information.

Obj Folder is used for
Compilation & linking
Is done and then
Placed in Bin.

```
DEMOWEEK1_TUESDAY
│   DemoWeek1_Tuesday.sln
│
└───DemoWeek1_Tuesday
    │   App.config
    │   DemoWeek1_Tuesday.vbproj
    │   DemoWeek1_Tuesday.vbproj.user
    │   Form1.Designer.vb
    │   Form1.resx
    │   Form1.vb
    │
    ├───bin
    │   ├───Debug
    │   │       DemoWeek1_Tuesday.exe
    │   │       DemoWeek1_Tuesday.exe.config
    │   │       DemoWeek1_Tuesday.pdb
    │   │       DemoWeek1_Tuesday.xml
    │   │
    │   └───Release
    ├───My Project
    │       Application.Designer.vb
    │       Application.myapp
    │       AssemblyInfo.vb
    │       Resources.Designer.vb
    │       Resources.resx
    │       Settings.Designer.vb
    │       Settings.settings
    │
    └───obj
        ├───Debug
        │   │   CoreCompileInputs.cache
        │   │   DemoWeek1_Tuesday.exe
        │   │   DemoWeek1_Tuesday.Form1.resources
        │   │   DemoWeek1_Tuesday.pdb
        │   │   DemoWeek1_Tuesday.Resources.resources
        │   │   DemoWeek1_Tuesday.vbproj.FileListAbsolute.txt
        │   │   DemoWeek1_Tuesday.vbproj.GenerateResource.Cache
        │   │   DemoWeek1_Tuesday.vbprojResolveAssemblyReference.cache
        │   │   DemoWeek1_Tuesday.xml
        │   │   DesignTimeResolveAssemblyReferences.cache
        │   │   DesignTimeResolveAssemblyReferencesInput.cache
        │   │
        │   └───TempPE
        │           My Project.Resources.Designer.vb.dll
        │
        └───Release
```

The Beginning - Summary

If there are questions on any of these topics –
add a News Forum Item for response. Or, in addition to, check instructor’s chat schedule to direct questions as well.

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