**Standard Work for Python Unittest Framework**

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**References:**

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# Purpose

Standard work to create automated test scripts using python for all types of automation like Web automation, BACnet automation and Mobile automation etc.

# Scope

To create common automation platform using Python libraries, writing test scripts for web application, BACnet and Mobile tests and execution.

# Installation of Python and Eclipse:

Download latest python version from <https://www.python.org/downloads/>

Step1: Install python installer (just click next …) Installation of python is done.

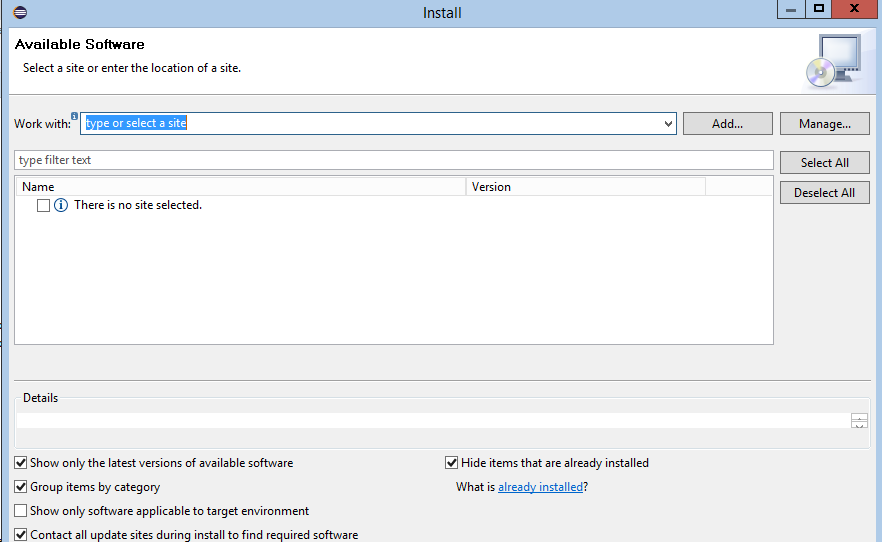
Step2: Set the python path in Environment Variables.

Download latest Eclipse Installer from <https://www.eclipse.org/downloads/packages/installer>

Step1: Install Eclipse installer (just click next…) Installation of Eclipse is done.

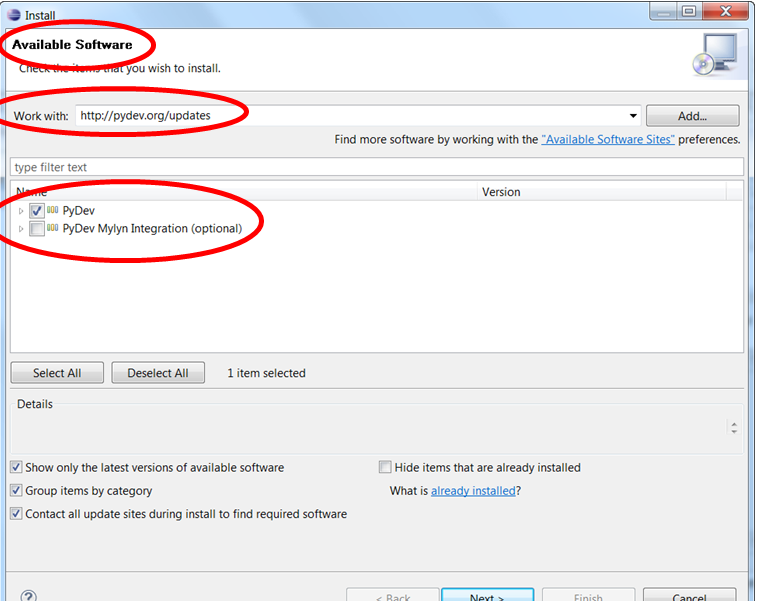
Step2: Download Pydev from within Eclipse.

Step3: Go to Help → Install New Software.



Step4: Enter http://pydev.org/updates in the Work with:

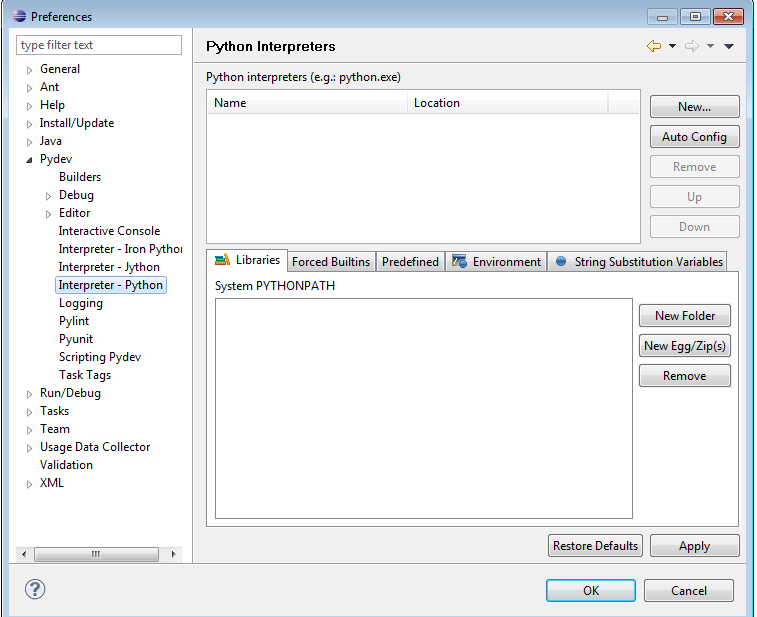
Step5: After several seconds, two options should appear. Select the PyDev for Eclipse option. Do not select the "PyDev Mylyn Integration" flag.



Step6: Click "Next" and "OK" to continue installing PyDev.

Step7: Select "I accept the terms of the license agreement", then click "Finish". The installer will begin to download the plug-in.

Step8: Configure PyDev, Go to Window → Preferences. In the Preferences window, expand PyDev and select Interpreter-Python.



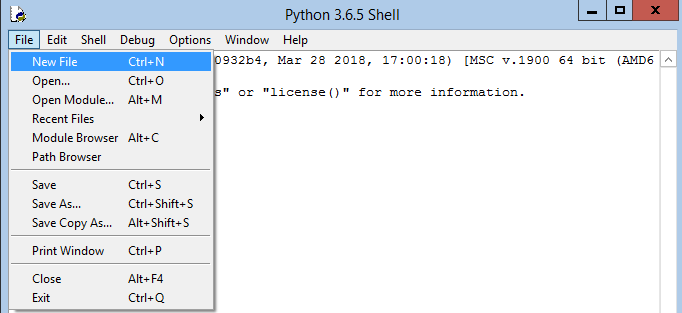
Step9: Click "New..." and type Python32 for the Interpreter name. For the Interpreter executable, browse to your copy of Python.

Now Eclipse with PyDev has successfully configured.

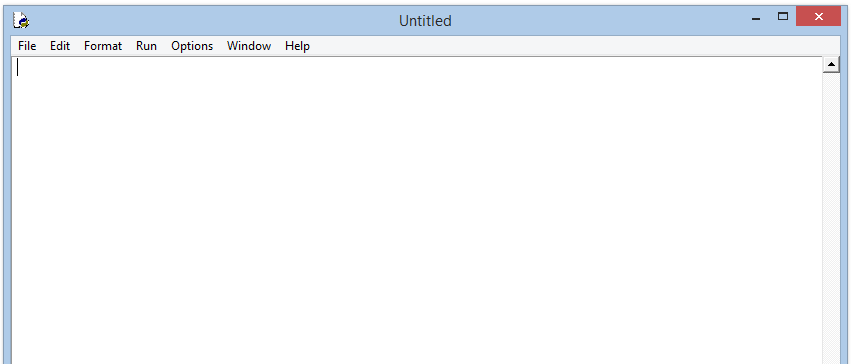
# Creating test scripts for Automation:

# Method 1 (Though IDLE):

1. Open the python IDLE then Navigate to File -> New File



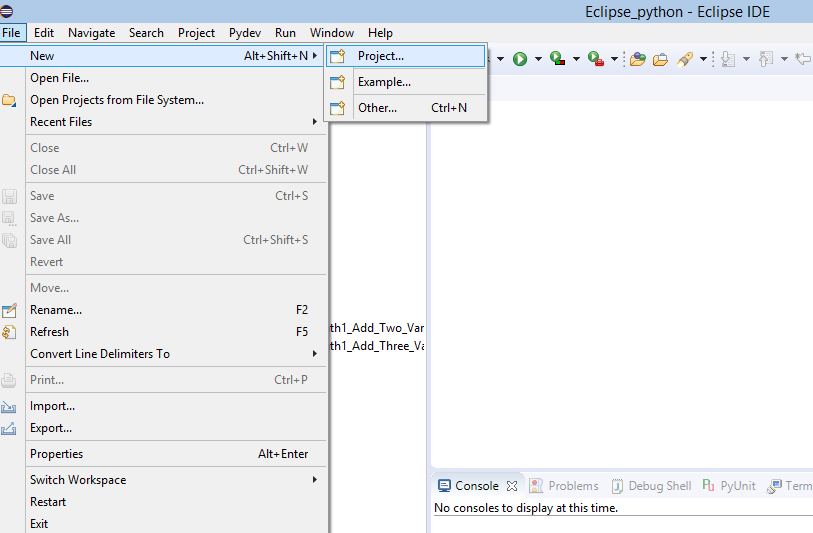
1. A blank file will be opened.



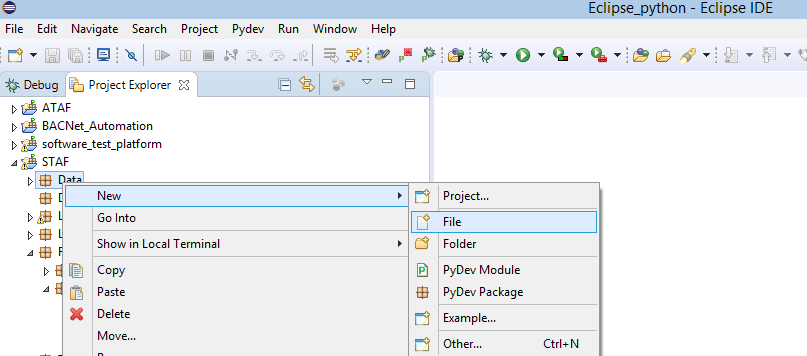
1. Write the Test script in the file and click on save.
2. The name must be given as “test\_xxxxx.py”

# Method 2(Using Eclipse)

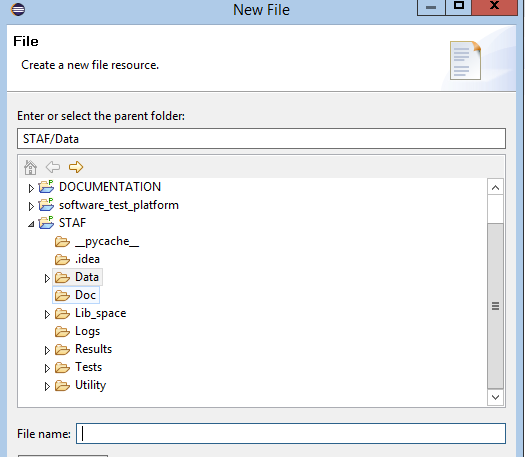
1. Open Eclipse editor
2. Navigate to File🡪New

****

1. Click on New🡪select File



1. Enter a file name as test\_xxx.py



*Note: The filename must be short and ensure that no blank spaces are included in the filename.*

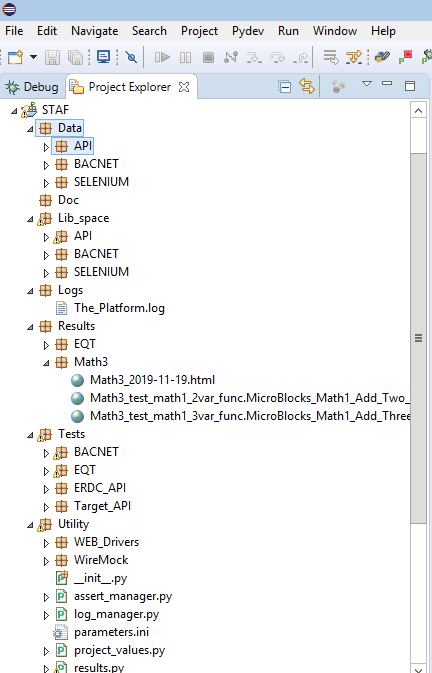
# Project Folder Structure for Implementation

Should have the following folders.

* **Lib\_Space**: Contains all core automation Libraries (CCN, NI, BACNet, Web automation,

Mobile automation etc.)

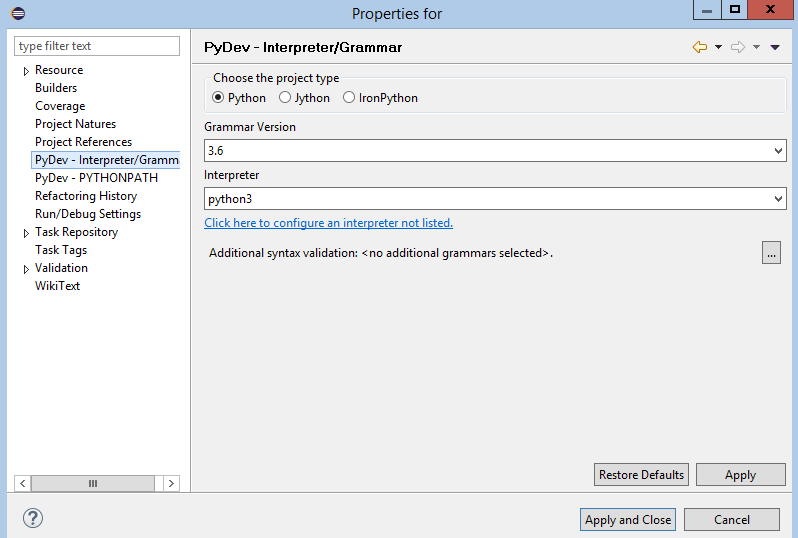
* **Utility**: Will have basic test functionalities according to project usage (Can be modified as per usage).
* **Data** : Will have the configuration and test data according to project usage.
* **Logs**: Will have logs which project tests used logs module in the scripts.
* **Doc**: Will have documents related to developed python modules.
* **Tests:** Will have subfolders containing test scripts according to functionalities.
* **Test\_Runner:** Will Run the test scripts under the Tests folder & generates report in to the Results folder.
* **Results:** Will have the generated reports Testsuite and individual file reports.



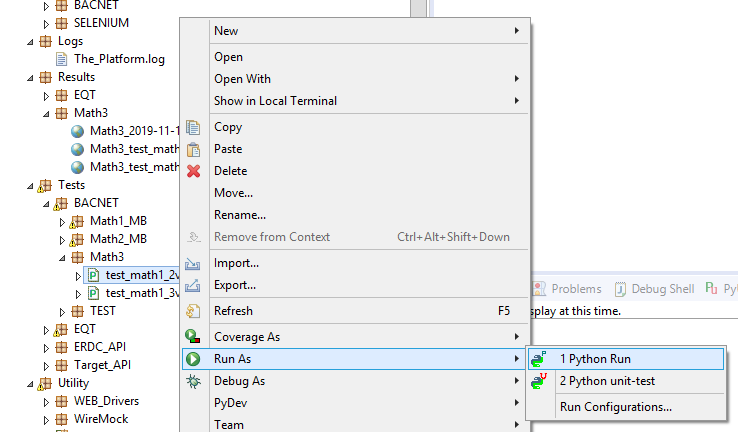
# Test Execution methods and generating reports:

# Using Eclipse:

* + 1. Configuration of Eclipse:
  + Open Eclipse
  + Go to File>>Properties>> Configure Python Interpreter.



* + 1. Execution of test scripts at File level:
* Right click on the test script file in the project area, right click and select ‘Python Unit-test’ as Python Run



# Using Test\_Runner file:

Execution of test scripts at Folder level, Execute Test\_Runner.py by giving argument as Test scripts folder path from command line or use Terminal in Eclipse from STAF Location.

