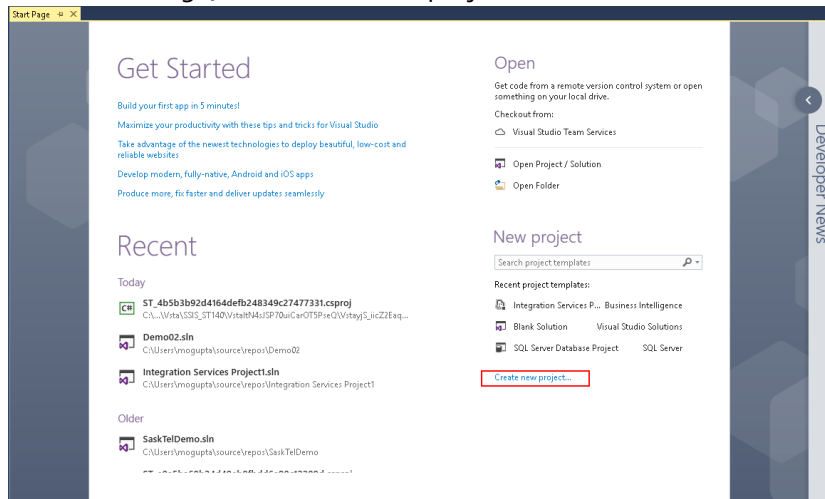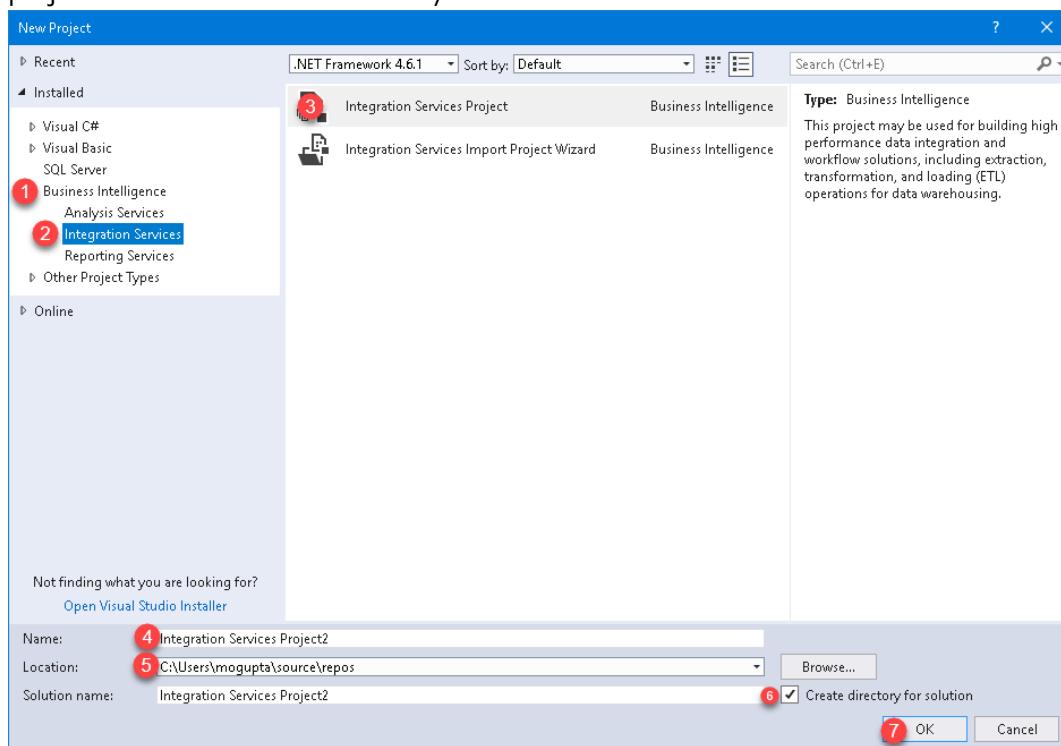# SQL SERVER INTEGRATION SERVICES
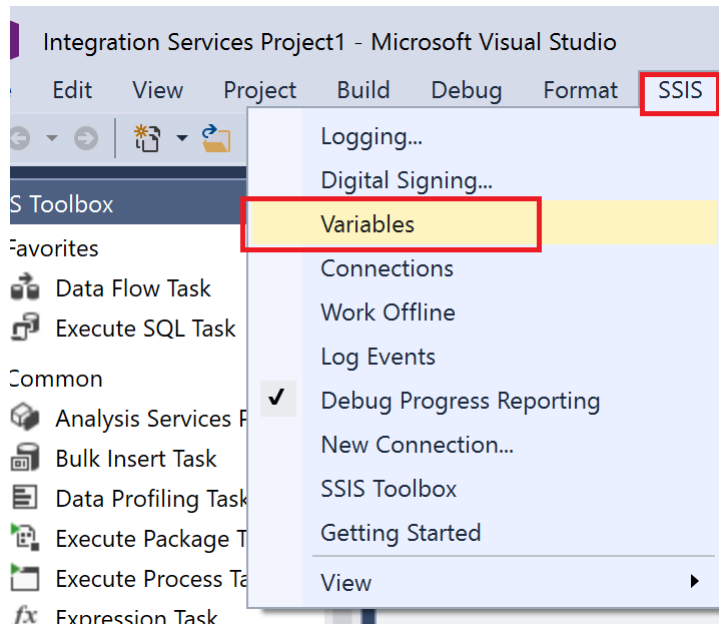
MODULE 03: CONTROL FLOW: **SCRIPT TASK**

1. Launch SQL Server Data Tools (SSDT), under start menu look for Visual Studio 2017 (SSDT).
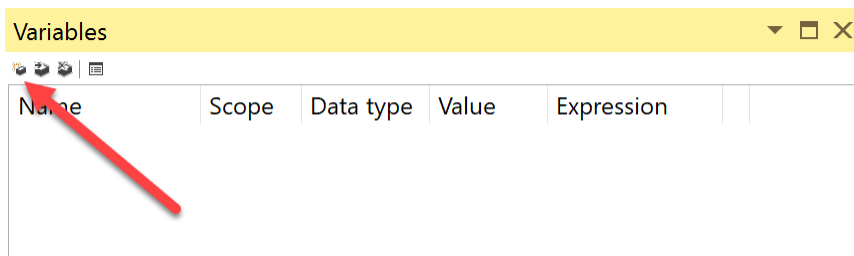2. In the Start Page, click Create new project.

3. In New Project dialog box select Business Intelligence > Integration Services > Integration Services Project. On the bottom enter in project name and location you wish to save the project. Make sure "Create directory for solution" is selected and click OK.
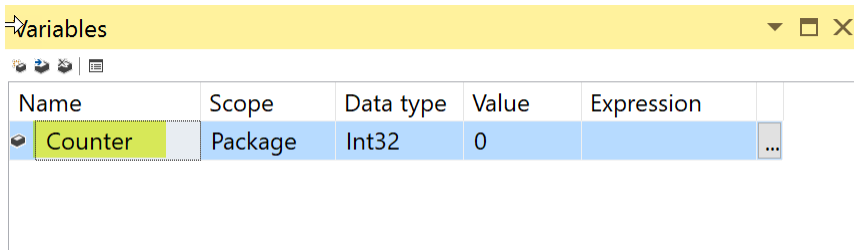
4. In the SSIS Menu select Variables

Integration Services Project1 - Microsoft Visual Studio

| Edit | View | Project | Build | Debug | Format | SSIS |

Logging...

Digital Signing...

Variables

Connections

Work Offline

Log Events

✓ Debug Progress Reporting

New Connection...

SSIS Toolbox

Getting Started

View ▶

S Toolbox

Favorites

Data Flow Task

Execute SQL Task

Common

Analysis Services

Bulk Insert Task

Data Profiling Task

Execute Package T

Execute Process Ta

fx Expression Task

5. Click on the New Variable icon

Variables

| Name | Scope | Data type | Value | Expression |

6. Rename the Variable to Counter. Notice initial value is defaulted to zero.

Variables

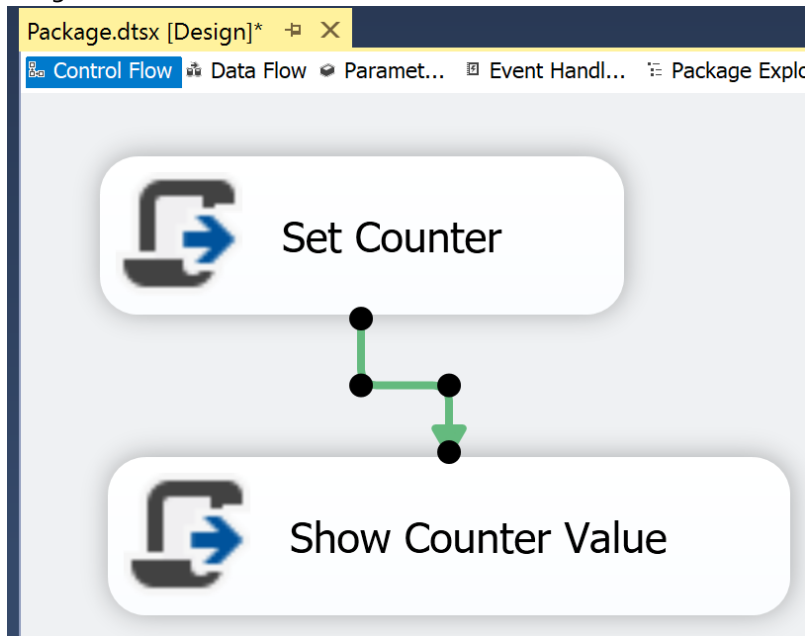| Name	Scope	Data type	Value	Expression	
Counter	Package	Int32	0		...

7. Drag and drop the Two Script Task onto the Control Flow canvas.
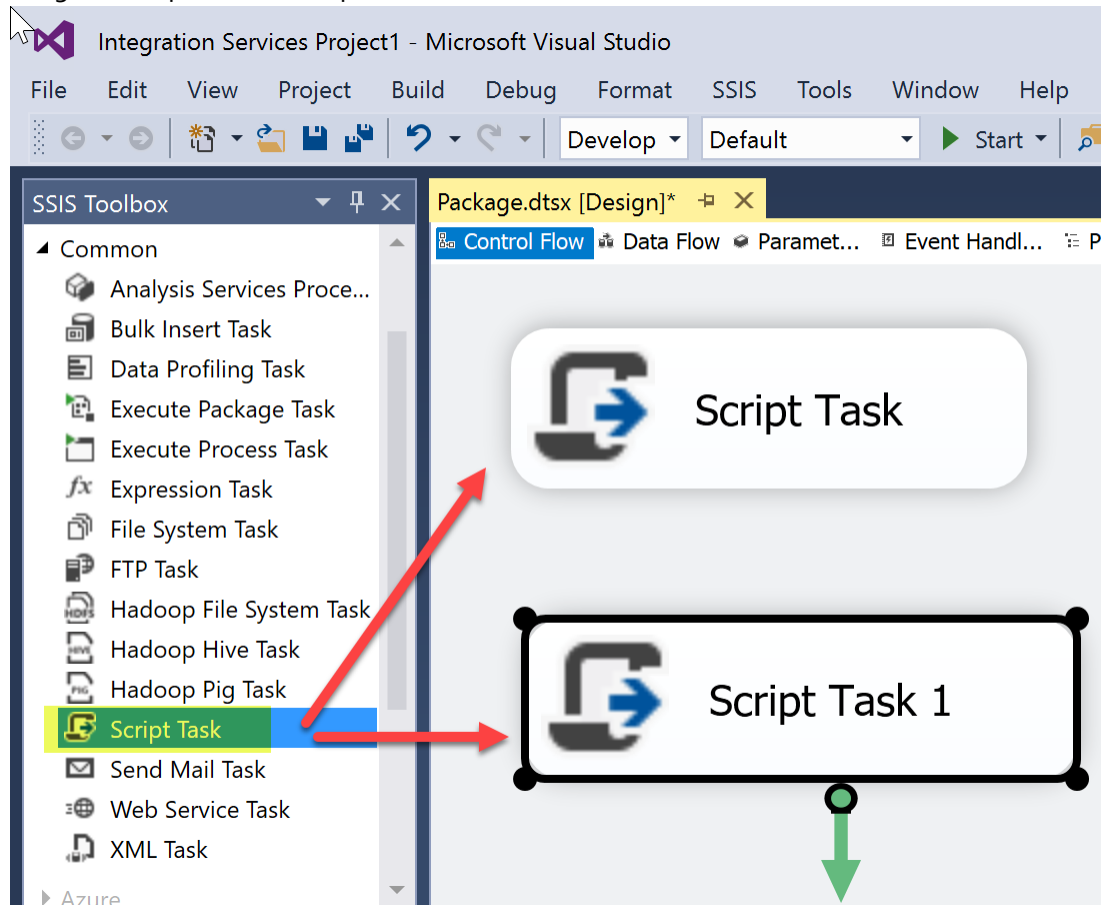
8. Rename Top script task to "Set Counter" and Bottom task to "Show Counter Value"
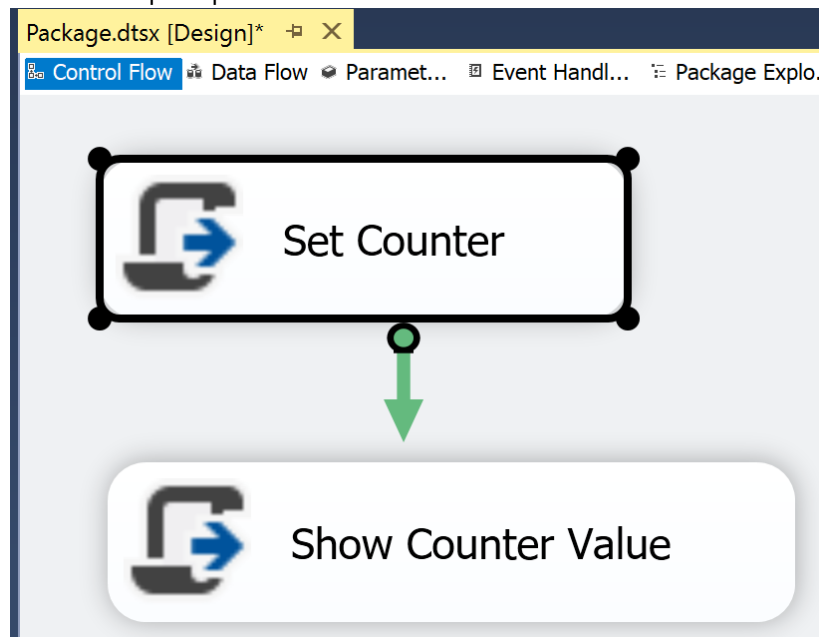
9. Drag the Green Precedence Constraint Arrow from the first task to the second task.
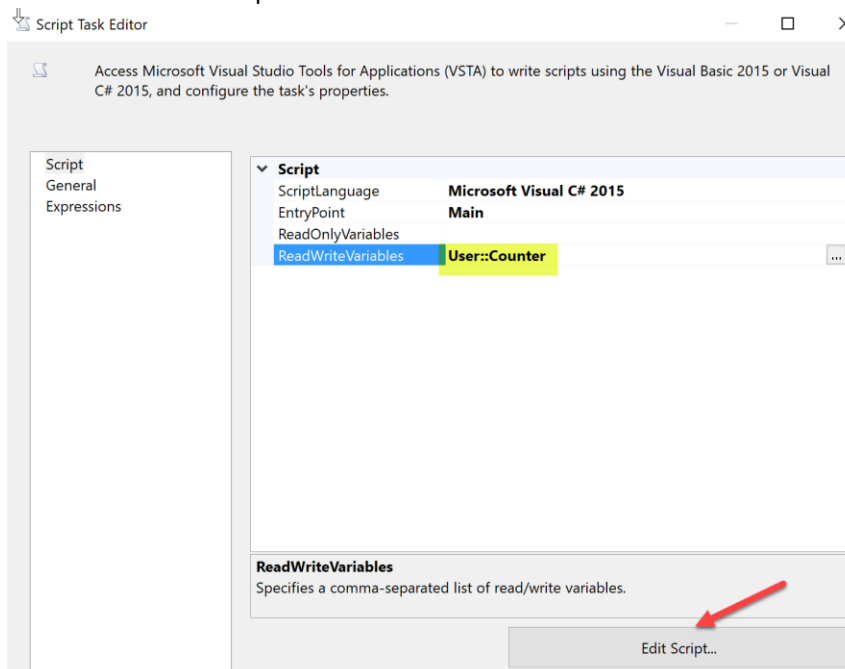

10. Double-Click "Set Counter" Task, since we will be assigning a value to the variable within the script task click on the ellipse button for the ReadWriteVariables
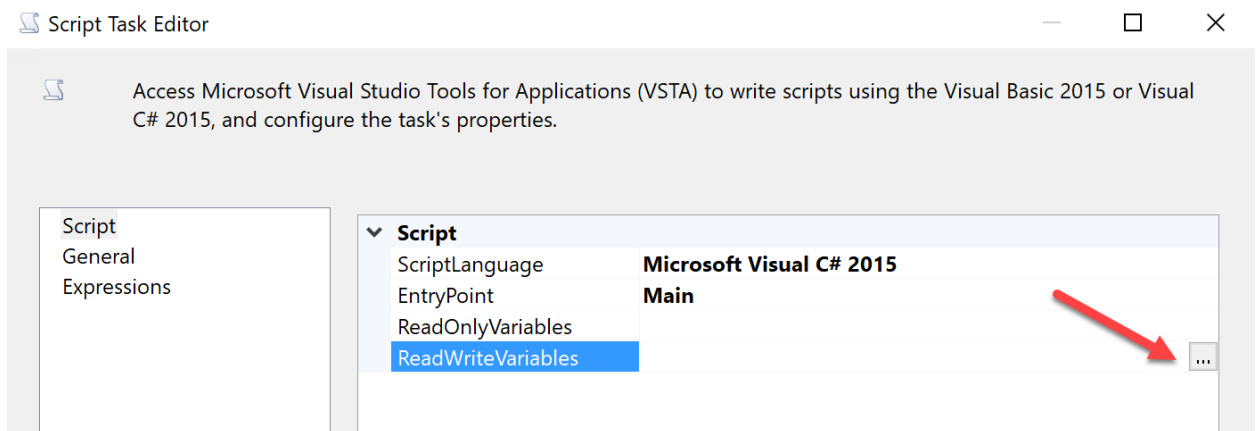
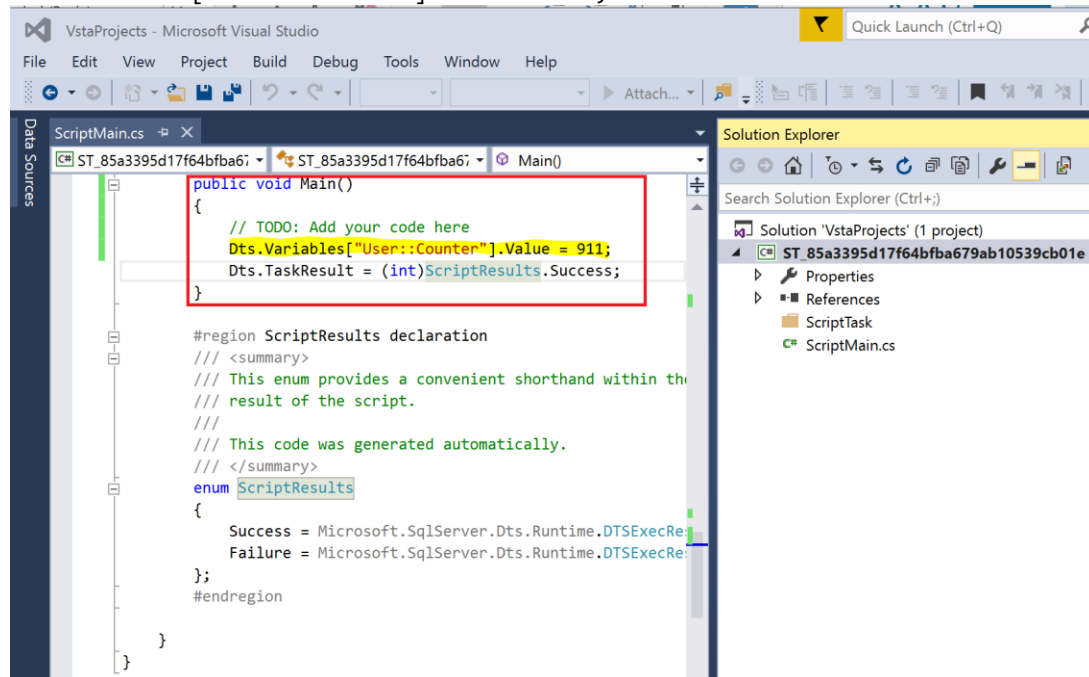11. Select the Variable you want to modify, in this case Counter, then click OK.
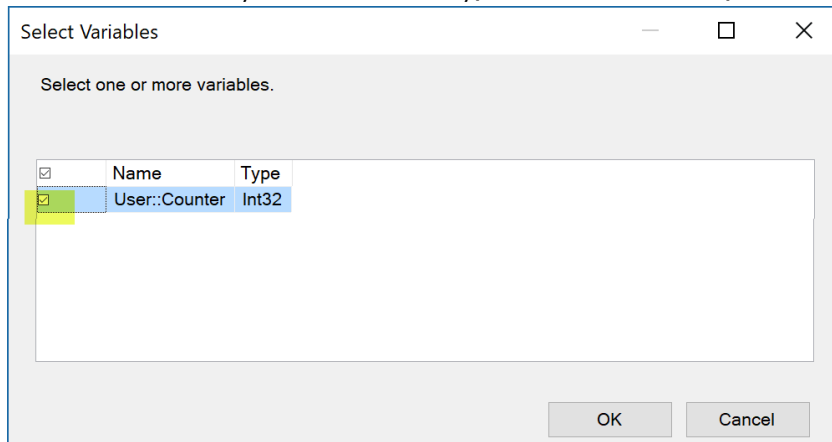
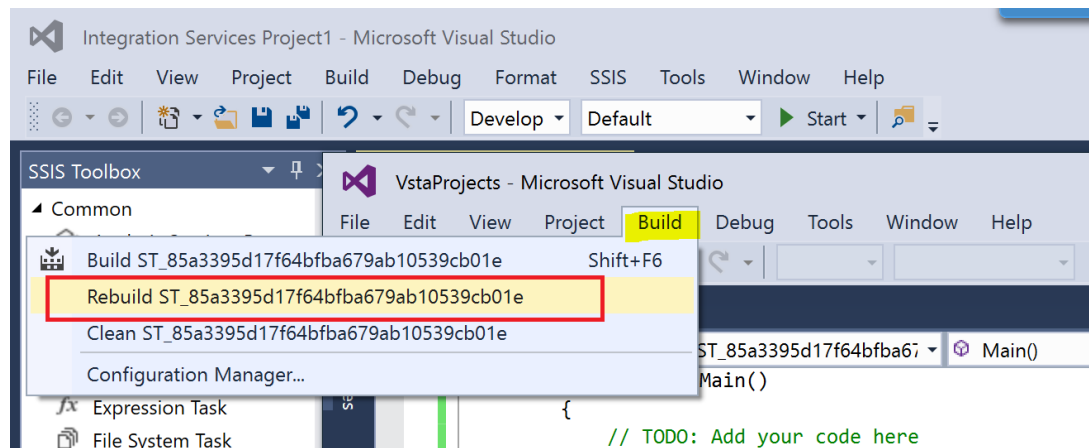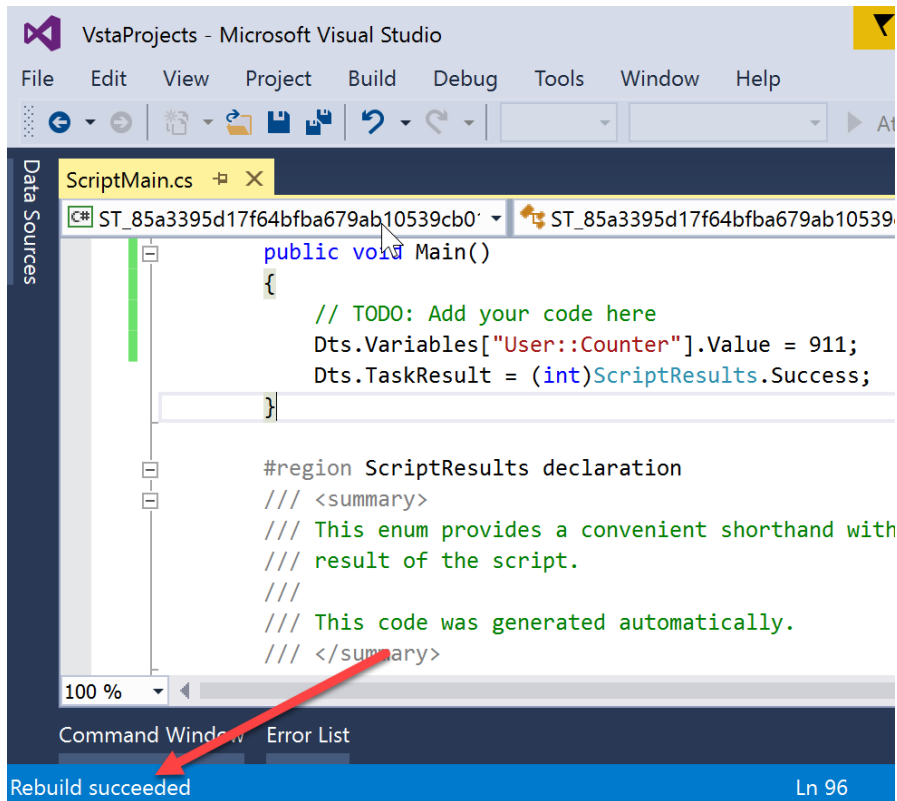

12. Click on the Edit Script Button

13. A Visual Studio Tools for Applications (VSTA) Scripting Windows will open, scroll down toward the bottom and the following code line to assign a value to in the Main() code block.

```
Dts.Variables["User::Counter"].Value = 911;
```
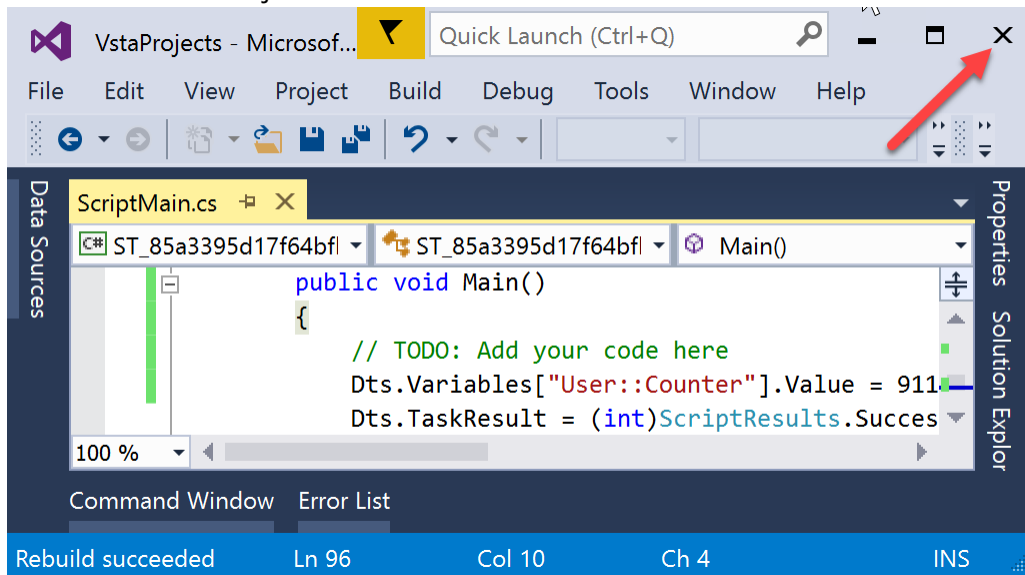

14. Ensure that you code syntax is correct, by verifying you can rebuild successfully. Click on Build menu and then select Rebuild.
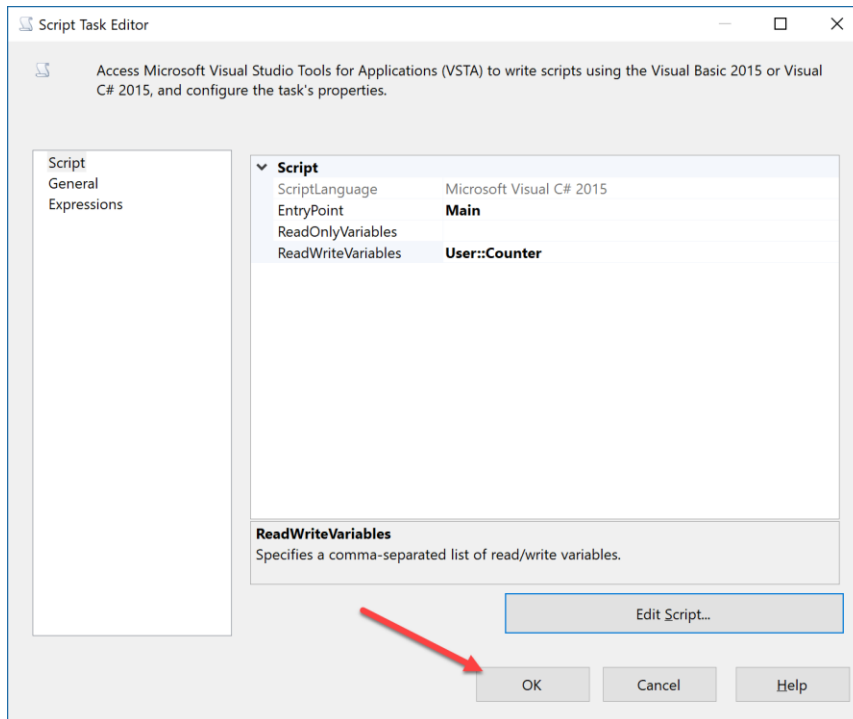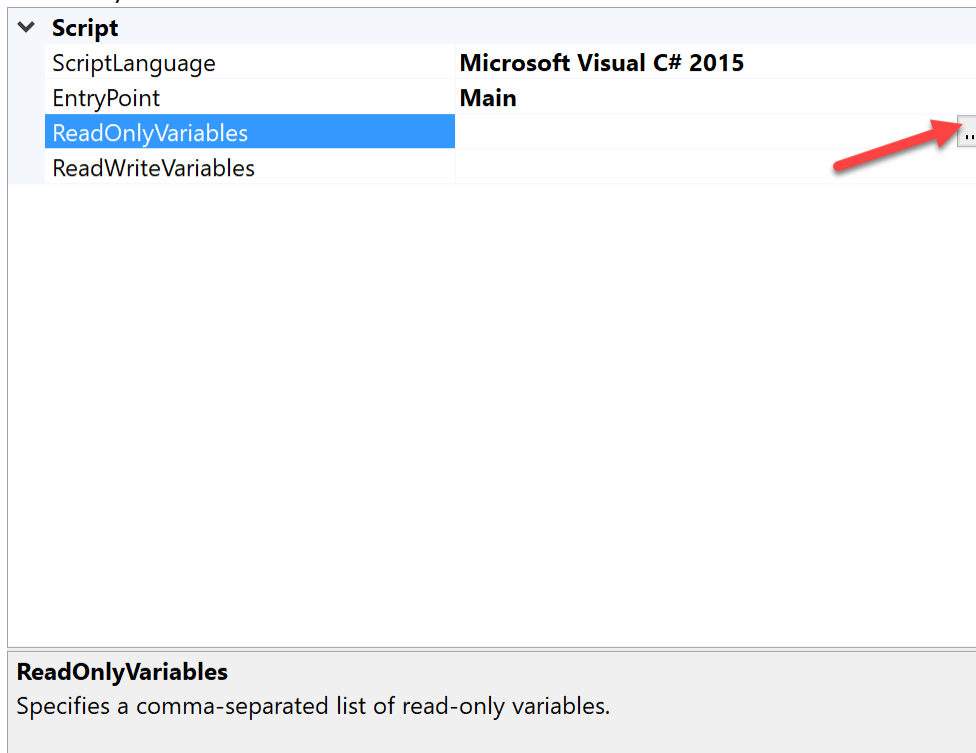
15. Exit the the VSTAProject window

16. Click OK.

We will now set the next script task properties.

17. Double-Click the "**Show Counter Value**" Script, and then click on the elipse button for ReadOnlyVariables.

∨ **Script**	
ScriptLanguage	**Microsoft Visual C# 2015**
EntryPoint	**Main**
ReadOnlyVariables	...
ReadWriteVariables	

ReadOnlyVariables
Specifies a comma-separated list of read-only variables.

18. Select the variable you want to retrieve values for, in our case Counter, then click OK.
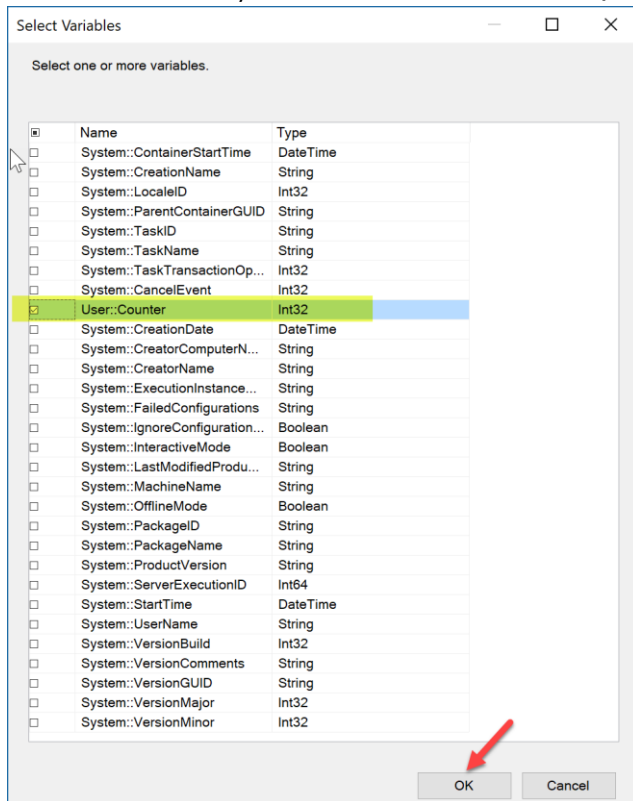
19. Click on the Edit Script button.
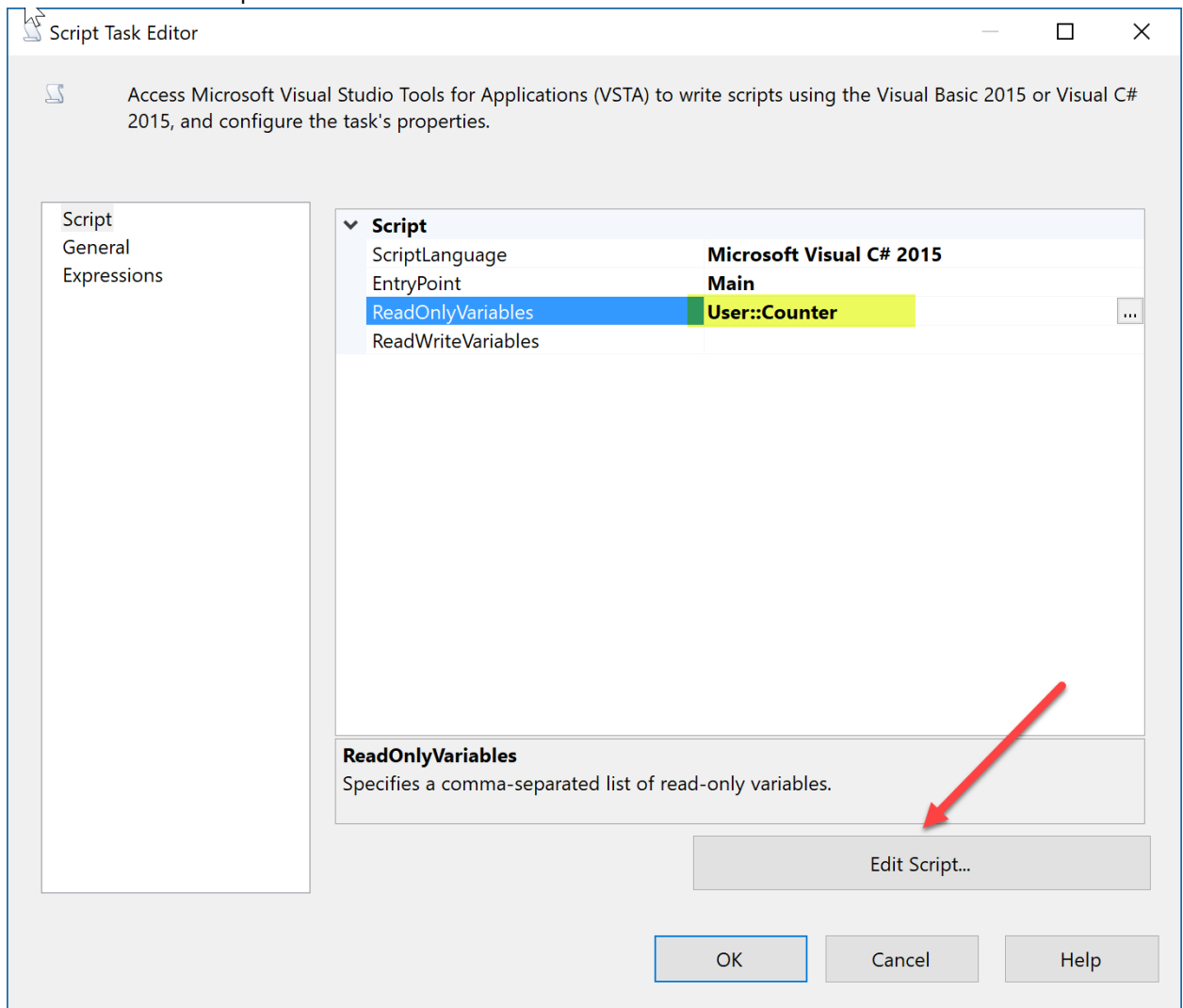
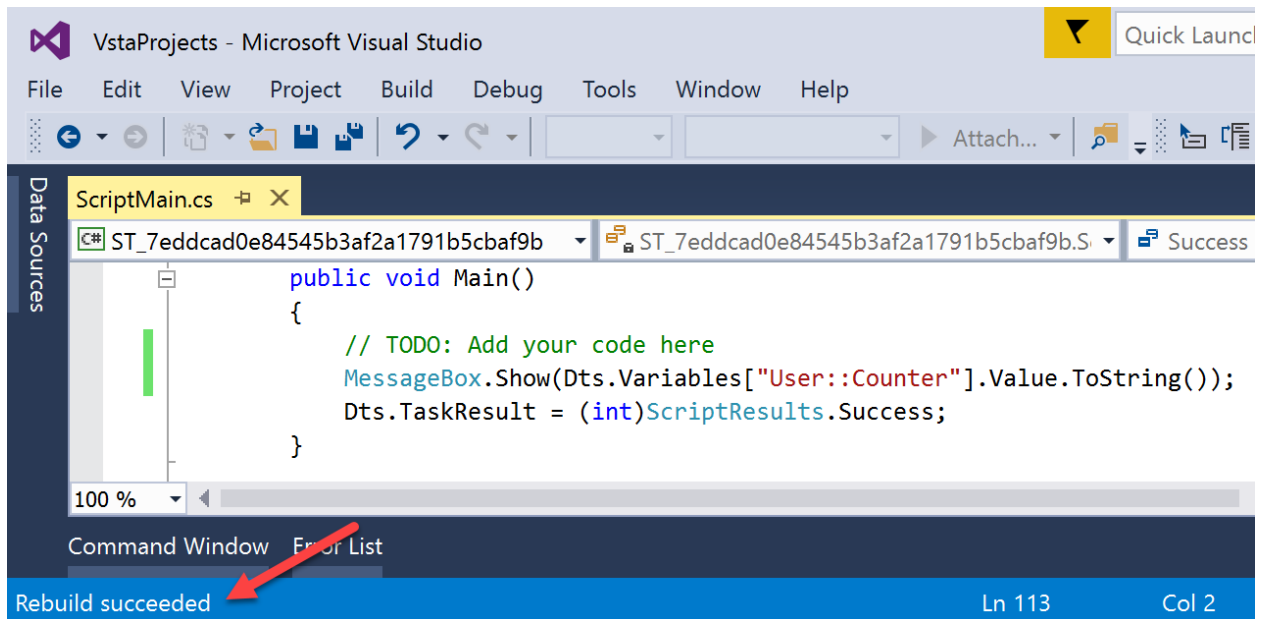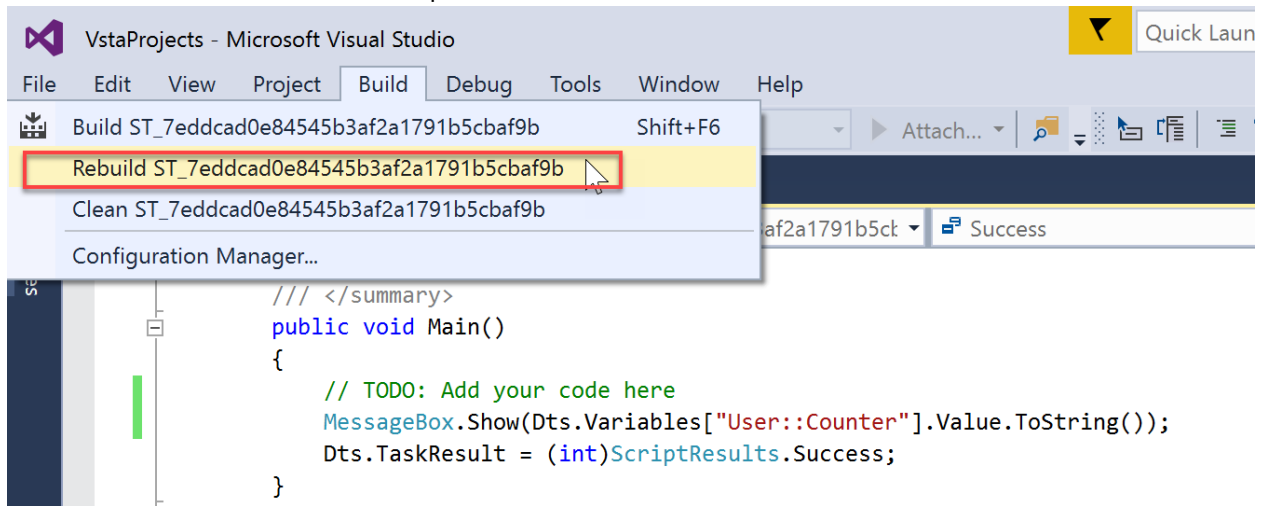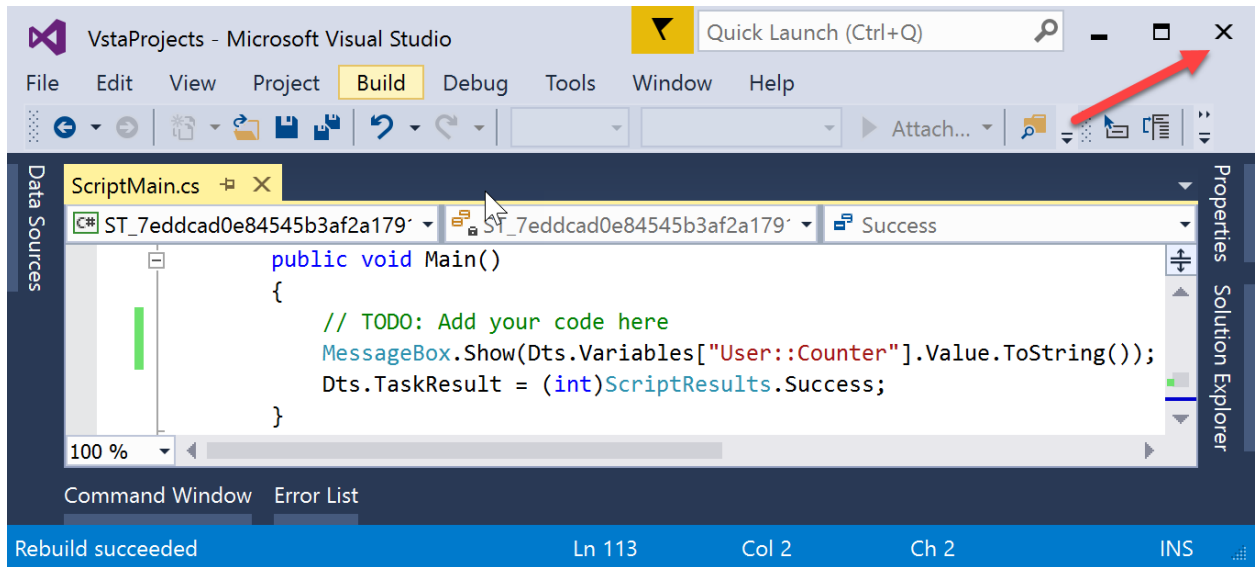20. In VSTA window, Add the following line in the Main() code block. This will display the value of Counter in a prompt window.

```
MessageBox.Show(Dts.Variables["User::Counter"].Value.ToString());
```
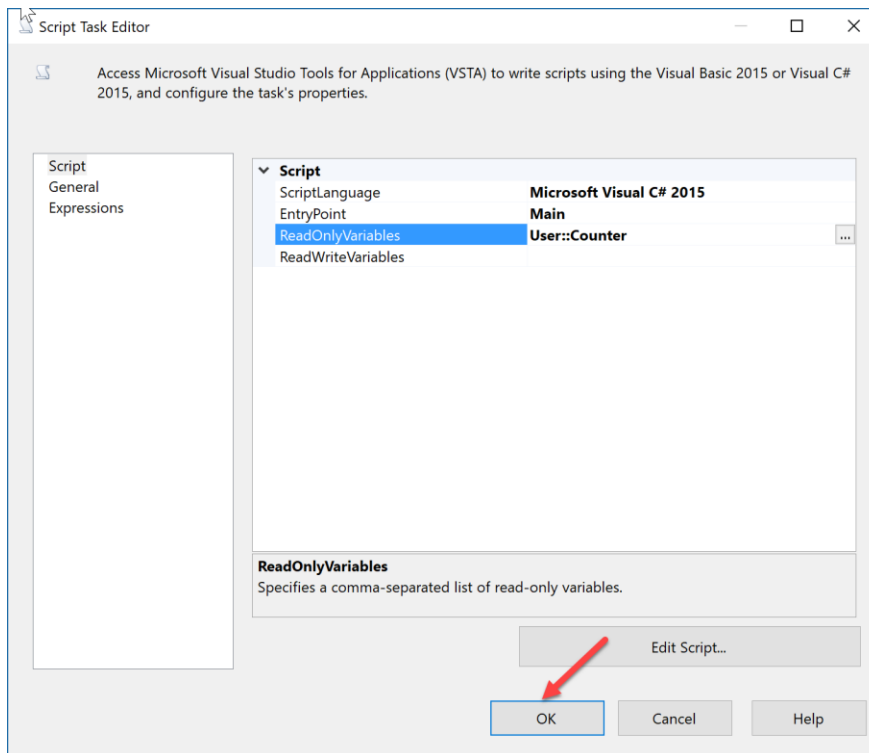
21. Rebuild to ensure there are no compile errors.

22. Close the VSTA window.

23. Click OK.

24. Click Start Button.
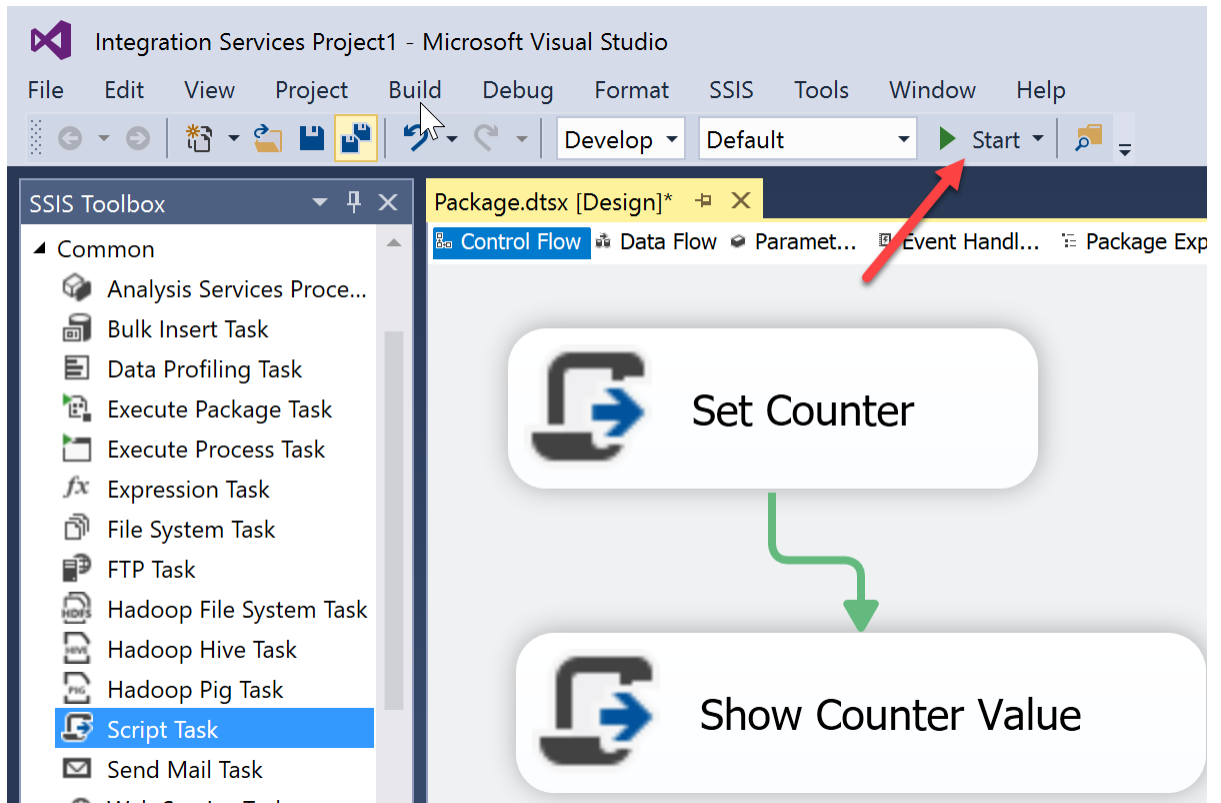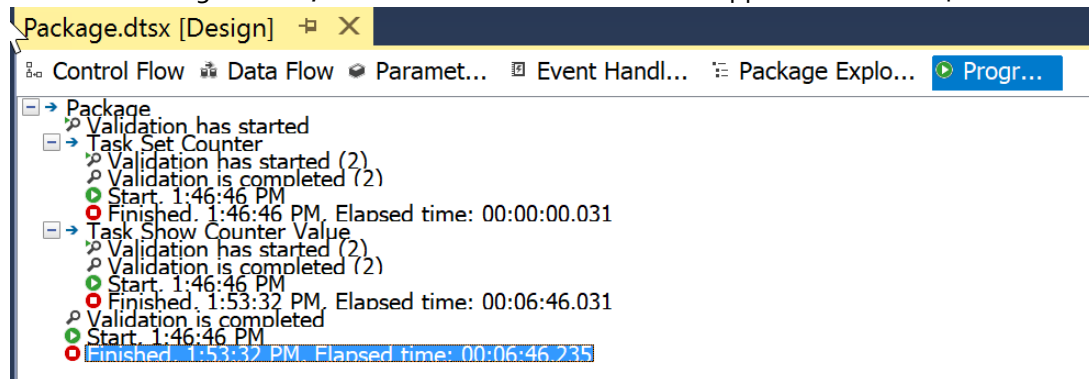

25. Notice Package is Running and displaying the assigned value. But is waiting for user interaction (clicking on OK) for the package to complete. Click on OK.

Tasks	Counter Value	
Initial assigned when variable declared	0	
Set to 911 within "Set Counter" script	911	
"Show Counter Value" script Correctly show the new value set	911	

Look at the Progress Tab, and notice the execution time is approx. 6 minutes 46 seconds.

```
Package.dtsx [Design]
 ⤬  Control Flow   Data Flow   Paramet...   Event Handl...   Package Explo...   Progr...

Package
  Validation has started
  Task Set Counter
    Validation has started (2)
    Validation is completed (2)
    Start. 1:46:46 PM
    Finished. 1:46:46 PM, Elapsed time: 00:00:00.031
  Task Show Counter Value
    Validation has started (2)
    Validation is completed (2)
    Start. 1:46:46 PM
    Finished. 1:53:32 PM, Elapsed time: 00:06:46.031
  Validation is completed
  Start. 1:46:46 PM
  Finished. 1:53:32 PM, Elapsed time: 00:06:46.235
```

Let's find another alternative to not having to wait.

26. Modify the "**Show Counter Value**" Script, and

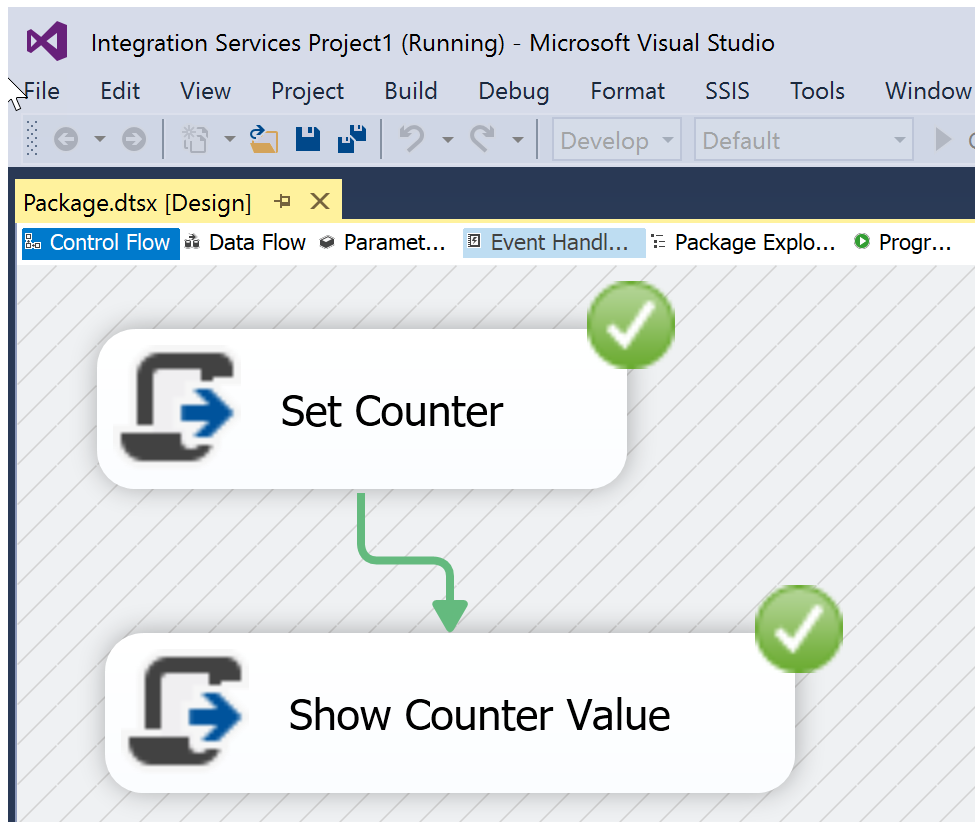   Replace following code
    ```
    MessageBox.Show(Dts.Variables["User::Counter"].Value.ToString());
    ```

    With the following code
    ```
    bool fireAgain = false;
    string description = "Counter Value= " +
    Dts.Variables["User::Counter"].Value.ToString();
    Dts.Events.FireInformation(0, null, description, null, 0, ref fireAgain);
    ```

27. Then run the Package again.

28. Look at the Progress tab now.