

# Python and Revit for B.I.M

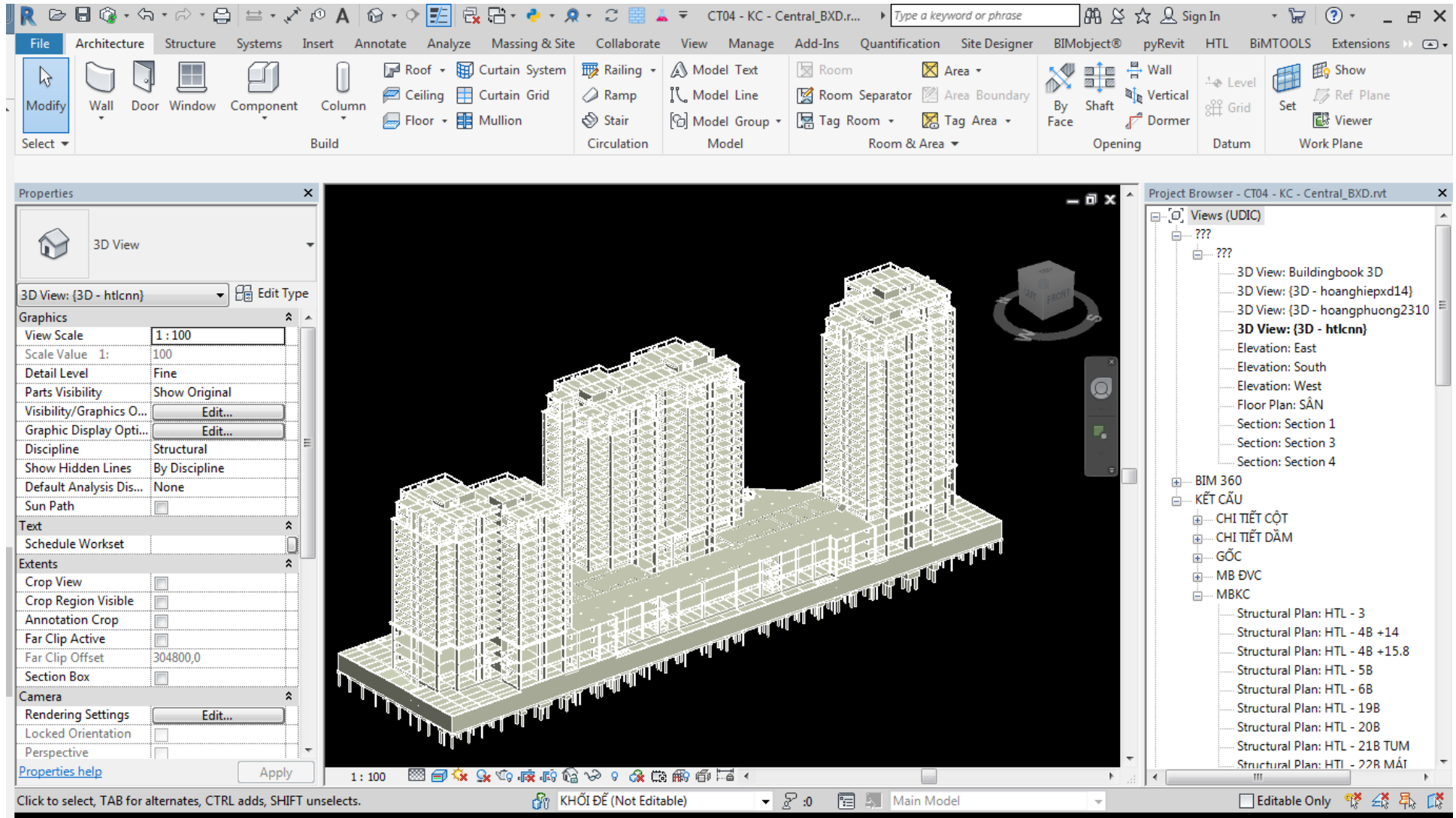
# OBJECTIVE

- B.I.M, Revit, Revit API introduction
- Use python in Revit
- Develop Revit addins using python

# BIM

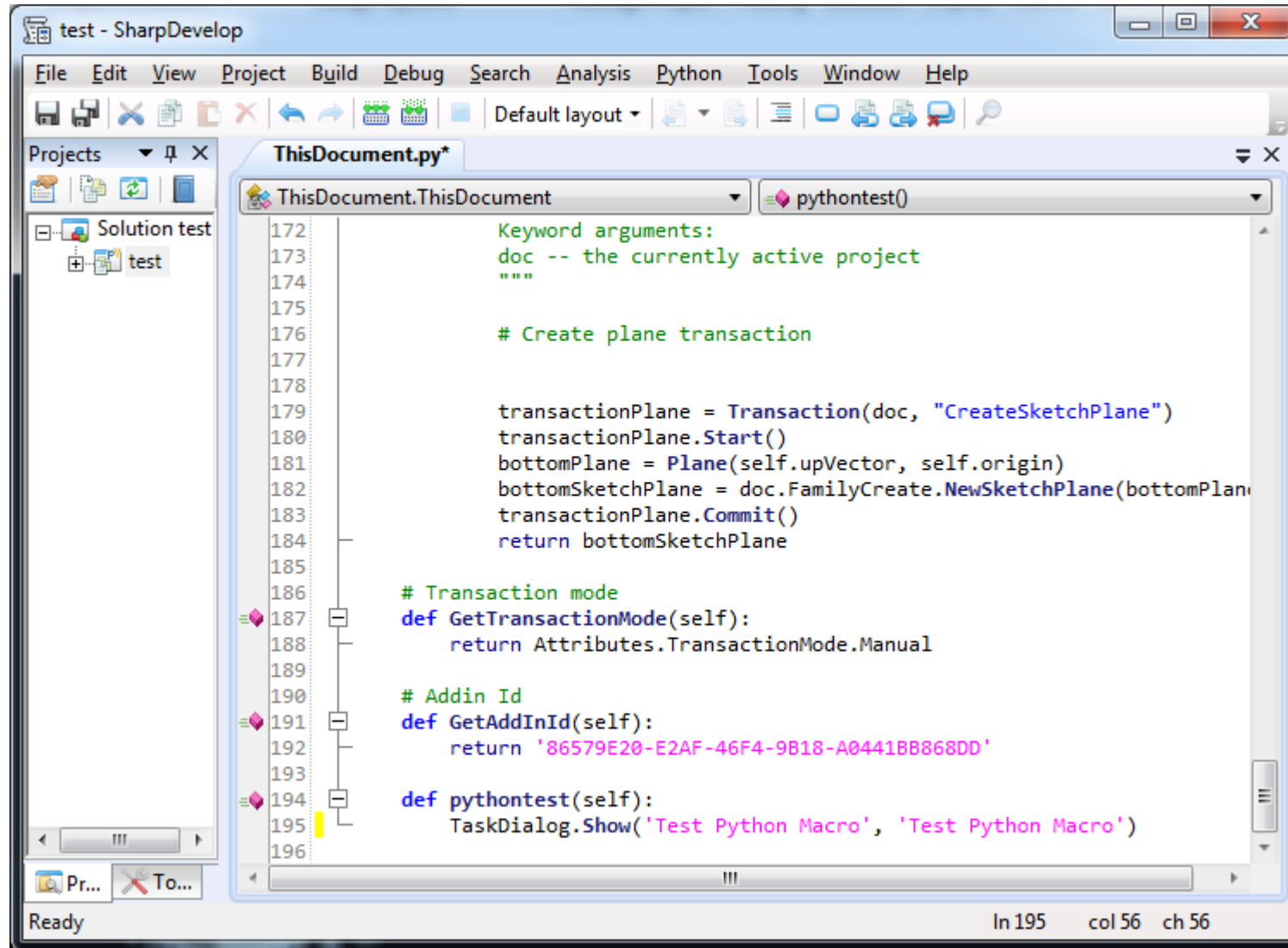


# Revit



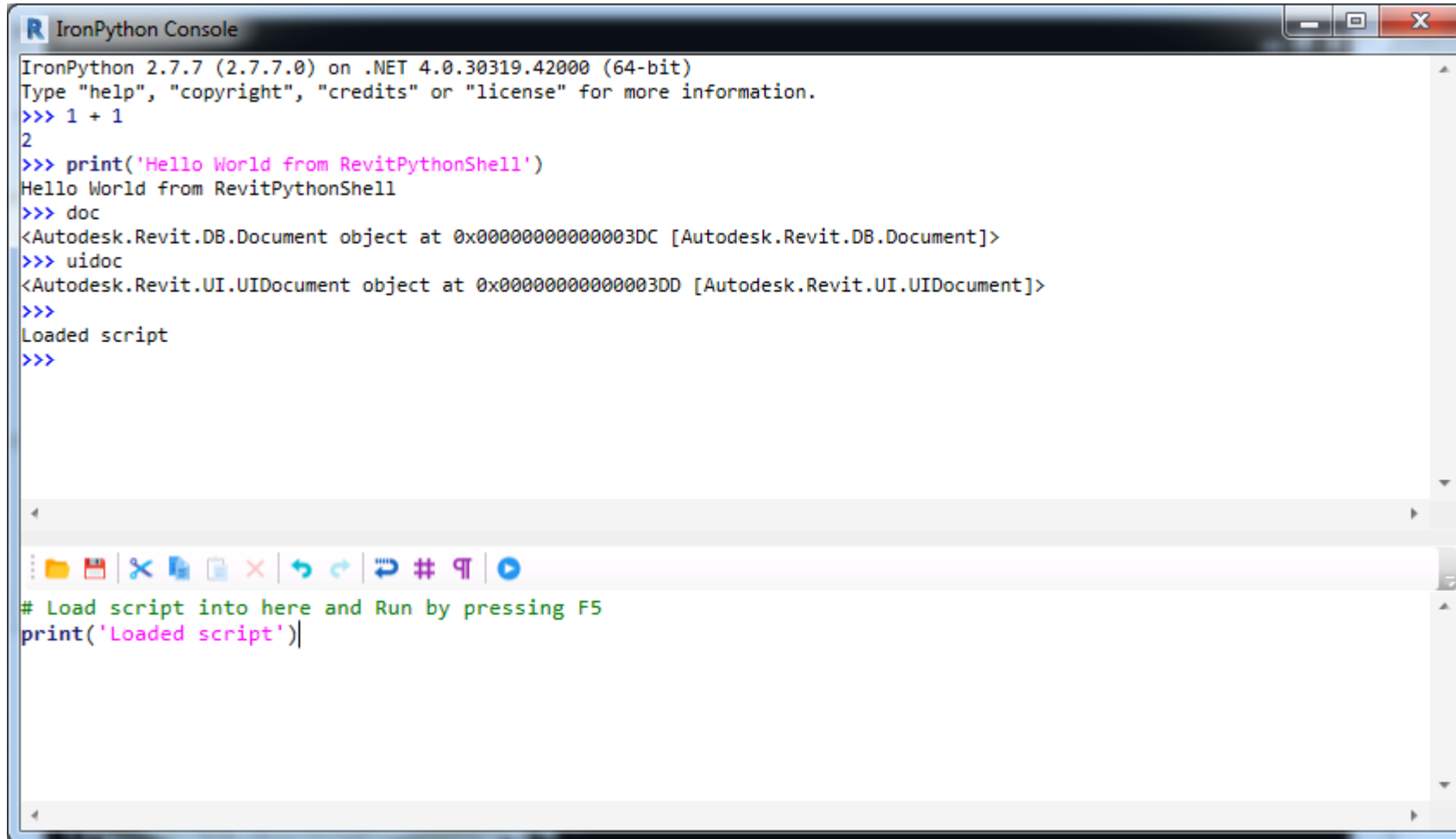
# Use python in Revit

→ Macro



# Use python in Revit

→ RevitPythonShell



```
IronPython Console
IronPython 2.7.7 (2.7.7.0) on .NET 4.0.30319.42000 (64-bit)
Type "help", "copyright", "credits" or "license" for more information.
>>> 1 + 1
2
>>> print('Hello World from RevitPythonShell')
Hello World from RevitPythonShell
>>> doc
<Autodesk.Revit.DB.Document object at 0x00000000000003DC [Autodesk.Revit.DB.Document]>
>>> uidoc
<Autodesk.Revit.UI.UIDocument object at 0x00000000000003DD [Autodesk.Revit.UI.UIDocument]>
>>>
Loaded script
>>>

# Load script into here and Run by pressing F5
print('Loaded script')
```

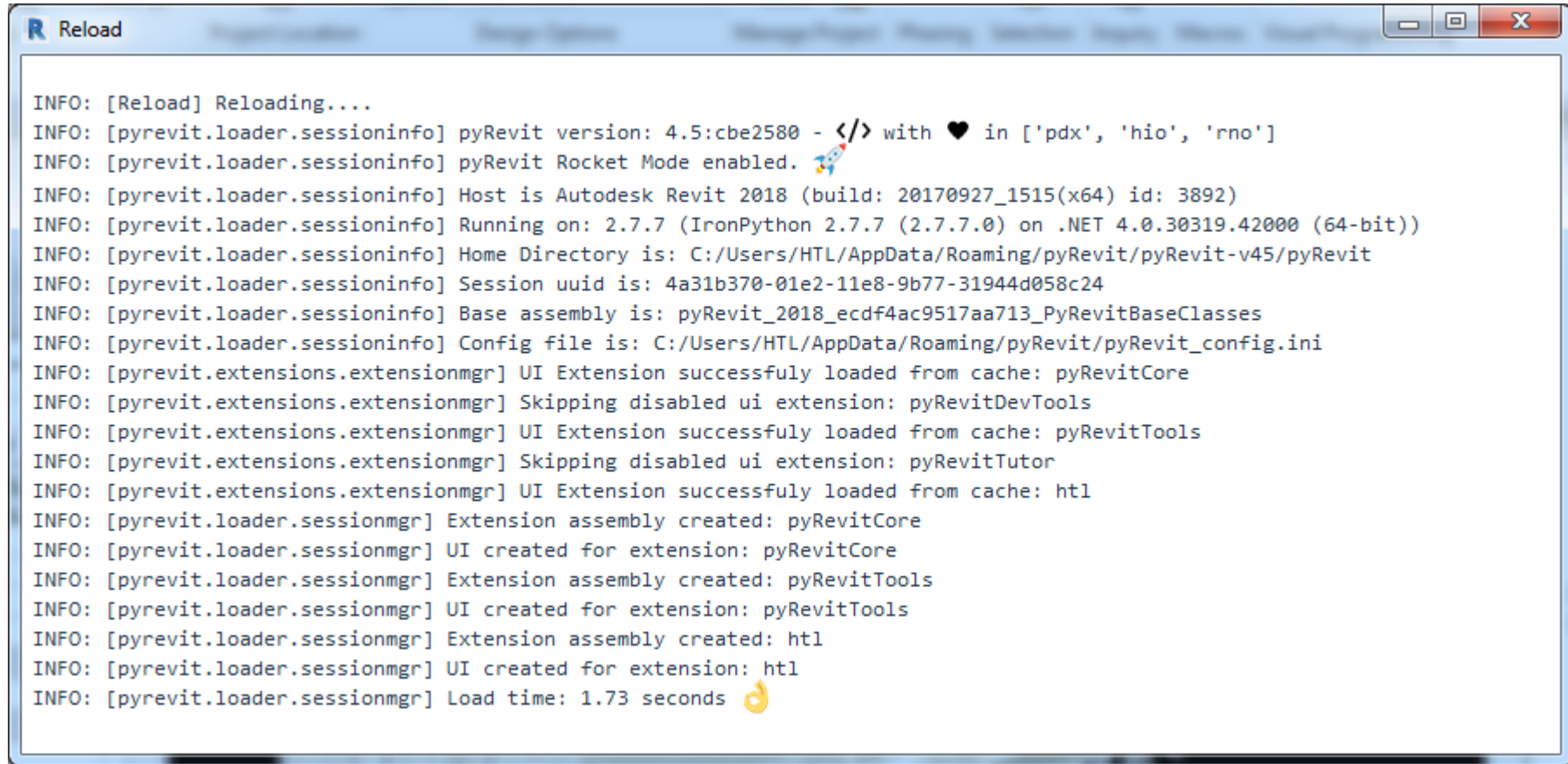
# Revit API

- API (Application Programming Interface)
- Revit SDK (.chm, C#)

[http://help.autodesk.com/view/RVT/2018/ENU/?guid=Revit\\_API\\_Revit\\_API\\_Developers\\_Guide\\_html](http://help.autodesk.com/view/RVT/2018/ENU/?guid=Revit_API_Revit_API_Developers_Guide_html)

# Develop Revit addins using python

→ pyRevit

A screenshot of a software window titled "Reload" with a blue header bar. The window contains a text area with log output. The log starts with "INFO: [Reload] Reloading...." and continues with various status messages from pyRevit, including version information, host details (Autodesk Revit 2018), session ID, and a list of loaded UI extensions (pyRevitCore, pyRevitTools, htl). It ends with "INFO: [pyrevit.loader.sessionmgr] Load time: 1.73 seconds" followed by a small orange flame icon.

```
INFO: [Reload] Reloading....
INFO: [pyrevit.loader.sessioninfo] pyRevit version: 4.5:cbe2580 - </> with ♥ in ['pdx', 'hio', 'rno']
INFO: [pyrevit.loader.sessioninfo] pyRevit Rocket Mode enabled. 🚀
INFO: [pyrevit.loader.sessioninfo] Host is Autodesk Revit 2018 (build: 20170927_1515(x64) id: 3892)
INFO: [pyrevit.loader.sessioninfo] Running on: 2.7.7 (IronPython 2.7.7 (2.7.7.0) on .NET 4.0.30319.42000 (64-bit))
INFO: [pyrevit.loader.sessioninfo] Home Directory is: C:/Users/HTL/AppData/Roaming/pyRevit/pyRevit-v45/pyRevit
INFO: [pyrevit.loader.sessioninfo] Session uuid is: 4a31b370-01e2-11e8-9b77-31944d058c24
INFO: [pyrevit.loader.sessioninfo] Base assembly is: pyRevit_2018_ecdf4ac9517aa713_PyRevitBaseClasses
INFO: [pyrevit.loader.sessioninfo] Config file is: C:/Users/HTL/AppData/Roaming/pyRevit/pyRevit_config.ini
INFO: [pyrevit.extensions.extensionmgr] UI Extension successfully loaded from cache: pyRevitCore
INFO: [pyrevit.extensions.extensionmgr] Skipping disabled ui extension: pyRevitDevTools
INFO: [pyrevit.extensions.extensionmgr] UI Extension successfully loaded from cache: pyRevitTools
INFO: [pyrevit.extensions.extensionmgr] Skipping disabled ui extension: pyRevitTutor
INFO: [pyrevit.extensions.extensionmgr] UI Extension successfully loaded from cache: htl
INFO: [pyrevit.loader.sessionmgr] Extension assembly created: pyRevitCore
INFO: [pyrevit.loader.sessionmgr] UI created for extension: pyRevitCore
INFO: [pyrevit.loader.sessionmgr] Extension assembly created: pyRevitTools
INFO: [pyrevit.loader.sessionmgr] UI created for extension: pyRevitTools
INFO: [pyrevit.loader.sessionmgr] Extension assembly created: htl
INFO: [pyrevit.loader.sessionmgr] UI created for extension: htl
INFO: [pyrevit.loader.sessionmgr] Load time: 1.73 seconds 🔥
```



# pyRevit

- Starts with Revit
- Folder structure → Buttons in Revit UI
- Reload to update UI
- No need to Build, Compile,...
- Bonus: some written utilities, other user's extensions

# pyRevit

- Demo: Some written utilities
- Deploy pyRevit scripts at work

# Q&A

Thank you!