



API 1: Create Sheets

Python in Dynamo

Related videos



MAKING A CUSTOM
NODE



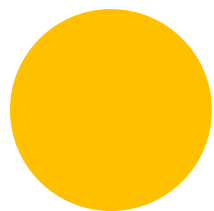
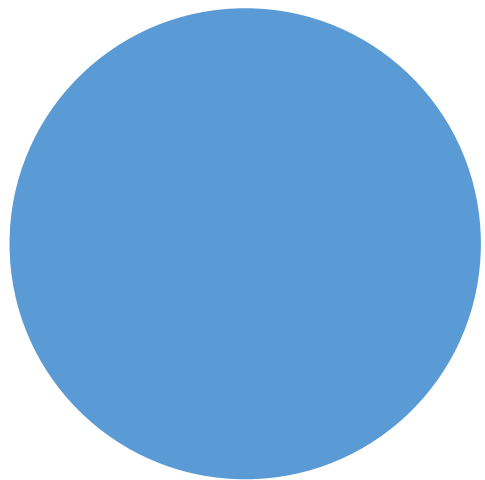
MAKING A CUSTOM
PACKAGE



PYTHON
FUNDAMENTALS



PYTHON IN
DYNAMO (SERIES)



Dynamo and Python

Create Sheets (API 1)

This video

- Navigate Revit API Docs
- Wrap/unwrap elements
- Transactions
- Create sheets by
number/name/titleblock

Please note

- I can't teach the entire API
- Will just use some examples
- Learning the entire API is *almost impossible!*

What is
Revit API

APPPLICATION

PROGRAMMING


INTERFACE

Revit API

The Building Coder

Programming Forge, BIM and the Revit API



 Follow @jeremytammik

Many places to begin learning, but this is a great place!

Revit API

Revit Developer Center



Check out

<https://www.autodesk.com/developer-network/platform-technologies/revit>

‘My first Revit plugin’

(Jeremy’s recommendation)

Revit API

C#

```
public string SheetNumber { get; set; }
```

```
public virtual string Name { get; set; }
```

```
sht.Name = na  
sht.SheetNumber = nu
```

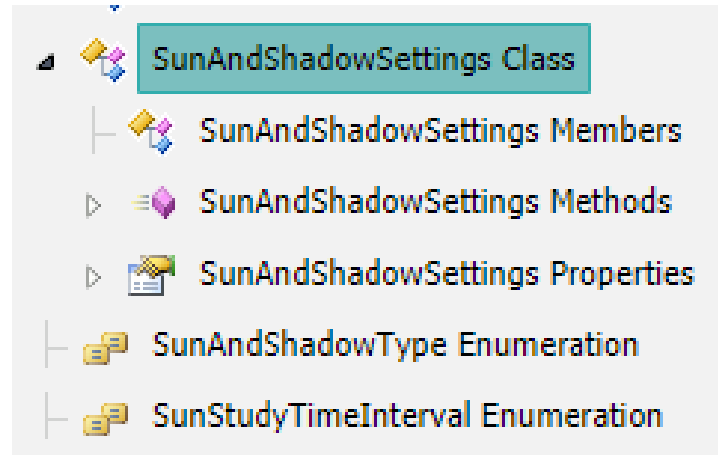
Revit API

Class

Members

Methods

Properties



Methods & Properties

Class.Method(args)

Object.Method(args)

E.g.

ViewSheet.Create()

Sheet.Name

Python API docs?!

November 2016

Q. Can you provide more examples using Python?

A. Nothing planned at this point. Good idea though. Log it.

API Docs is still C#/VB

Some shortcuts

Learn from 'exposed' nodes

- Clockwork
- Springs
- Steamnodes
- Genius Loci

To name a few!

Some resources

AU Classes

‘Untangling Python’ by Gui T

‘Exploring Python Nodes in Dynamo’ by Tadeh H

Dynamo Primer Part 10

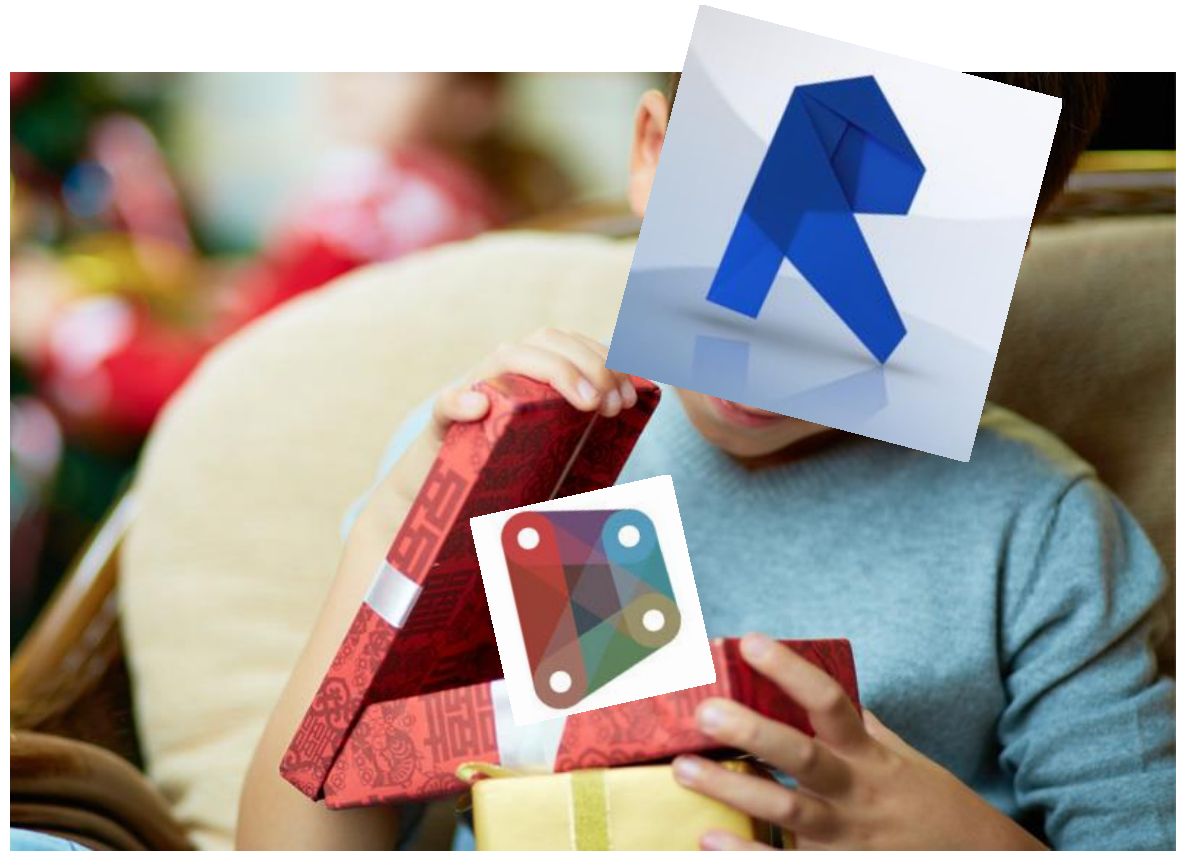
Dynamo Python Primer

by Oliver Green

Lynda

‘Jumping into Python’ by Jeremy Graham

Unwrap



Unwrap

*If we interact with Dynamo
sourced elements in the
Revit API*

We must **unwrap** elements
`UnwrapElement()`

Wrap



Wrap

*If we need to return Revit
owned objects back to the
Dynamo canvas*

We must **wrap** them
`ToDSType(bool)`

Good Article

Revit.Dynamo what does UnwrapElement() do exactly?

Published on July 8, 2017



Ron Allen

Design Technology Leader at KTG Architecture + Planning

```
Python Script
1 # Made by Gavin Crump
2 # Free for use
3 # BIM Guru, www.bimguru.com.au
4
5 #Reference for script name: https://github.com/Amoursol/dynamoPython/blob/master/dynamoAPI/dynamoAPICurrentGraphName.py
6 #Thanks to John Pierson for sharing the code for Dynamo file data
7
8 #Add CLR and Dynamo services for its API
9 import clr
10 clr.AddReference('DynamoRevitDS')
11 import Dynamo
12 from System import Environment
13
14 #Add document manager from Revit services
15 clr.AddReference('RevitServices')
16 import RevitServices
17 from RevitServices.Persistence import DocumentManager
18
19 # access to the current Dynamo instance and workspace
20 DynamoCurrent = Dynamo.Applications.DynamoRevit()
21 ActiveScript = DynamoCurrent.RevitDynamoModel.CurrentWorkspace
22 DynamoVersion = DynamoCurrent.RevitDynamoModel.Version
23
24 # ensure version 2.X, get name
25 if DynamoVersion.StartsWith("2."):
26     ScriptName = ActiveScript.Name + ".dyn"
27 else:
28     ScriptName = "Version not supported"
29
30 # get system user name
31 UserName = Environment.UserName
32
33 # get active document name and path
```

Let's get into
the example!

Making sheets

We want to create sheets

So we need to inspect the
ViewSheet class

On API Docs

<https://www.revitapidocs.com/>

Future Videos

Basic
samples

Revit API

Advanced
samples

And
more!



Crumple is on
github

<https://github.com/aussieBIMguru>



API 1: Create Sheets

Python in Dynamo