

# NEO Persistable Classes 2.1 Platform for Python Smart Contracts

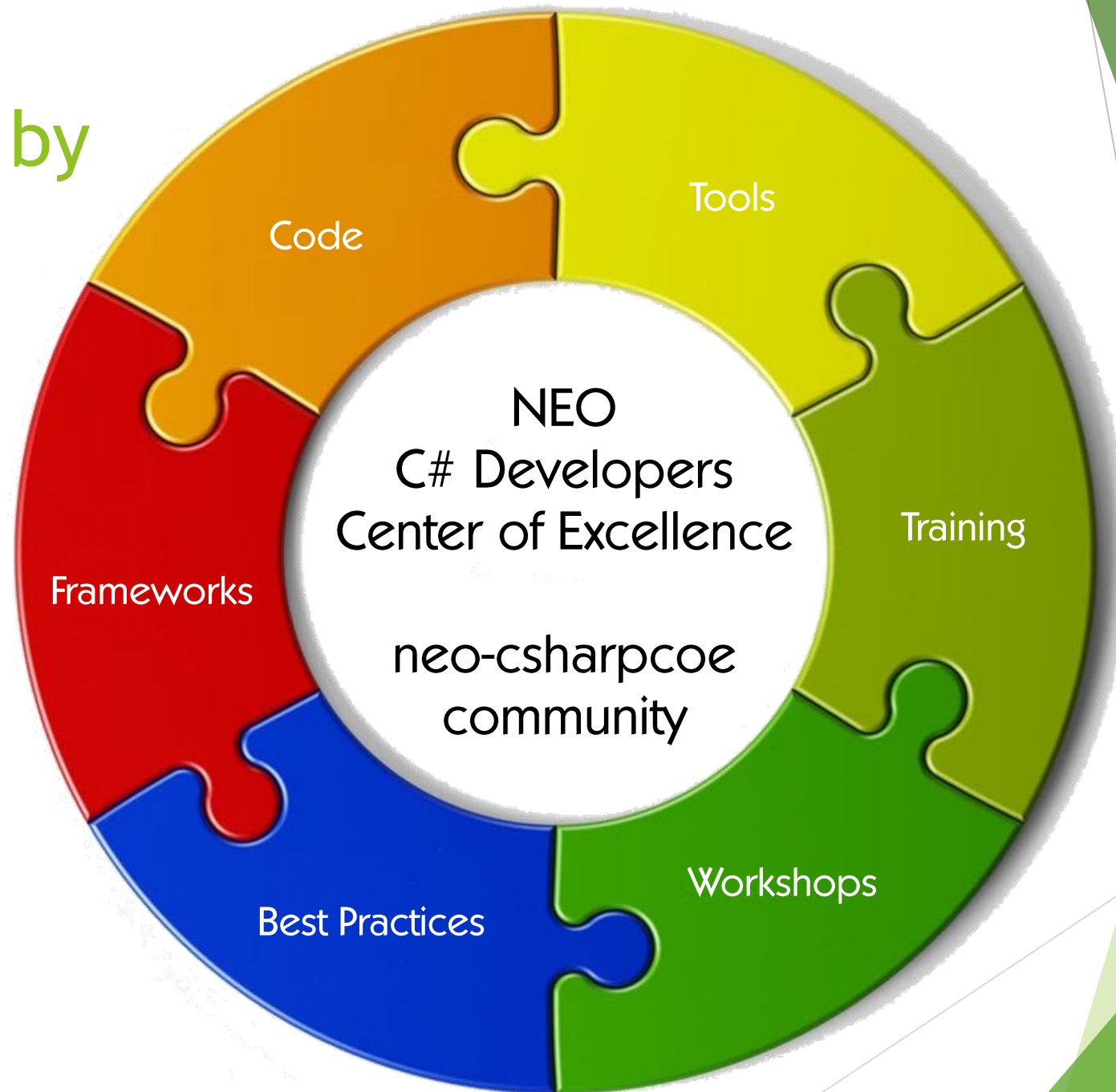
Michael Herman and Nate Bronstein  
Independent Blockchain Developers

NEO C# Developers Center of Excellence

<https://github.com/mwherman2000/neo-csharpcoe>

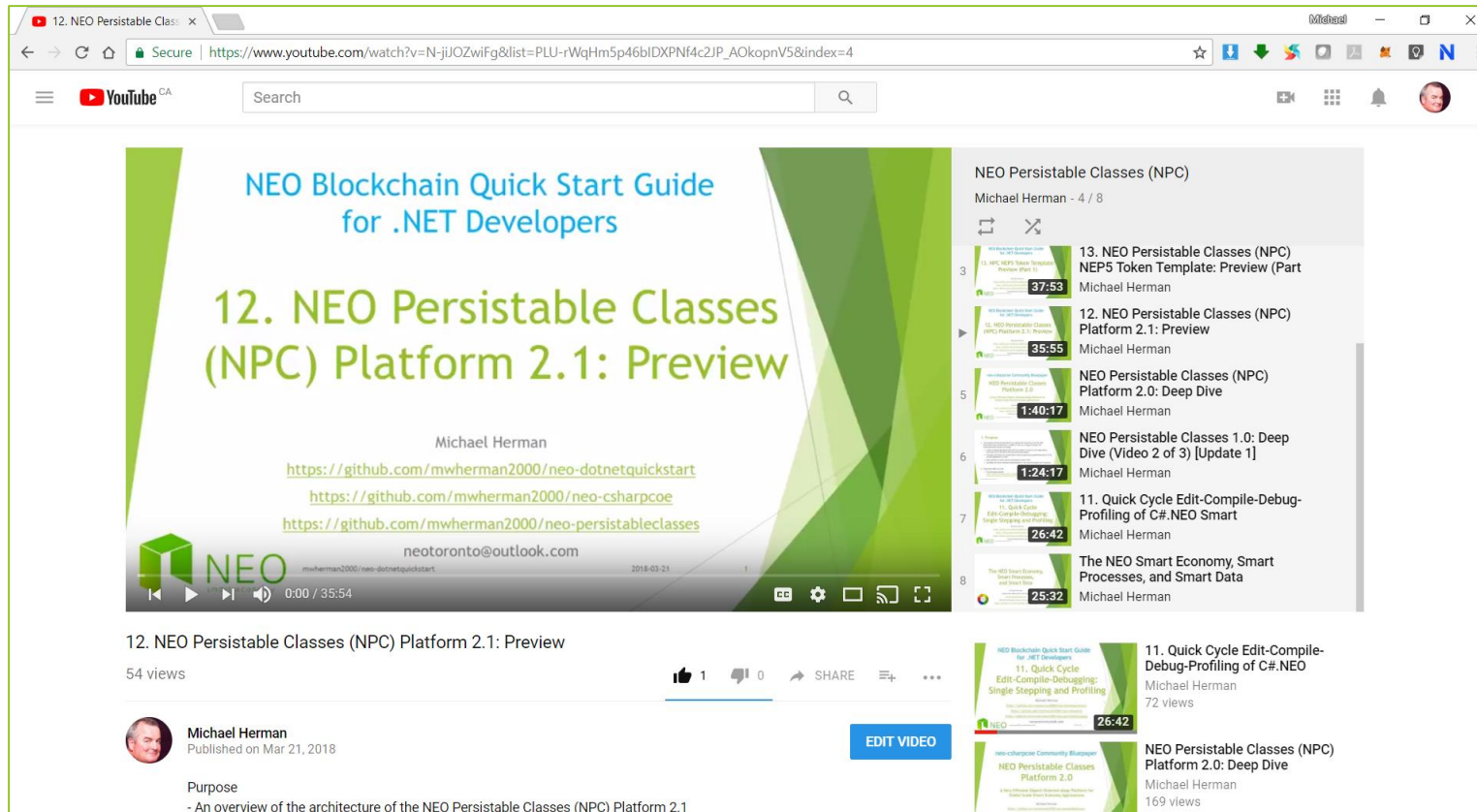


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# Homework

1. Watch the webcast “12. NEO Persistable Classes (NPC) Platform 2.1: Preview”  
<https://www.youtube.com/watch?v=N-jiJOZwiFg>



The screenshot shows a YouTube video player interface. The video title is "12. NEO Persistable Classes (NPC) Platform 2.1: Preview" by Michael Herman. The video player shows a progress bar at 0:00 / 35:54. Below the video player, there is a description and a list of related videos.

**Video Title:** 12. NEO Persistable Classes (NPC) Platform 2.1: Preview

**Channel:** Michael Herman

**Description:**

- <https://github.com/mwherman2000/neo-dotnetquickstart>
- <https://github.com/mwherman2000/neo-csharpcoe>
- <https://github.com/mwherman2000/neo-persistableclasses>

**Related Videos:**

- 13. NEO Persistable Classes (NPC) NEP5 Token Template: Preview (Part 1) - Michael Herman (37:53)
- 12. NEO Persistable Classes (NPC) Platform 2.1: Preview - Michael Herman (35:55)
- NEO Persistable Classes (NPC) Platform 2.0: Deep Dive - Michael Herman (1:40:17)
- NEO Persistable Classes 1.0: Deep Dive (Video 2 of 3) [Update 1] - Michael Herman (1:24:17)
- 11. Quick Cycle Edit-Compile-Debug-Profiling of C#.NEO Smart Contracts - Michael Herman (26:42)
- The NEO Smart Economy, Smart Processes, and Smart Data - Michael Herman (25:32)

NATE: First 9 step are complete

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1. Install Visual Studio 2017 Community Edition (free)  
TODO
2. Modify the Visual Studio 2017 configuration to include Python support  
TODO
3. Follow the normal NPC process to create a Model Class project using C#  
TODO e.g. `NPC.mwherman2000.NEP5Token.Model`
4. Configure the NPC Compiler (npcc.exe) to be the “debugger” for the Model Class project  
TODO
5. Create a (C#) NEO Smart Contract project for the C# version of the smart contract  
TODO e.g. `NPC.mwherman2000.NEP5Token.Contract`
6. Click Start to run the NPC Compiler to generate the NPC C# support files in the C# smart contract project
7. Manually include the generated C# support files into the Visual Studio project
8. Create a Python Model project for the manually-created Python version of the C# smart contract (from Step 5-6-7)  
e.g. `NPC.mwherman2000.NEP5Token.ManualPContract`
9. Create a second Python Model project for the automatically generated Python version of smart contract  
e.g. `NPC.mwherman2000.NEP5Token.PContract`
10. Manually translate/port the C# from `NPC.mwherman2000.NEP5Token.Contract`  
to `NPC.mwherman2000.NEP5Token.ManualPContract`

## 2. Modify the Visual Studio 2017 configuration to include Python support

Visual Studio Installer

Modifying — Visual Studio Community 2017 — 15.6.6

**Workloads** Individual components Language packs

Windows (3)

- ☐ Universal Windows Platform development  
Create applications for the Universal Windows Platform with C#, VB, JavaScript, or optionally C++.
- ☒ Desktop development with C++  
Build Windows desktop applications using the Microsoft C++ toolset, ATL, or MFC.
- ☒ .NET desktop development  
Build WPF, Windows Forms, and console applications using C#, Visual Basic, and F#.

Web & Cloud (7)

- ☒ ASP.NET and web development  
Build web applications using ASP.NET, ASP.NET Core, HTML/JavaScript, and Containers including Docker support.
- ☒ Azure development  
Azure SDKs, tools, and projects for developing cloud apps, creating resources, and building Containers including...
- ☒ Python development  
Editing, debugging, interactive development and source control for Python.
- ☒ Node.js development  
Build scalable network applications using Node.js, an asynchronous event-driven JavaScript runtime.

**Summary**

- > Visual Studio core editor
- > .NET desktop development
- > Desktop development with C++
- > ASP.NET and web development
- > Azure development
- > Python development
- > Node.js development
- > Mobile development with .NET
- ✓ Individual components
  - ✓ Android NDK (R13B)
  - ✓ TypeScript 2.5 SDK

Location  
D:\Program Files (x86)\Microsoft Visual Studio\2017\Community

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By continuing, you agree to the [license](#) for the Visual Studio edition you selected. We also offer the ability to download other software with Visual Studio. This software is licensed separately, as set out in the [3rd Party Notices](#) or in its accompanying license. By continuing, you also agree to those licenses.

4/13/2018

System drive (C:): 0 KB  
Install location (D:): 0 KB  
Total install size: 0 KB

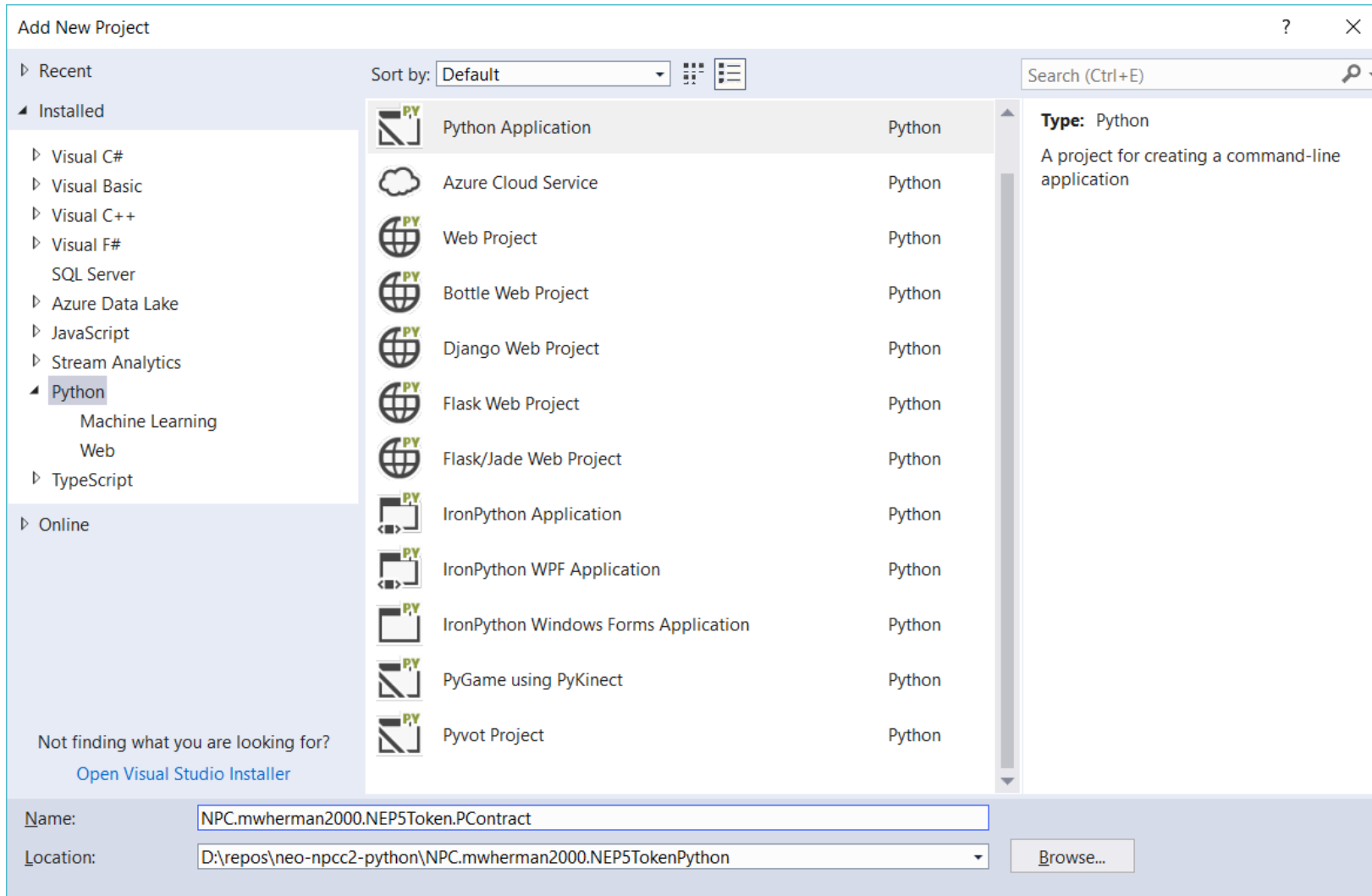
Modify

1.15.3248.309

# 8,9. Create a Python Model projects

NPC.mwherman2000.NEP5Token.ManualPContract

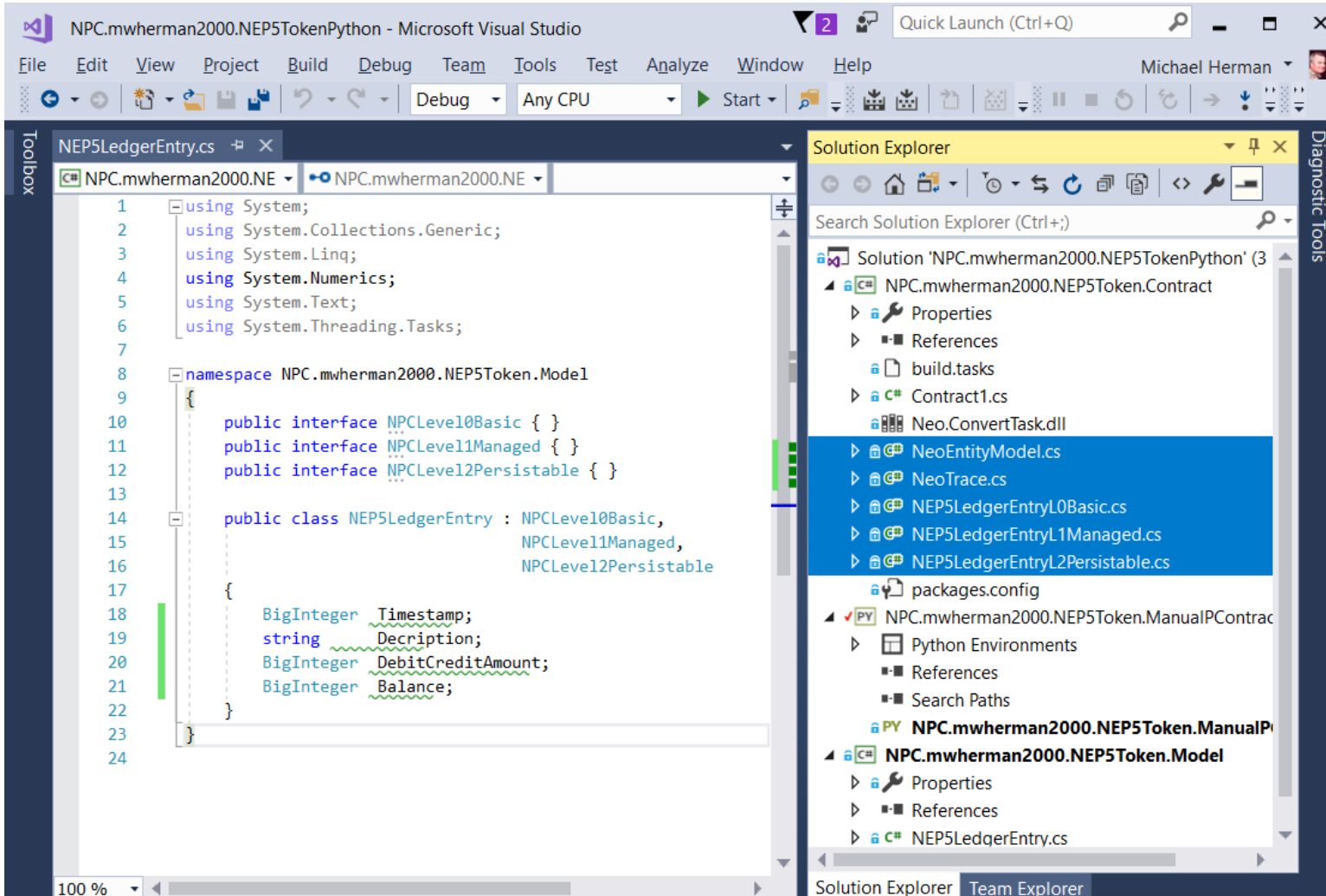
NPC.mwherman2000.NEP5Token.PContract



# 10. Manually translate/port the C#

from NPC.mwherman2000.NEP5Token.Contract

to NPC.mwherman2000.NEP5Token.ManualPContract



< Translate these 5 C# files

< into this Python project



# Questions?



Michael Herman (Toronto) - Independent Blockchain Developer

G: <https://github.com/mwherman2000/neo-csharpcoe>

E: <mailto:neotoronto@outlook.com>

L: <https://www.linkedin.com/in/mwherman/>

M: <https://www.meetup.com/NEO-Blockchain-Toronto>

F: <https://www.facebook.com/neotoronto/>

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