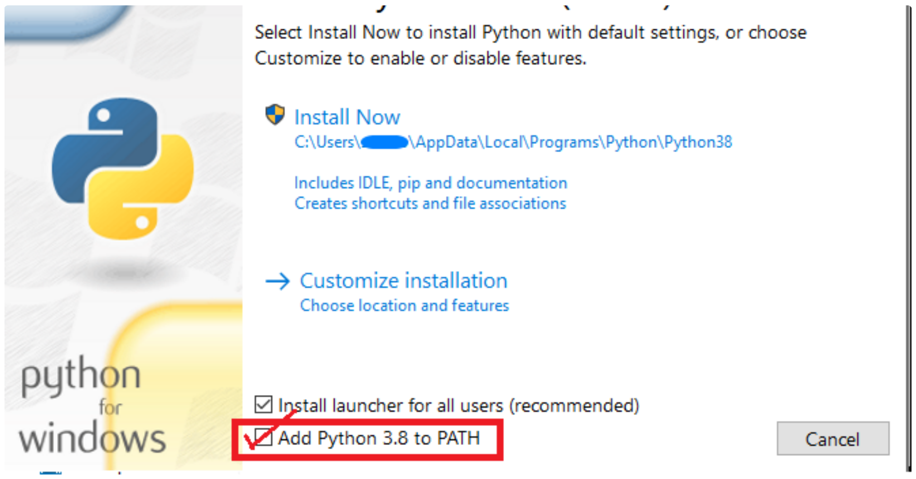
Automation Environment Setup

We need to perform the following process to set Automation Environment in our machine.

Installing Python:

1. We need to download python *version 3.8.5* from the following link.
   https://www.python.org/downloads/
   Note: For now(***Milestone-6***) we have installed ***python version 3.8.5***
2. While installing python we need to **check 'Add Python 3.8 to Path'** checkbox from Python Installation Window.
3. We need to make sure to choose custom installation, this this we will create a custom directory "C:/Python" and install python there to keep the directory path short and simple.



Select Install Now to install Python with default settings, or choose Customize to enable or disable features.

Install Now
C:\Users\[redacted]\AppData\Local\Programs\Python\Python38

Includes IDLE, pip and documentation
Creates shortcuts and file associations

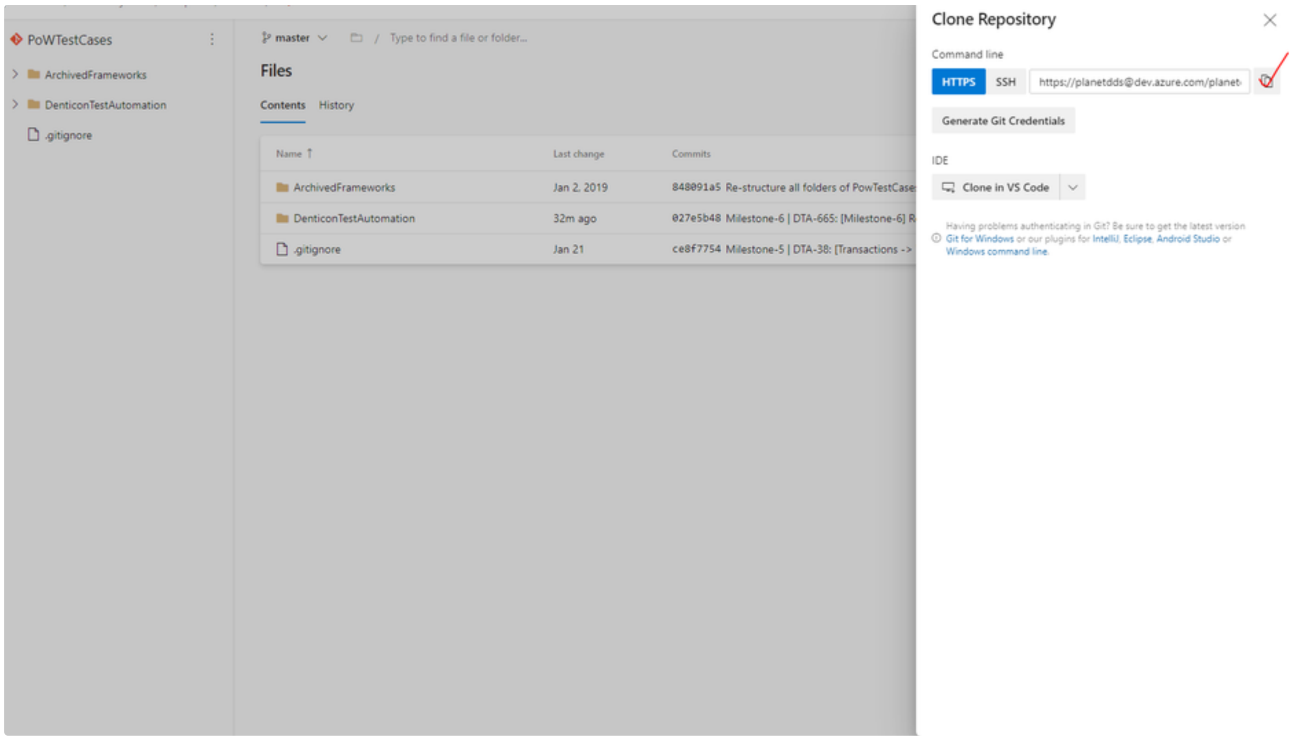
→ Customize installation
Choose location and features

☑ Install launcher for all users (recommended)
☑ Add Python 3.8 to PATH

With this, Python 3.8 will be added to Environment variables of the computer.

Installing Source Tree and Clone Repository:

1. We need to download source tree from the following link and install that in our machine.
   https://www.sourcetreeapp.com/
2. After installation is complete we have to clone the master branch in our machine. For doing that we need to do the following.
   - Navigate to https://dev.azure.com/planetdds/PoWProjects/_git/PoWTestCases
   - Copy the Repository URL



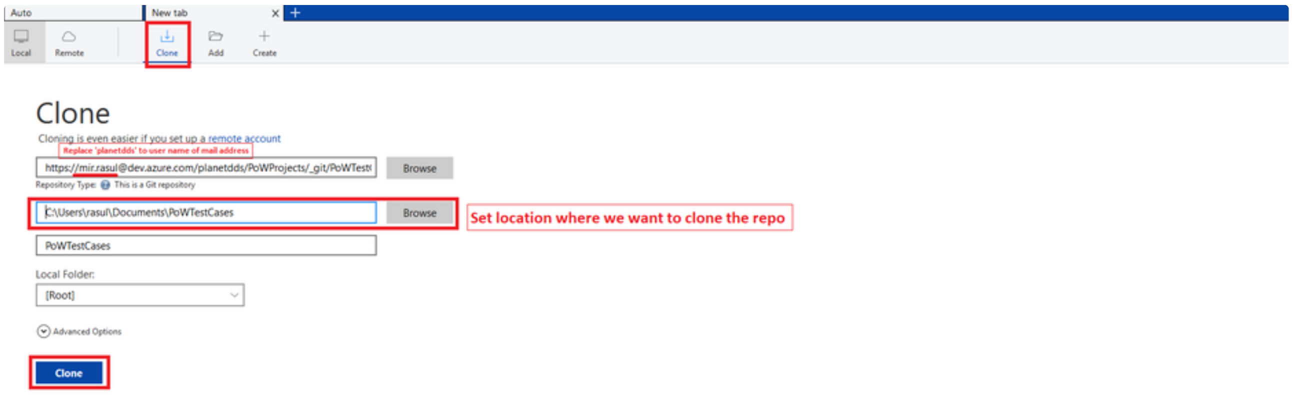
Name ↑	Last change	Commits
ArchivedFrameworks	Jan 2, 2019	848091a5 Re-structure all folders of PowTestCase
DenticonTestAutomation	32m ago	e27e5b48 Milestone-6 | DTA-665: [Milestone-6] R
.gitignore	Jan 21	ce8f7754 Milestone-5 | DTA-38: [Transactions ->

https://planetdds@dev.azure.com/planet

Having problems authenticating in Git? Be sure to get the latest version Git for Windows or our plugins for IntelliJ, Eclipse, Android Studio or Windows command line.

- Paste the Repo URL in Source Path Field of Clone Section of Source Tree.
- **Be careful not to change mouse focus outside of the input field in this stage!** Replace the ‘planetdds’ with the username (mail prefix) of PlanetDDS email address (ex: **username**@contract.planetdds.com) And select the location where we want to clone the repo (Preferably “D://PowTestCases”).

3. Click on “Advanced Options”. Then change the checkout branch to “Main“. Then click the clone button.


Auto
New tab
Local
Remote
Clone
Add
Create
Clone
Cloning is even easier if you set up a remote account
Replace 'planetdds' to user name of mail address
Browse
Browse
Set location where we want to clone the repo
Local Folder:
Advanced Options
Clone

https://mir.rasul@dev.azure.com/planetdds/PoWProjects/_git/PoWTest

Repository Type: This is a Git repository

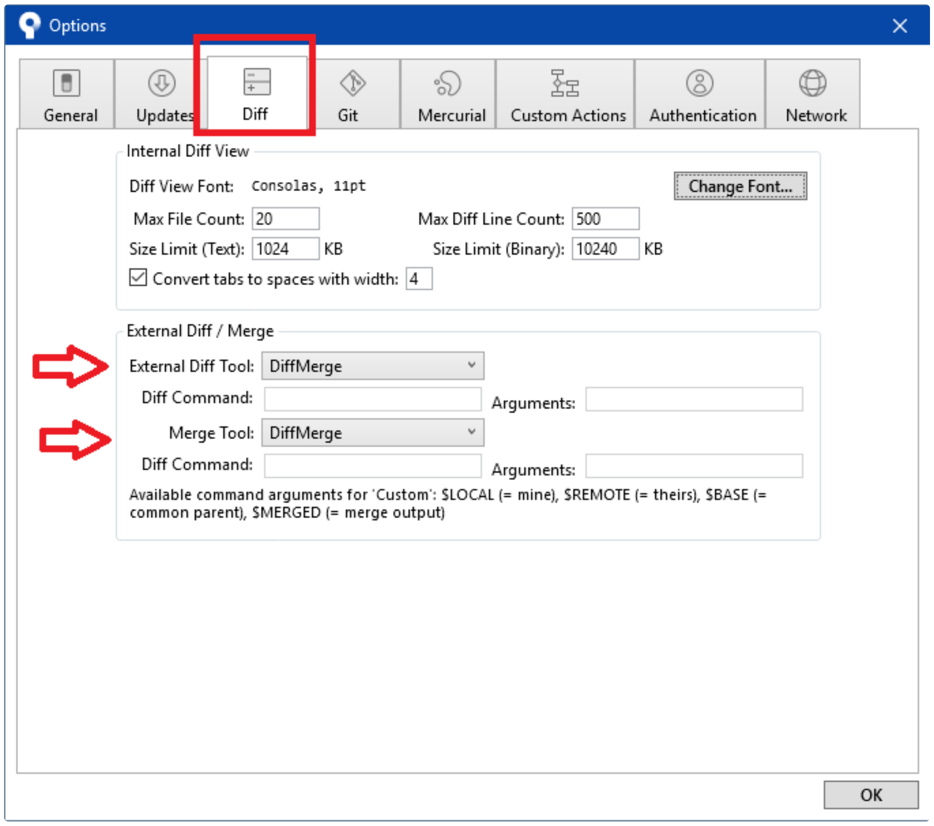
C:\Users\rasul\Documents\PoWTestCases

PoWTestCases

[Root]

Installing DiffMerge and Integrate with Source Tree:

1. Download DiffMerge https://sourcegear.com/diffmerge/downloads.php and install this to the machine
2. After completing installation open Source Tree and go to Tools->Options
3. Switch to Diff Tab and Set External Diff Tool and Merge Tool to DiffMerge and Click OK button.



Internal Diff View

Diff View Font: Consolas, 11pt

Max File Count: 20 Max Diff Line Count: 500

Size Limit (Text): 1024 KB Size Limit (Binary): 10240 KB

☑ Convert tabs to spaces with width: 4

External Diff / Merge

External Diff Tool: DiffMerge

Diff Command: Arguments:

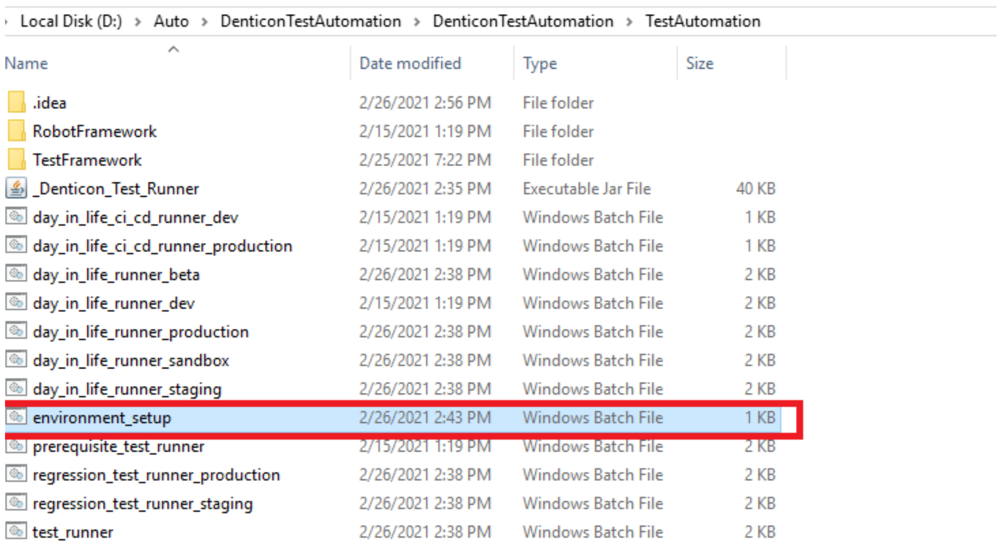
Merge Tool: DiffMerge

Diff Command: Arguments:

Available command arguments for 'Custom': $LOCAL (= mine), $REMOTE (= theirs), $BASE (= common parent), $MERGED (= merge output)

Installing Python Libraries:

1. For installing python libraries we run a bat file which can be found in cloned repository. In our cloned repository ***environment_setup.bat*** can be found on the following directory. 'DenticonTestAutomation\DenticonTestAutomation\TestAutomation'
2. Run the ***environment_setup.bat***

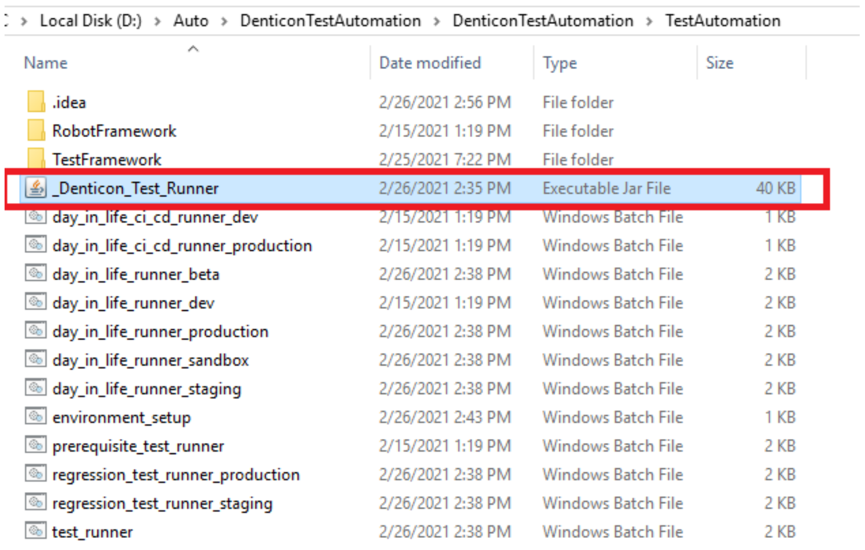


› Local Disk (D:) › Auto › DenticonTestAutomation › DenticonTestAutomation › TestAutomation

Name	Date modified	Type	Size
.idea	2/26/2021 2:56 PM	File folder	
RobotFramework	2/15/2021 1:19 PM	File folder	
TestFramework	2/25/2021 7:22 PM	File folder	
_Denticon_Test_Runner	2/26/2021 2:35 PM	Executable Jar File	40 KB
day_in_life_ci_cd_runner_dev	2/15/2021 1:19 PM	Windows Batch File	1 KB
day_in_life_ci_cd_runner_production	2/15/2021 1:19 PM	Windows Batch File	1 KB
day_in_life_runner_beta	2/26/2021 2:38 PM	Windows Batch File	2 KB
day_in_life_runner_dev	2/15/2021 1:19 PM	Windows Batch File	2 KB
day_in_life_runner_production	2/26/2021 2:38 PM	Windows Batch File	2 KB
day_in_life_runner_sandbox	2/26/2021 2:38 PM	Windows Batch File	2 KB
day_in_life_runner_staging	2/26/2021 2:38 PM	Windows Batch File	2 KB
environment_setup	2/26/2021 2:43 PM	Windows Batch File	1 KB
prerequisite_test_runner	2/15/2021 1:19 PM	Windows Batch File	2 KB
regression_test_runner_production	2/26/2021 2:38 PM	Windows Batch File	2 KB
regression_test_runner_staging	2/26/2021 2:38 PM	Windows Batch File	2 KB
test_runner	2/26/2021 2:38 PM	Windows Batch File	2 KB

Installing JDK and Running Denticon Test Runner:

1. Install the latest JDK from the link below. Please be sure to install only the stable releases.
   Download the Latest Java LTS Free
2. We can now run test automation from an user friendly UI we can use 'Denticon Test Runner'. In our cloned repository can be found on the following directory.
   'DenticonTestAutomation\DenticonTestAutomation\TestAutomation'



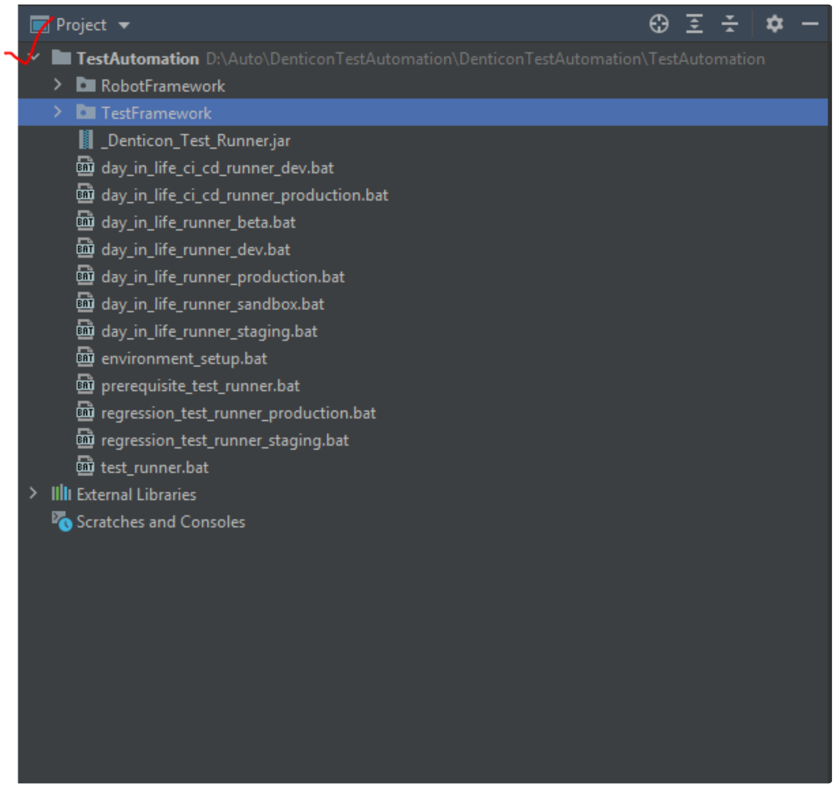
› Local Disk (D:) › Auto › DenticonTestAutomation › DenticonTestAutomation › TestAutomation

Name	Date modified	Type	Size
.idea	2/26/2021 2:56 PM	File folder	
RobotFramework	2/15/2021 1:19 PM	File folder	
TestFramework	2/25/2021 7:22 PM	File folder	
_Denticon_Test_Runner	2/26/2021 2:35 PM	Executable Jar File	40 KB
day_in_life_ci_cd_runner_dev	2/15/2021 1:19 PM	Windows Batch File	1 KB
day_in_life_ci_cd_runner_production	2/15/2021 1:19 PM	Windows Batch File	1 KB
day_in_life_runner_beta	2/26/2021 2:38 PM	Windows Batch File	2 KB
day_in_life_runner_dev	2/15/2021 1:19 PM	Windows Batch File	2 KB
day_in_life_runner_production	2/26/2021 2:38 PM	Windows Batch File	2 KB
day_in_life_runner_sandbox	2/26/2021 2:38 PM	Windows Batch File	2 KB
day_in_life_runner_staging	2/26/2021 2:38 PM	Windows Batch File	2 KB
environment_setup	2/26/2021 2:43 PM	Windows Batch File	1 KB
prerequisite_test_runner	2/15/2021 1:19 PM	Windows Batch File	2 KB
regression_test_runner_production	2/26/2021 2:38 PM	Windows Batch File	2 KB
regression_test_runner_staging	2/26/2021 2:38 PM	Windows Batch File	2 KB
test_runner	2/26/2021 2:38 PM	Windows Batch File	2 KB

IDE(Pycharm) Installation and Configuration:

1. Pycharm is used as our IDE for developing automation project. For downloading the Pycharm, we can navigate to the following page and **download the community version of Pycharm**.
   https://www.jetbrains.com/pycharm/download/

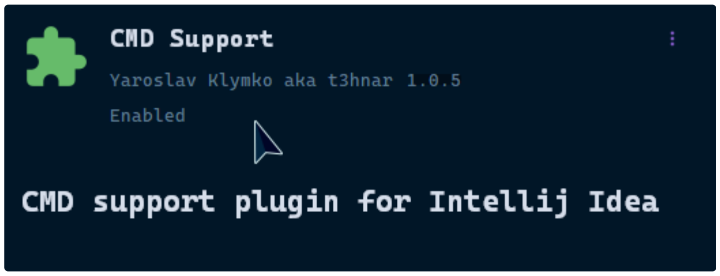
Note: In PyCharm, we open and work on the 'TestAutomation' folder. Here, we can find all of our Resource, Testsuites, Test Methods and other necessary files.



```
Project
TestAutomation D:\Auto\DenticonTestAutomation\DenticonTestAutomation\TestAutomation
  RobotFramework
  TestFramework
  _Denticon_Test_Runner.jar
  day_in_life_ci_cd_runner_dev.bat
  day_in_life_ci_cd_runner_production.bat
  day_in_life_runner_beta.bat
  day_in_life_runner_dev.bat
  day_in_life_runner_production.bat
  day_in_life_runner_sandbox.bat
  day_in_life_runner_staging.bat
  environment_setup.bat
  prerequisite_test_runner.bat
  regression_test_runner_production.bat
  regression_test_runner_staging.bat
  test_runner.bat
External Libraries
Scratches and Consoles
```

1. **Necessary Plugins:**
   - If we open a bat file, pycharm will suggest us to install plugin '**Batch Script Support**'. We have to install that plugin.

   - We need to install "**CMD Support**" from the Plugins Marketplace in order run certain Batch files from the IDE itself.



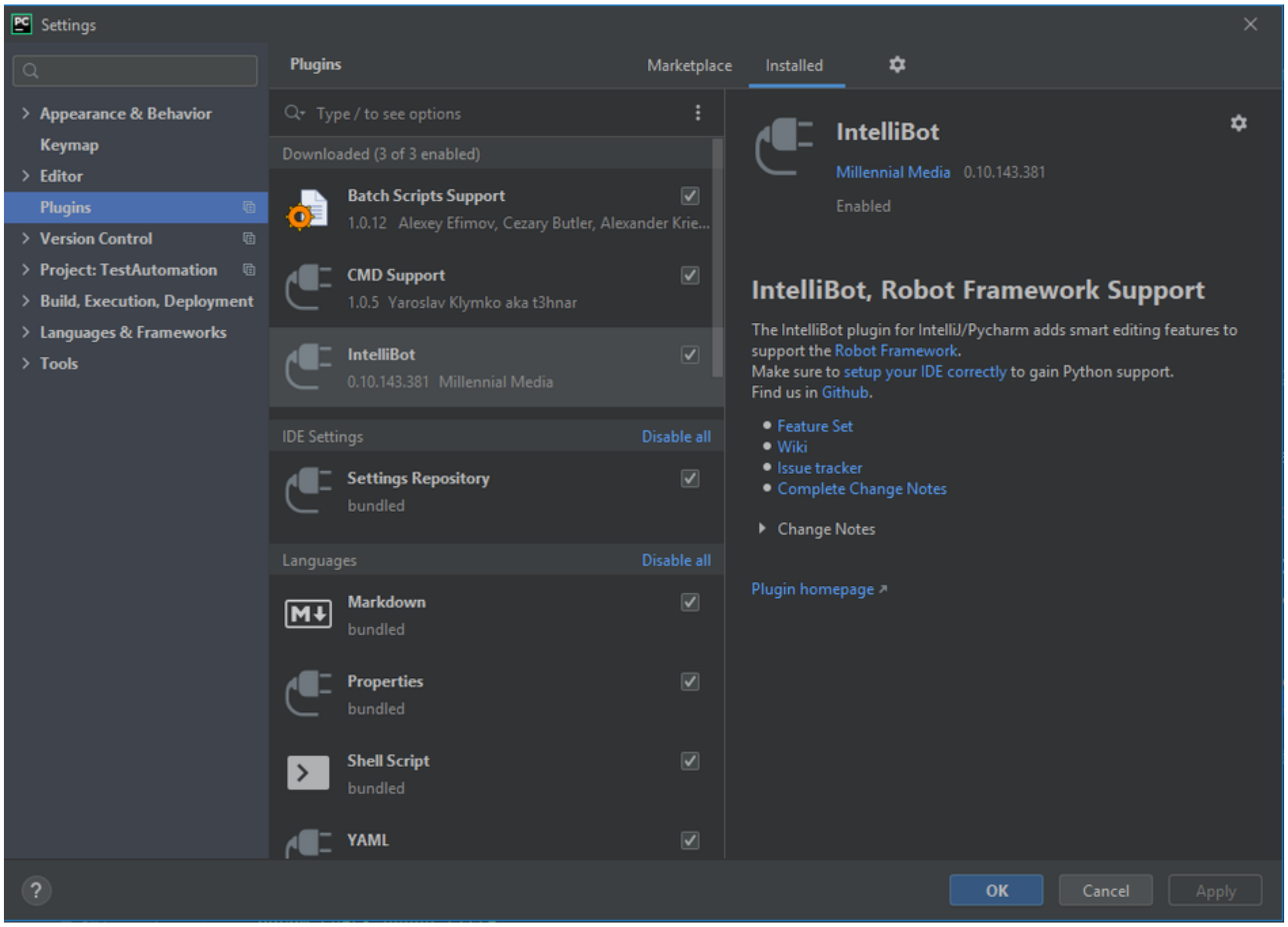
CMD Support

Yaroslav Klymko aka t3hnar 1.0.5

Enabled

CMD support plugin for Intellij Idea

- If we are suggested to install Git from PyCharm, then click on "Download and Install"
- From File->Settings->Plugin, we have to install IntelliBot



IntelliBot

Millennial Media 0.10.143.381

Enabled

IntelliBot, Robot Framework Support

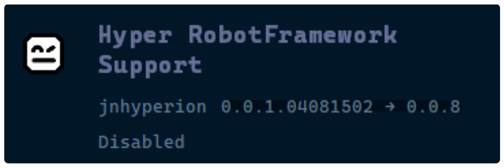
The IntelliBot plugin for IntelliJ/Pycharm adds smart editing features to support the Robot Framework.
Make sure to setup your IDE correctly to gain Python support.
Find us in Github.

- Feature Set
- Wiki
- Issue tracker
- Complete Change Notes

Change Notes

Plugin homepage ↗

At this point, since we have some .robot files opened in pycharm, it will prompt us to install "**Hyper RobotFramework Support**". We will **ignore** this prompt and will **NOT INSTALL** this plugin.

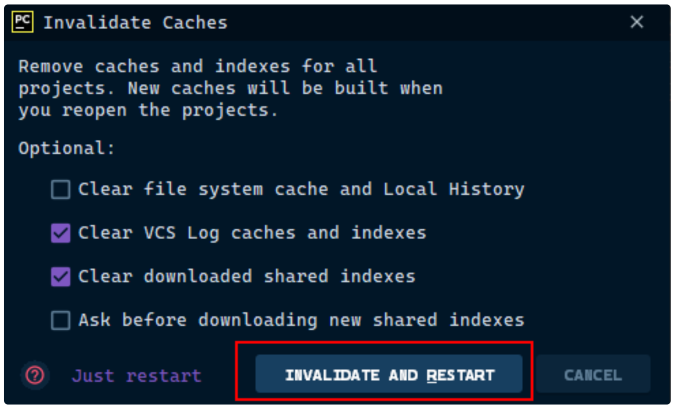


Hyper RobotFramework Support

jnhyperion 0.0.1.04081502 → 0.0.8

Disabled

After completing installations of the necessary plugins in PyCharm we should navigate to **File** → **Invalidate Caches,** upon which the following pop up will appear. We will click "Invalidate and Restart".



Invalidate Caches

Remove caches and indexes for all projects. New caches will be built when you reopen the projects.

Optional:

- [ ] Clear file system cache and Local History
- [x] Clear VCS Log caches and indexes
- [x] Clear downloaded shared indexes
- [ ] Ask before downloading new shared indexes

Installing AutoIt for interacting with OS pop-ups:

AutoIt is a freeware BASIC-like scripting language designed for automating the Windows GUI and general scripting. It uses a combination of simulated keystrokes, mouse movement and window/control manipulation in order to automate tasks in a way not possible or reliable with other languages

Please download and install AutoIt from this URL.

Setting Email Environment:

We should copy the following files and paste these files to the 'C:\Python\Lib\site-packages\robotframework_metrics' folder.

File#1:

robotmetrics.py
10 Jun 2022, 09:20 AM

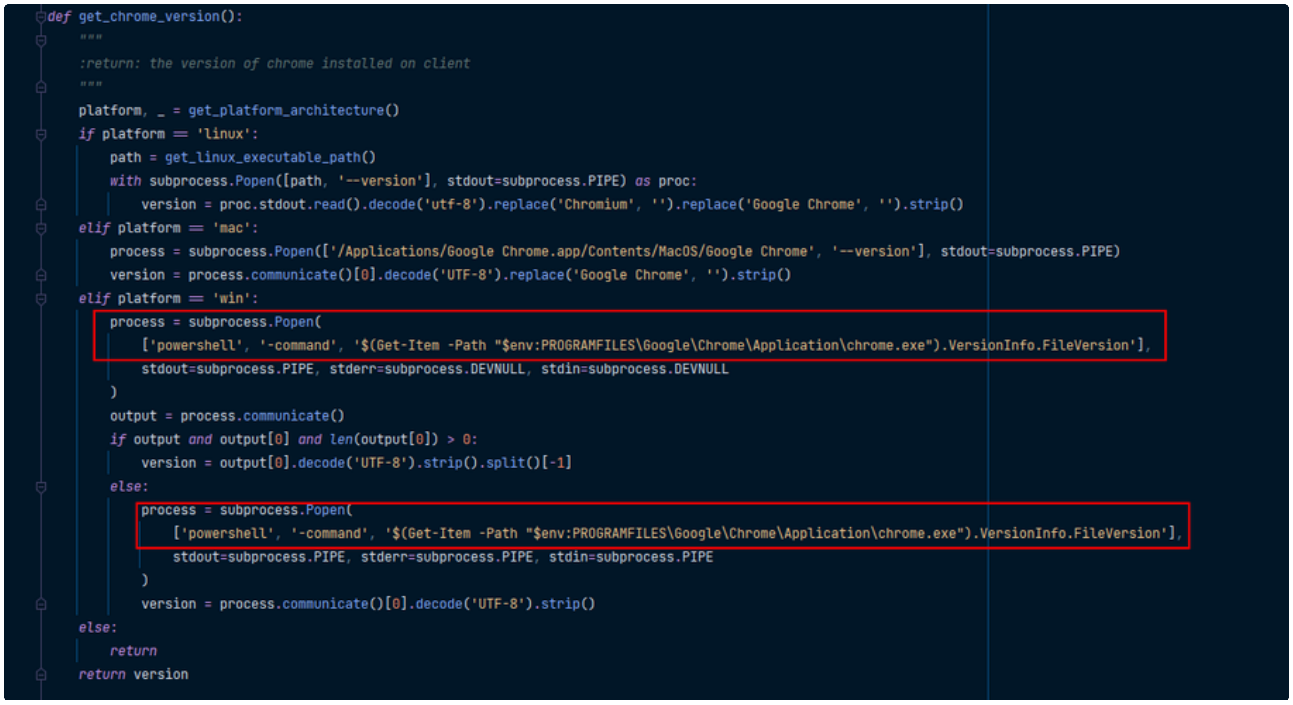
File#2:

runner.py
01 Mar 2021, 10:48 AM

Installing Google Chrome and Setting ChromeDriver:

1. In our automation environment, latest version Google Chrome should be downloaded and installed.
2. In ‘C:\Python\Lib\site-packages\chromedriver_autoinstaller\utils.py’ file, we need to change two paths. The paths are mentioned in the below image. We need to change these paths to:

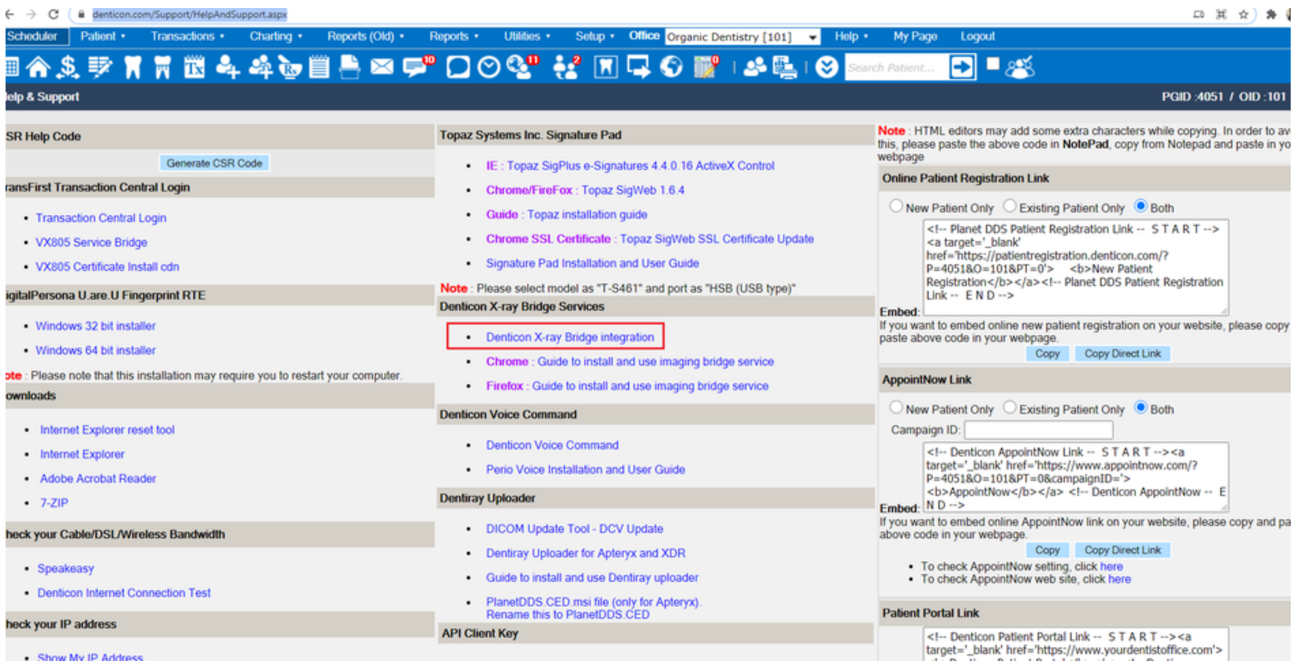
   `['powershell', '-command', '$(Get-Item -Path "$env:PROGRAMFILES\Google\Chrome\Application\chrome.exe").VersionInfo.FileVersion'],`



```python
def get_chrome_version():
    """
    :return: the version of chrome installed on client
    """
    platform, _ = get_platform_architecture()
    if platform == 'linux':
        path = get_linux_executable_path()
        with subprocess.Popen([path, '--version'], stdout=subprocess.PIPE) as proc:
            version = proc.stdout.read().decode('utf-8').replace('Chromium', '').replace('Google Chrome', '').strip()
    elif platform == 'mac':
        process = subprocess.Popen(['/Applications/Google Chrome.app/Contents/MacOS/Google Chrome', '--version'], stdout=subprocess.PIPE)
        version = process.communicate()[0].decode('UTF-8').replace('Google Chrome', '').strip()
    elif platform == 'win':
        process = subprocess.Popen(
            ['powershell', '-command', '$(Get-Item -Path "$env:PROGRAMFILES\Google\Chrome\Application\chrome.exe").VersionInfo.FileVersion'],
            stdout=subprocess.PIPE, stderr=subprocess.DEVNULL, stdin=subprocess.DEVNULL
        )
        output = process.communicate()
        if output and output[0] and len(output[0]) > 0:
            version = output[0].decode('UTF-8').strip().split()[-1]
        else:
            process = subprocess.Popen(
                ['powershell', '-command', '$(Get-Item -Path "$env:PROGRAMFILES\Google\Chrome\Application\chrome.exe").VersionInfo.FileVersion'],
                stdout=subprocess.PIPE, stderr=subprocess.PIPE, stdin=subprocess.PIPE
            )
            version = process.communicate()[0].decode('UTF-8').strip()
    else:
        return
    return version
```

Installing Denticon X-Ray Bridge Integration:

1. From Denticon we need to download 'Denticon X-Ray Bridge Integration' from https://denticon.com/Support/HelpAndSupport.aspx and install this to our machine.



SR Help Code

ransFirst Transaction Central Login

- Transaction Central Login
- VX805 Service Bridge
- VX805 Certificate Install cdn

igitalPersona U.are.U Fingerprint RTE

- Windows 32 bit installer
- Windows 64 bit installer

ote : Please note that this installation may require you to restart your computer.

ownloads

- Internet Explorer reset tool
- Internet Explorer
- Adobe Acrobat Reader
- 7-ZIP

heck your Cable/DSL/Wireless Bandwidth

- Speakeasy
- Denticon Internet Connection Test

heck your IP address

- Show My IP Address

Topaz Systems Inc. Signature Pad

- IE : Topaz SigPlus e-Signatures 4.4.0.16 ActiveX Control
- Chrome/FireFox : Topaz SigWeb 1.6.4
- Guide : Topaz installation guide
- Chrome SSL Certificate : Topaz SigWeb SSL Certificate Update
- Signature Pad Installation and User Guide

Note : Please select model as "T-S461" and port as "HSB (USB type)"

Denticon X-ray Bridge Services

- Denticon X-ray Bridge integration
- Chrome : Guide to install and use imaging bridge service
- Firefox : Guide to install and use imaging bridge service

Denticon Voice Command

- Denticon Voice Command
- Perio Voice Installation and User Guide

Dentiray Uploader

- DICOM Update Tool - DCV Update
- Dentiray Uploader for Apteryx and XDR
- Guide to install and use Dentiray uploader
- PlanetDDS.CED.msi file (only for Apteryx). Rename this to PlanetDDS.CED

API Client Key

Note : HTML editors may add some extra characters while copying. In order to av this, please paste the above code in **NotePad**, copy from Notepad and paste in yo webpage

Online Patient Registration Link

New Patient Only Existing Patient Only [✓ Both]

Embed:

```
<!-- Planet DDS Patient Registration Link --  S T A R T -->
<a target='_blank'
href='https://patientregistration.denticon.com/?
P=4051&O=101&PT=0'>    <b>New Patient
Registration</b></a><!-- Planet DDS Patient Registration
Link --  E N D -->
```

If you want to embed online new patient registration on your website, please copy paste above code in your webpage.

AppointNow Link

New Patient Only Existing Patient Only [✓ Both]

Campaign ID:

Embed:

```
<!-- Denticon AppointNow Link --  S T A R T --><a
target='_blank' href='https://www.appointnow.com/?
P=4051&O=101&PT=0&campaignID='>
<b>AppointNow</b></a> <!-- Denticon AppointNow -- E
N D -->
```

If you want to embed online AppointNow link on your website, please copy and pa above code in your webpage.

- To check AppointNow setting, click here
- To check AppointNow web site, click here

Patient Portal Link

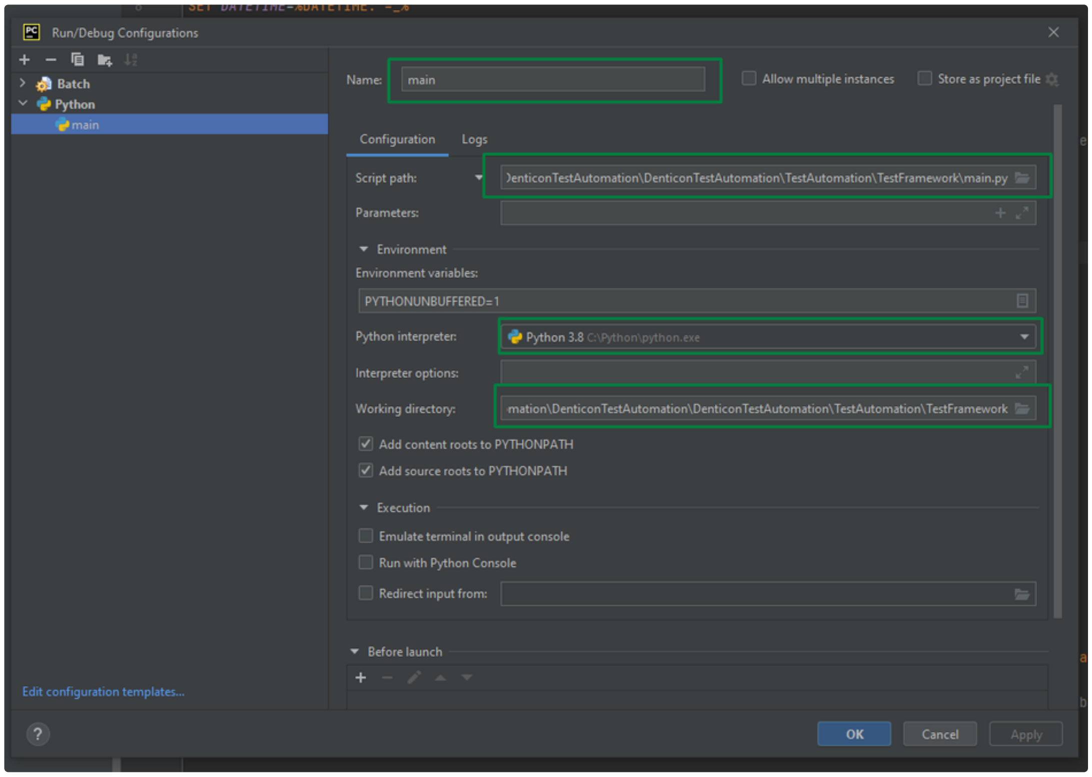
```
<!-- Denticon Patient Portal Link --  S T A R T --><a
target='_blank' href='https://www.yourdentistoffice.com'>
```

After installing this, user can navigate to Utility->Launch Third Party-EzDenti

Configuration to run Debugger in Pycharm:

We use main.py file under TestAutomation->TestFramework directory for debugging python code. To run debugger, following configuration should be done:

1. Open project in Pycharm
2. Navigate to Run->Edit Configuration. A window will open. Click on the plus (+) icon. Select option ‘Python’ from the dropdown.
3. Now, add the following in the window



Name: main

☐ Allow multiple instances ☐ Store as project file

Script path:)enticonTestAutomation\DenticonTestAutomation\TestAutomation\TestFramework\main.py

Parameters:

Environment variables:

PYTHONUNBUFFERED=1

Python interpreter: Python 3.8 C:\Python\python.exe

Interpreter options:

Working directory: mation\DenticonTestAutomation\DenticonTestAutomation\TestAutomation\TestFramework

☑ Add content roots to PYTHONPATH

☑ Add source roots to PYTHONPATH

☐ Emulate terminal in output console

☐ Run with Python Console

☐ Redirect input from:

- Name: Main
- Script path: path to the main.py file
- Environment variables: PYTHONBUFFERED=1 (should be automatically configured)
- Python interpreter: Python 3.8 (select from the dropdown)
- Working directory: Path to the TestFramework folder
- Add content root to PYTHONPATH: checked (should be automatically configured)
- Add source root to PYTHONPATH: checked (should be automatically configured)

4. After the setup, click on ‘Apply’ and then ‘OK’.