Introduction

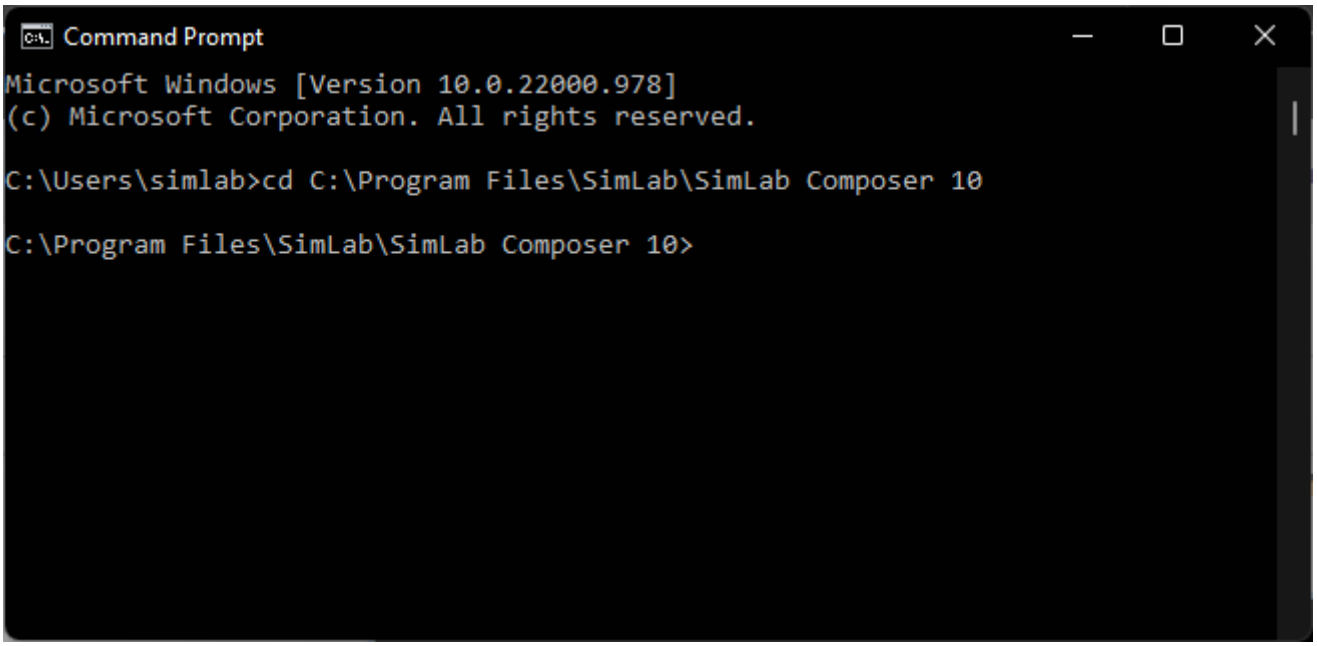
SimLab Composer allows using Python, and Java Scripts to automate processes, both scripts automation is supported in two modes:

1. Command line (for batch processing a large number of files). This includes command line without scripting using -ie command, and with scripting using Python, and Java scripts.
2. Interactive mode (from inside the GUI of SimLab Composer)

Scripting is supported in the **Ultimate edition** of SimLab Composer

Command line without scripting

Open the command line window, by typing "cmd" in Start. Go to the directory where SimLab Composer was installed, the default installation directory is "C:\Program Files\SimLab\SimLab Composer 10" to go there type **cd C:\Program Files\SimLab\SimLab Composer 10**



Now to run import/export functions in SimLab Composer, type Sim.. then start clicking the Tab button, until SimLabComposer.exe appears.

Type in the code -ie <import_file> <export_file>

With actual file locations, the below line will convert RubikCube.obj 3D models into RubikCube.skp in the indicated folders. Don't forget " "

-ie "C:\Users\simlab\Desktop\Delete\RubikCube.obj"
"C:\Users\simlab\Desktop\Delete\RubikCube.skp"

Check this **article** for more ab out the command line-based methods, also for commands on Mac.

Command line Python Scripts

Python scripts can be run from the command line using the following command

```
SimLabComposer.exe -py “File.py”
```

So if the user named a script as example.py, and saved it in folder C:\Scripts, The user should use the following command

```
SimLabComposer.exe -py “C:\Scripts\example.py”
```

Passing arguments to Python Scripts

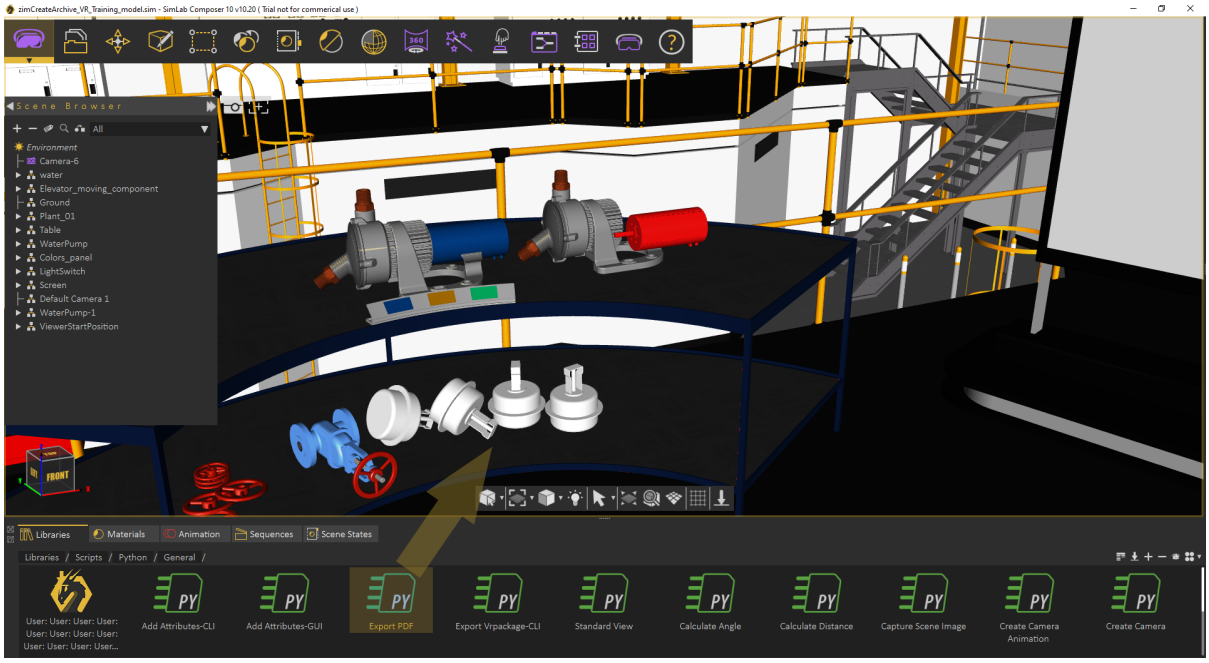
Passing arguments to a script makes it dynamic, and reusable without the need to change its code.

```
scene =Scene()
runtime =RunTime()
scene.reset()
fileName= runtime.args.getAsString("-path")
scene.importFile(fileName)
```

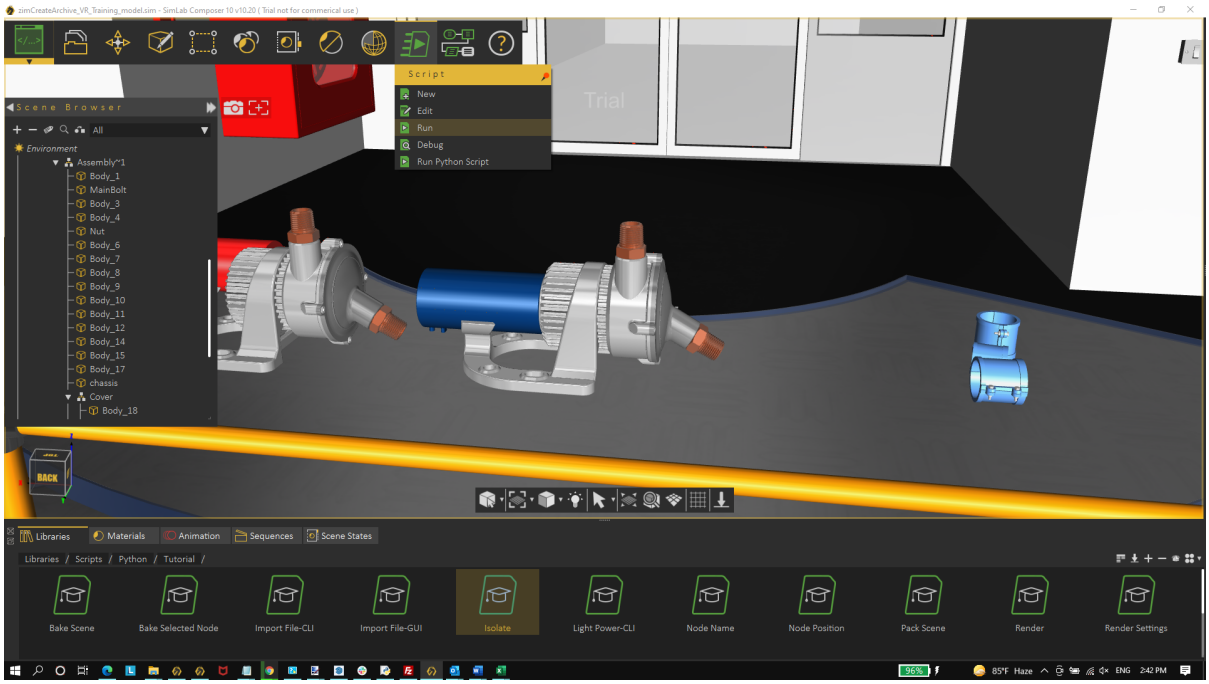
Interactive Scripting - Running Python script interactively

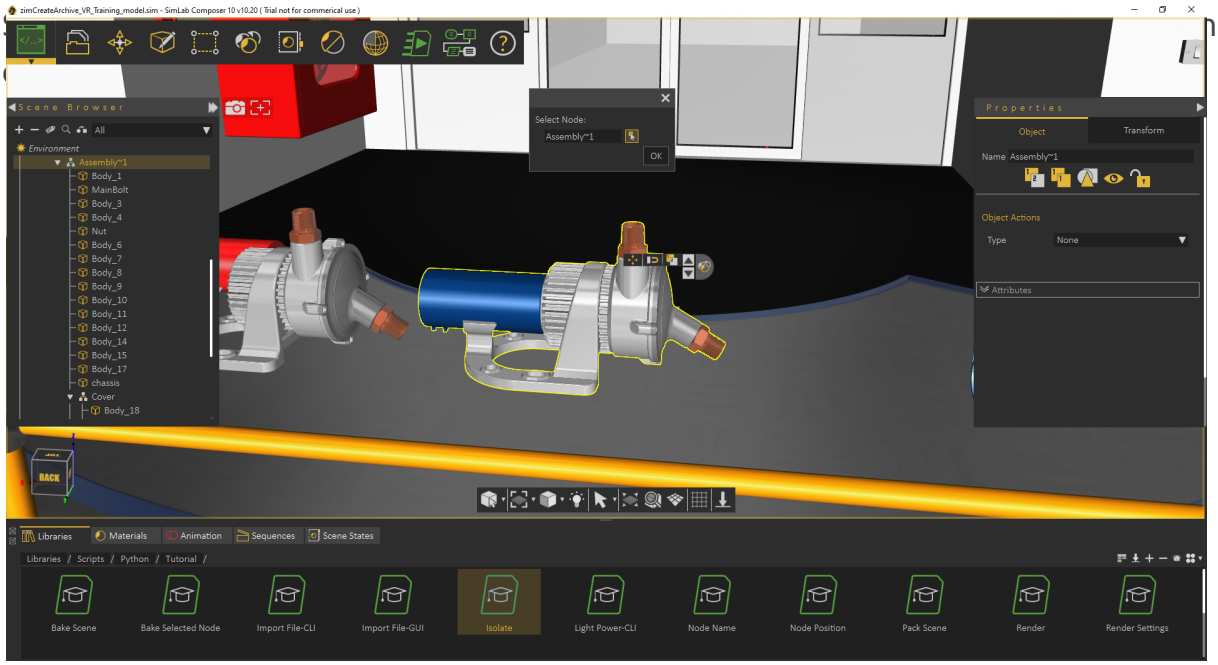
The user can run Python Scripts interactively in different ways:

1. Select a script from the scripting library, drag it, and drop it on the 3D area



2. Select a script from the library, then from the Script menu, click Run


Script
New
Edit
Run
Debug
Run Python Script
Scene Browser
Environment
Assembly^1
Body_1
MainBolt
Body_3
Body_4
Nut
Body_6
Body_7
Body_8
Body_9
Body_10
Body_11
Body_12
Body_14
Body_15
Body_17
chassis
Cover
Body_18
Libraries
Materials
Animation
Sequences
Scene States
Bake Scene
Bake Selected Node
Import File-CLI
Import File-GUI
Isolate
Light Power-CLI
Node Name
Node Position
Pack Scene
Render
Render Settings

3. 
Select Node:
Assembly^1
OK
Properties
Object
Transform
Name Assembly^1
Object Actions
Type
None
Attributes
Scene Browser
Environment
Assembly^1
Body_1
MainBolt
Body_3
Body_4
Nut
Body_6
Body_7
Body_8
Body_9
Body_10
Body_11
Body_12
Body_14
Body_15
Body_17
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My first Python script / Python Scripts using GUI input

The following script gets the location to save the rendered image, using a GUI dialog. Renders the current scene, saves the resulting image in the selected location, and finally displays a dialog indicating that rendering is done.

```
from simlabpy import *


scene = Scene()
runtime = RunTime()
render_path = runtime.ui.getSaveFileName("Exported rendered image location:", "",
"*.jpg;;*.png")
scene.render(render_path)
runtime.ui.alert("Rendered image was created.")
```

For a list of supported Python scripting commands visit this page

> Check out a blog about the approaches to automatically do things with SimLab Composer.

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