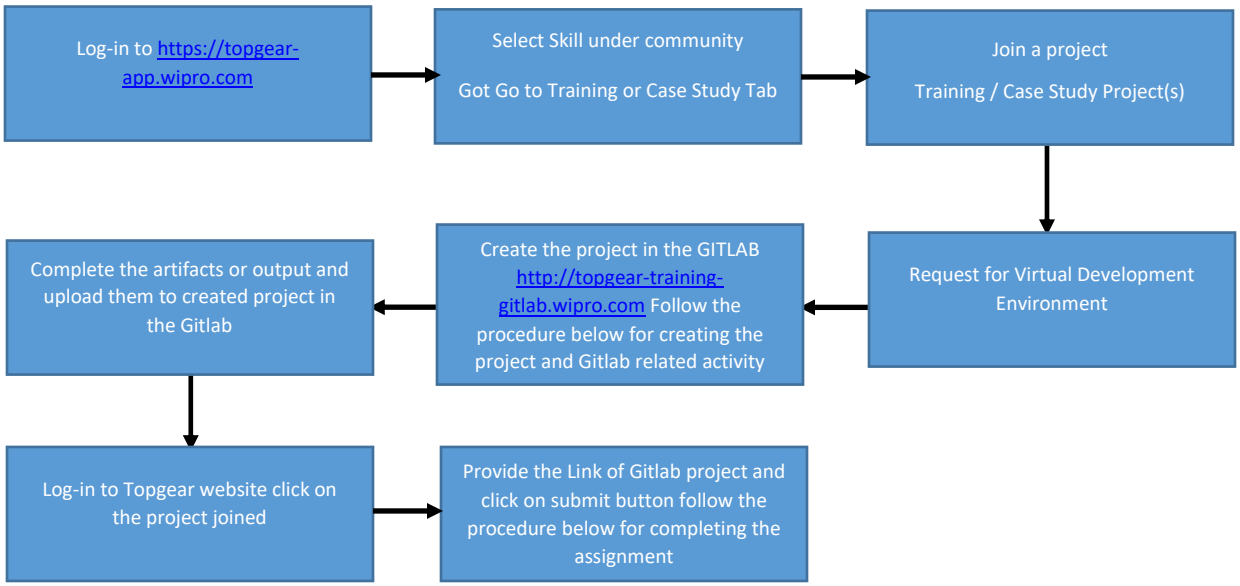
Steps To Execute TopGear Training & Case Study Projects V1.2.3

Please note: In this document version, the process of requesting VDI from the TopGear portal (Step 2) and creating GitLab repository sections (Step 4) are updated with respect to changes on portal and the GitLab. Thus, users are advised to go through these sections mindfully before starting with their respective projects.

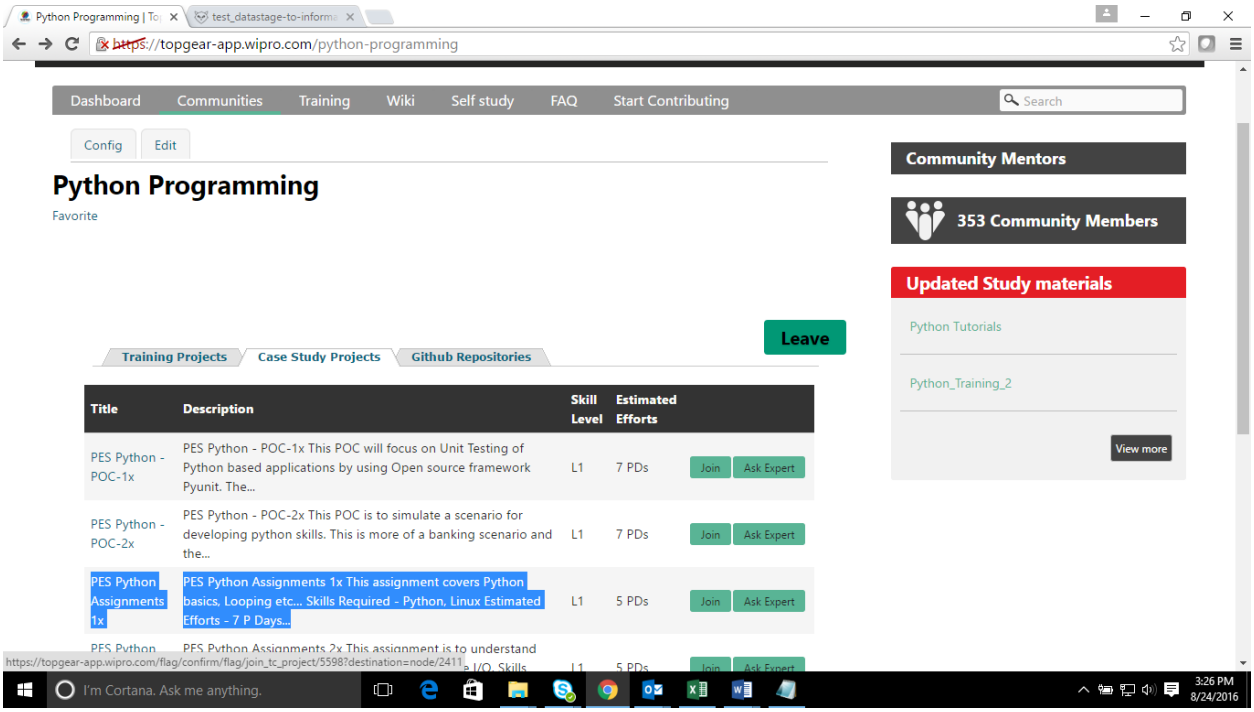
Following flow diagram depicts the process overview for TopGear training and case study projects. TopGear users who are joining training or case study projects are advised to trace this while going through steps provided in this document.



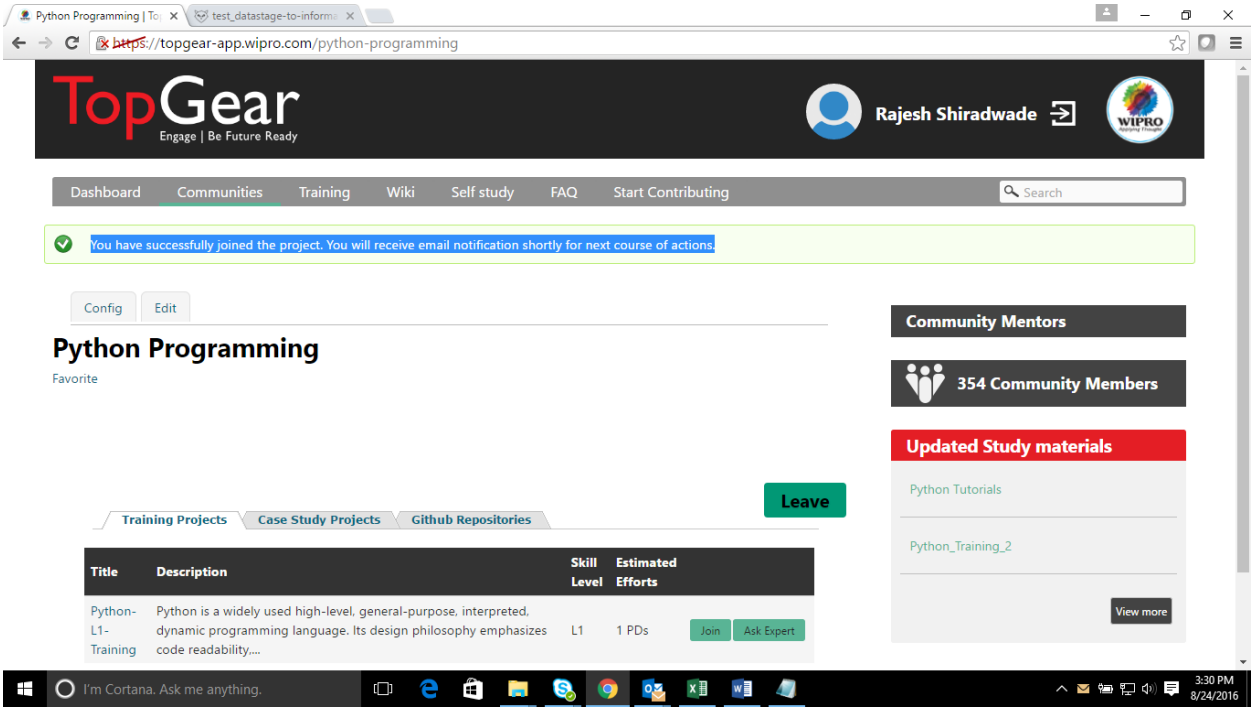
In the below reference scenario a TopGear user chooses to join Embedded and Platform →Python Programming →PES Python Assignments 1x case study project . Following steps can be referred by any new TopGear user to join and complete their respective Training or Case Study Projects:

1. **Step 1→ Joining project on TopGear portal :**

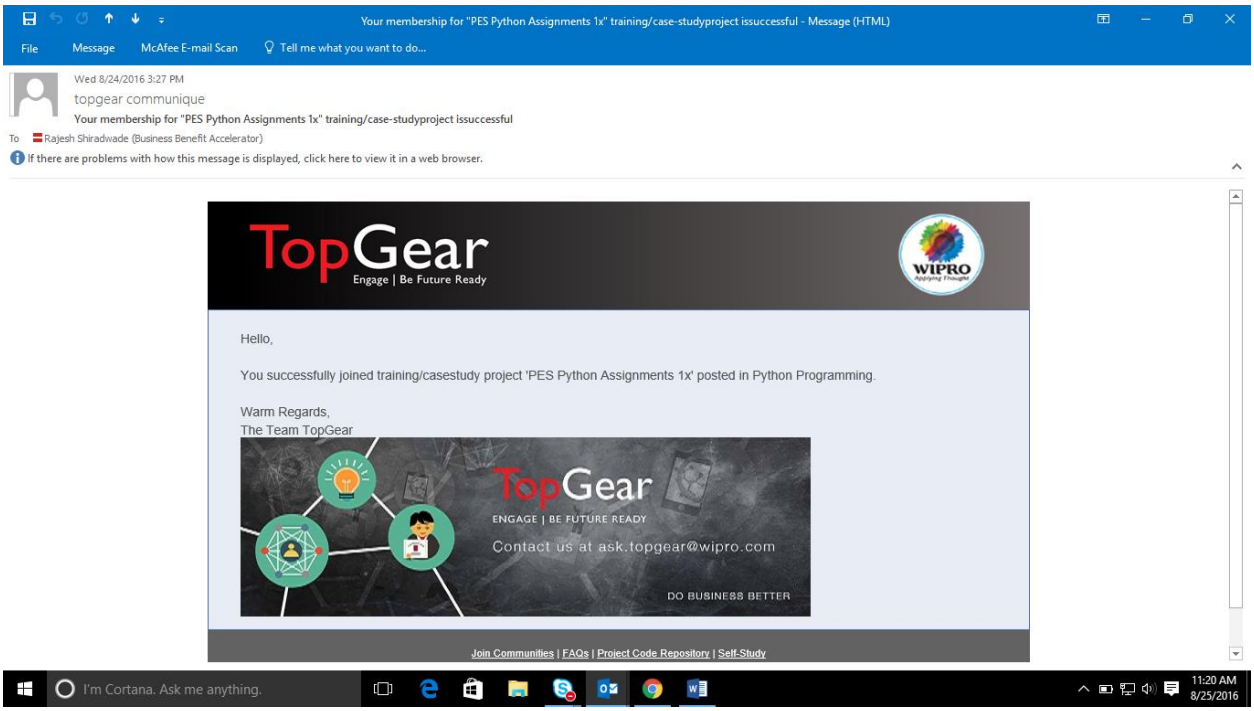
a. User navigates to Python programming sub community and joins the PES Python Assignments 1x project on the portal.



b. User gets confirmation message:

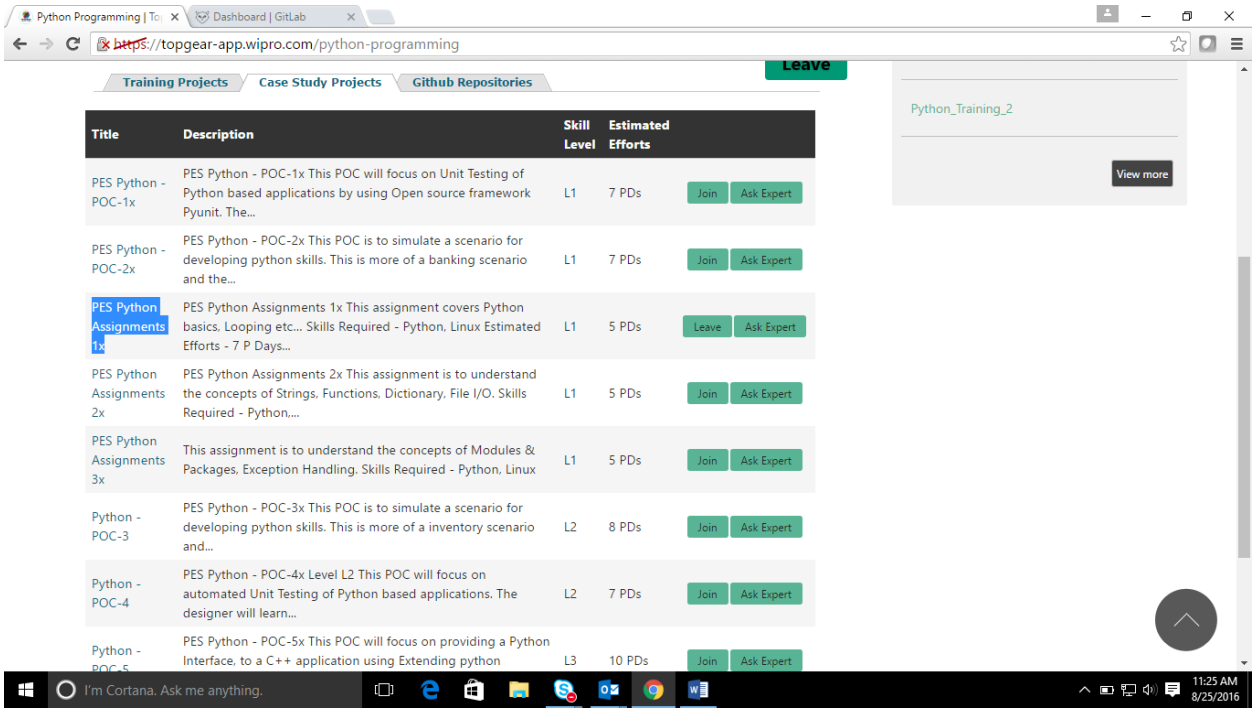


c. Mail confirmation from TopGear admin:



d. Navigate to project description page:

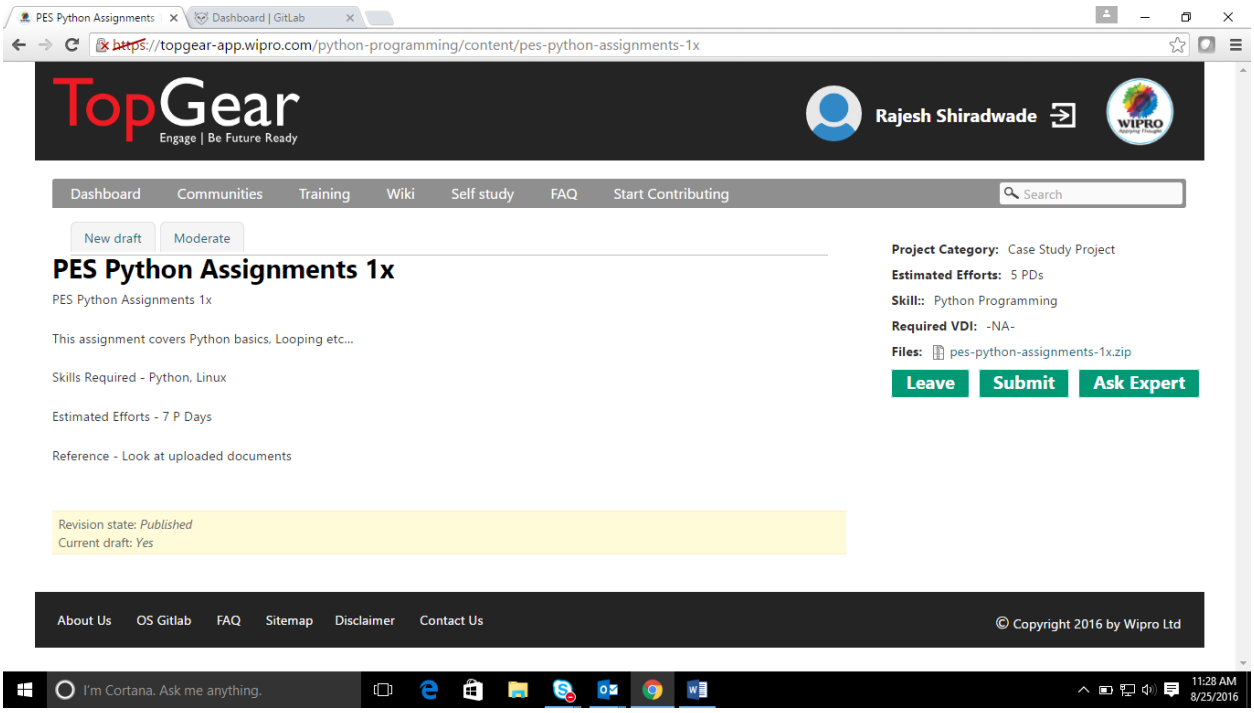
User needs to click the project name (highlighted text) which is a link to the project description page:



Below is the description page which will have:

- A brief description about the project.

- Pre-requisite skill/s.
- Estimated efforts in person days.
- Name of the VDI required for this project.
- Zip file downloadable containing project documents.



At this point of time user is required to note down the VDI type required and proceed with next step.

2. Step 2→ Requesting for VDI (development environment) a new process scenarios :

Users are advised to go through following scenarios and choose the appropriate process for requesting the VDI.

1. When TopGear user joins a training or case study project and VDI is mapped in project description page :

In this scenario, the TopGear portal will automatically raise a request for the required VDI and user will receive a mail from TopGear team containing following message:

"Request for the <required VDI> VDI has already been raised.
You will get an email notification after successful VDI allocation. Use this VDI to complete the <project name> project."

By default, VDI will be allocated to this user for 4 weeks.

2. When TopGear user joins a training or case study project , already has access to required VDI and mapping present on description page:

In this scenario, no new request will be made for the VDI. TopGear Portal checks the duration of accessibility left with the user for that particular VDI and extends it to further 4 weeks automatically. User will receive a mail from TopGear team with following message:

" A <required VDI name> VDI had already been allocated to you. Kindy use the same VDI to complete this <project name> project"

3. **When TopGear user joins training or case study project, VDI is mapped in the project description page ,but user is already having access to different VDI:**

   In this scenario, no new request will be made for required VDI by TopGear portal as the user is allowed to have access for only one VDI at a time. Now user has to de-allocate (cancel) the existing VDI and request for the required VDI manually. User will receive a mail from TopGear team with following message:

   "You have reached the maximum number of VDI allocation. Please deallocate the existing VDI and request for a new <required VDI name> VDI to complete the <project name> project."

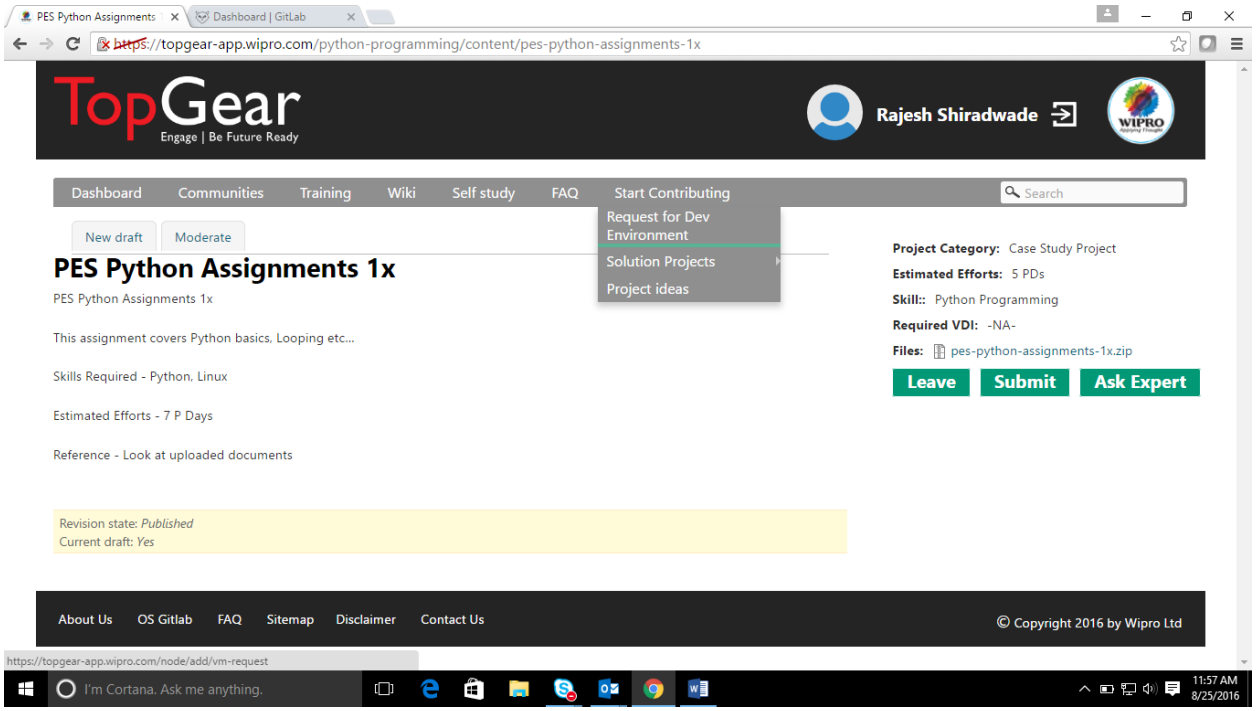
   User need to refer below mentioned "**Cancelling the allocated VDI** " and "**Requesting the VDI manually"** sections to de-allocate (cancel) and request for required VDI from TopGear portal.

4. **When TopGear user joins a training and case study project and required VDI is not mapped in project description page:**

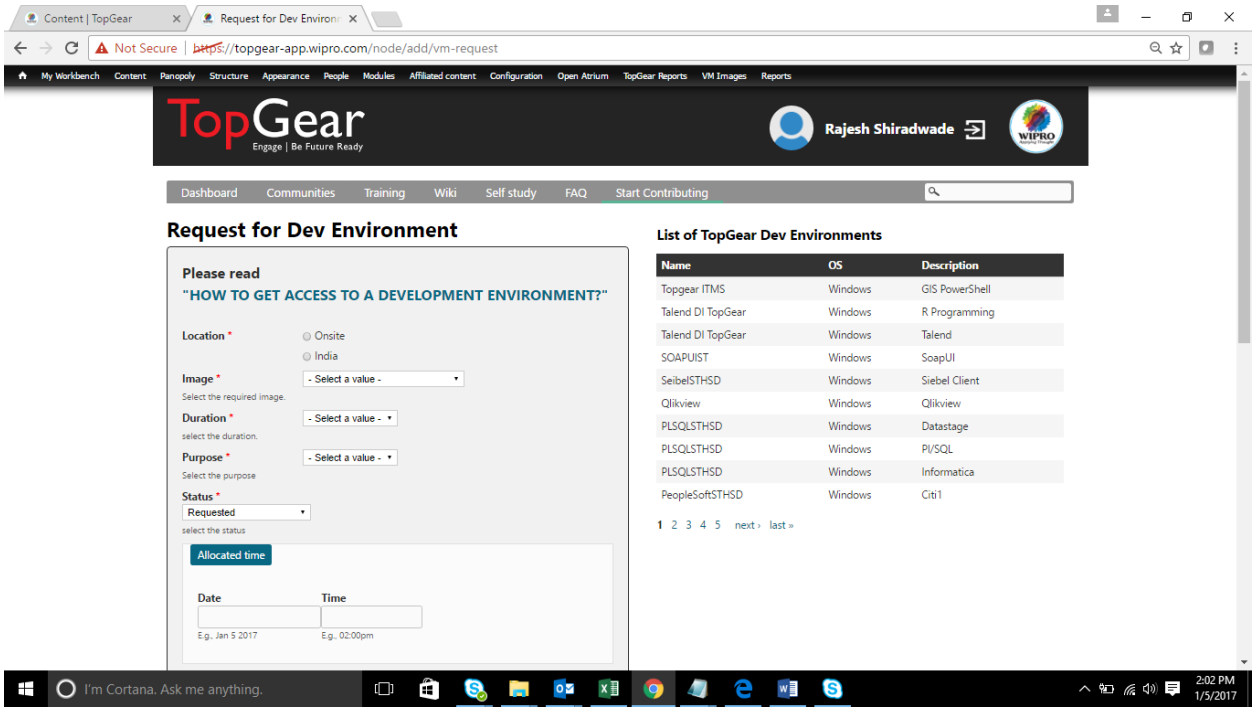
   In this scenario, no new request will be made for the VDI, as the VDI mapping does not exist on the project description page. TopGear portal will trigger mail to its admin team to map the required VDI for that particular project. User will have to use "ask expert" button for querying to know which VDI is required.
   After receiving a response from TopGear team, user need to refer below ("**Requesting the VDI manually")** section to raise the request for the required VDI.

Requesting the VDI manually:

User clicks "Start Contributing → Request for Dev Environment" link on TopGear portal as shown in the below screen shot.



Dev environment request form is as shown in the below screen shot:



Form has following fields to be chosen by the user:

- **Location:** User needs to select appropriate option.
- **Image:** User needs to select type of VDI mentioned in the project description page. If this information is not available, please refer the table on right of the form for the list of development environments provided by TopGear for different OSs and technologies.

- **Duration:** User needs to choose the duration diligently based on the efforts defined for the project and his/her proficiency.
- **Purpose:** For training projects and case studies, it will be either “Upskilling” or “Training”.

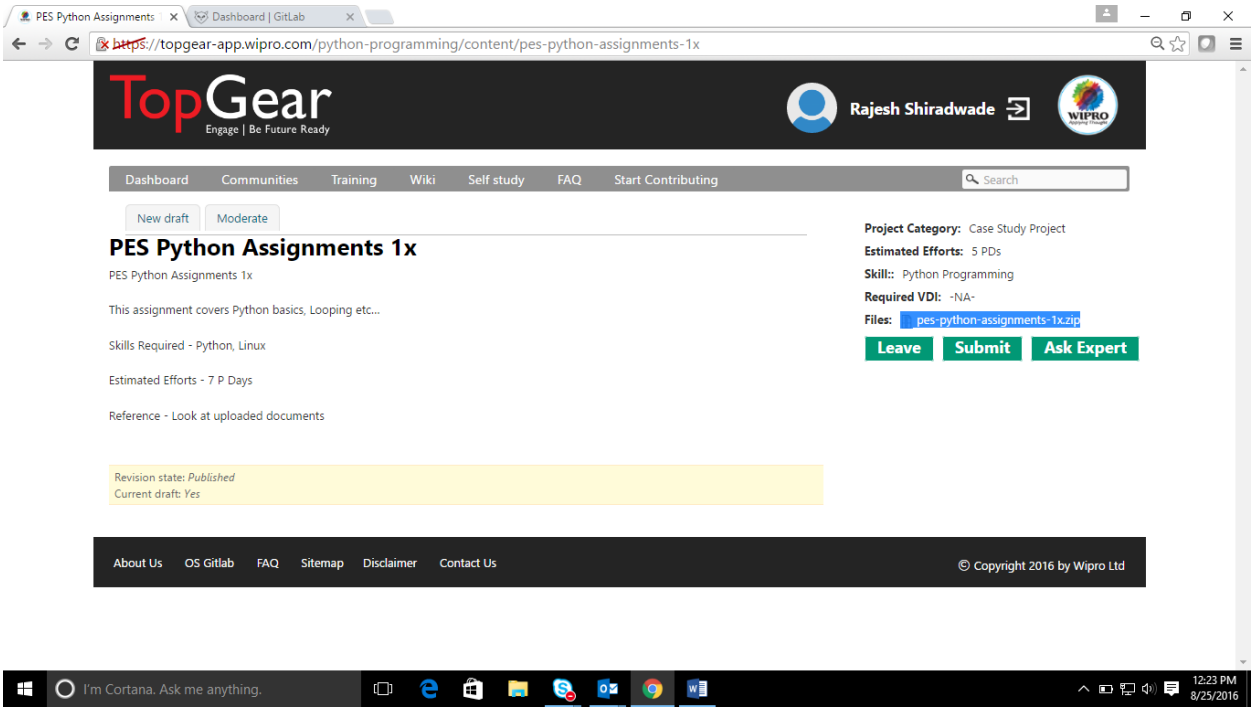
User has to leave rest all fields on this form with default values and submit the request form. Request will be addressed by three hours (max) with mail instructing how to access the requested VDI. If by mistake user has requested for the wrong flavor of VDI, she/he can cancel that request (only after it is approved) and re-request for the correct VDI from the same request form.

Cancelling the allocated VDI: If the user is already allocated with any of the VDI, on navigating to “Request for dev environment” page she/he will be presented with option to cancel it. And in case if the user immediately wants to request for new (required) VDI, she/he can request for the required VDI as mentioned in the above (“**Requesting the VDI manually** “) section. Complete de-allocation (cancel) and re-allocation of required VDI would take 3 hours.

3. Step 3→ Downloading project documents and artefacts from TopGear portal :

Once user gets access to required VDI or decides to start project on own machine with development environment:

- She/he needs to log in to TopGear website on that VDI/machine.
- Navigate to project description page as mentioned in Step 1(d).
- Click the downloadable zip link under “Files” as shown below.

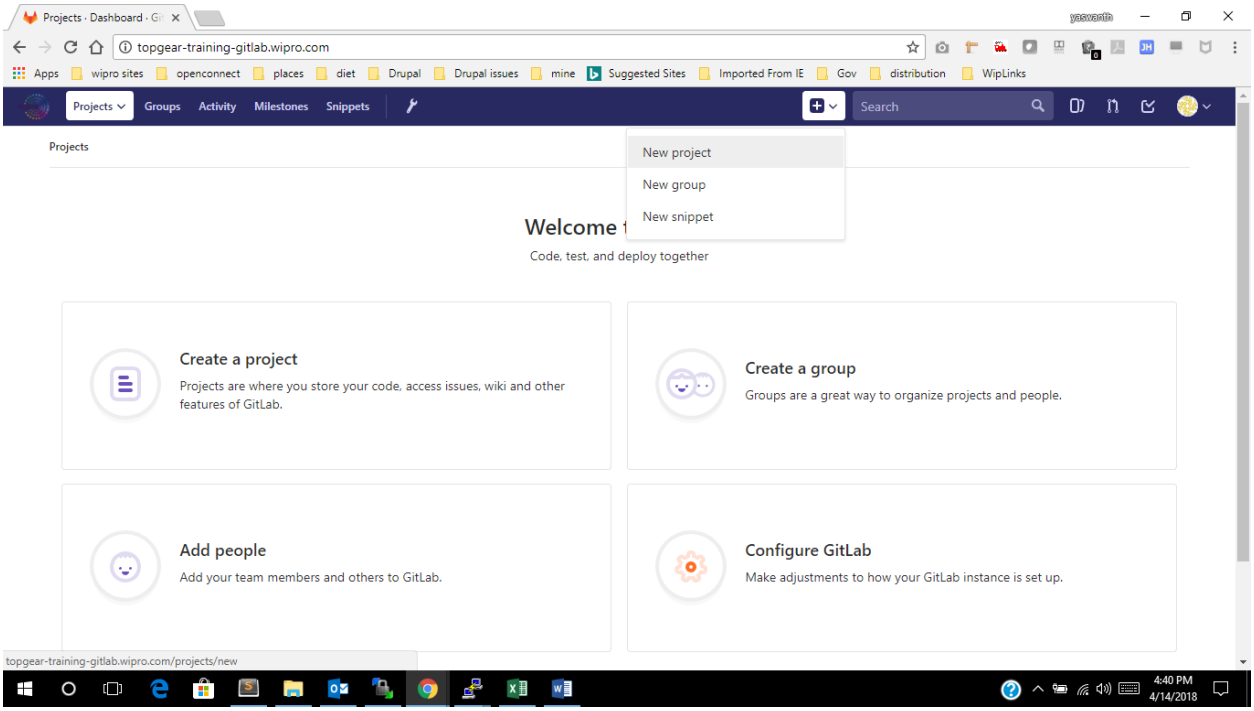


- This zip file will get downloaded in downloads folder. User needs to unzip and keep the contents safely as these document/s will have the steps or thee guide lines to execute the training project.

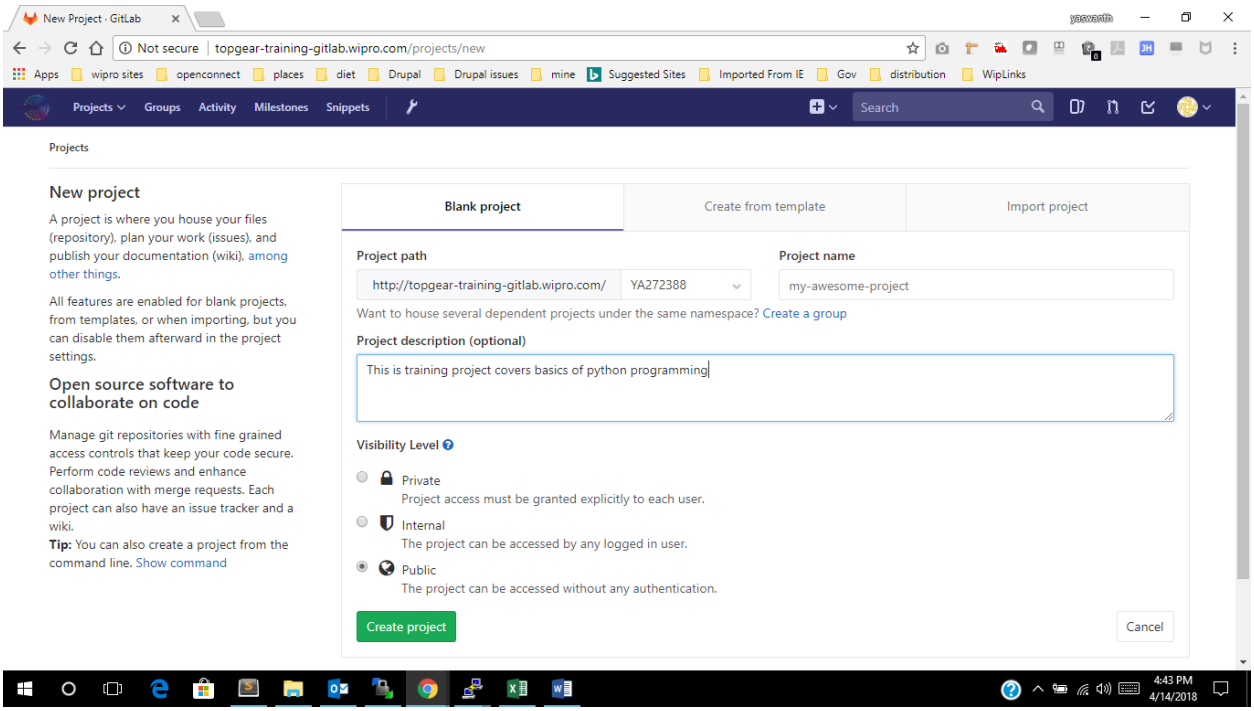
4. Step-4→ Creating GITLAB project and related GIT activities:

Once the user downloads the zip archive from the portal and decides to start with training he/she will have to create his/her own GIT repository using GITLab interface. To do this follow the below mentioned steps:

a. **Log in to GITLab using Wipro AD ID and password**
   By using "Training GITLab" link on the page footer or typing following URL on the browser : http://topgear-training-gitlab.wipro.com
b. **Create a new GITLab project by clicking "+" icon on right top corner of GITLab page and choosing "New project" option (by clicking it) or by directly clicking green coloured " New project " button as shown below:**



>>Then user will be navigated to below shown page with visibility level set to default **"Private"**. Please note that the user needs to change this level to **"Public"** to make this repository available for reviews by the mentors.

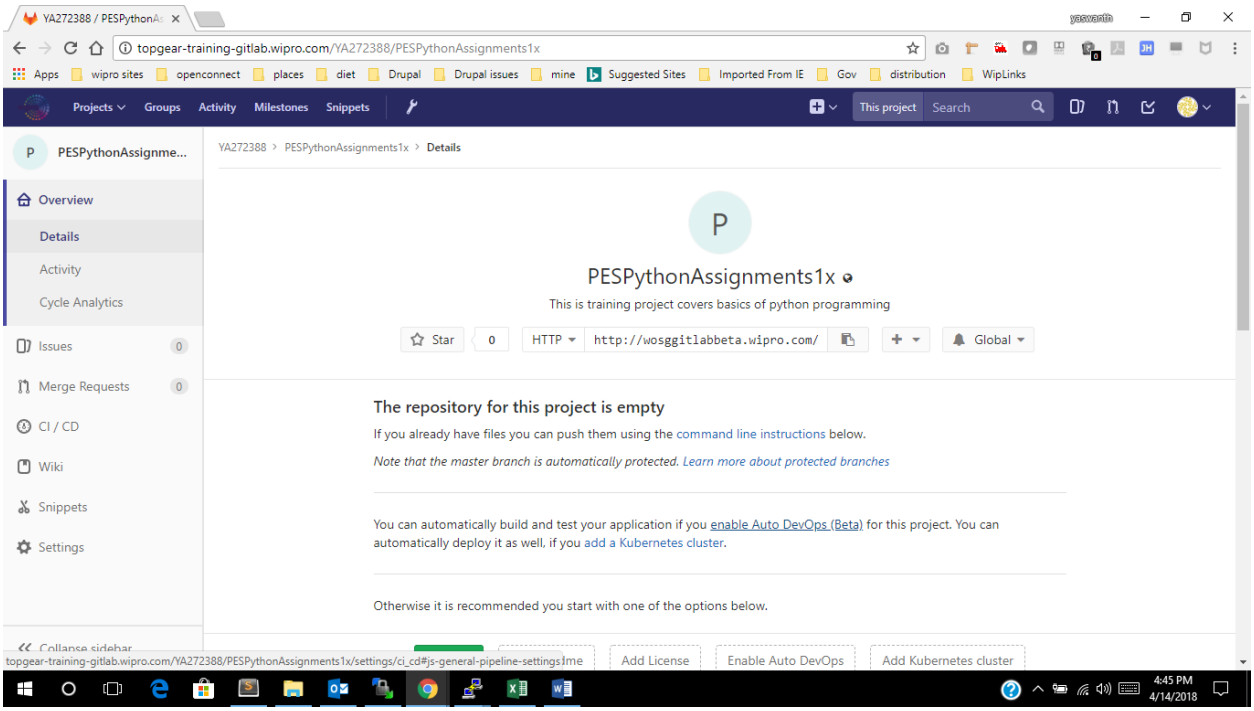


Where user needs to fill:

- **Project Name:** Use same name of the project (removing all spaces) mentioned on the TopGear portal.
- **Import project from:** Do not use any of these options as they are only to import existing repository on other GIT interfaces**.** Every TopGear user is expected to created her/his own repository for each individual project.
- **Description:** User needs to mention about the project and it's type with few words. Ex: "This is a training project which covers basics of Python programming"
- **Visibility Level:** Choose **"Public**" option so that project will be accessible to all users including reviewers.

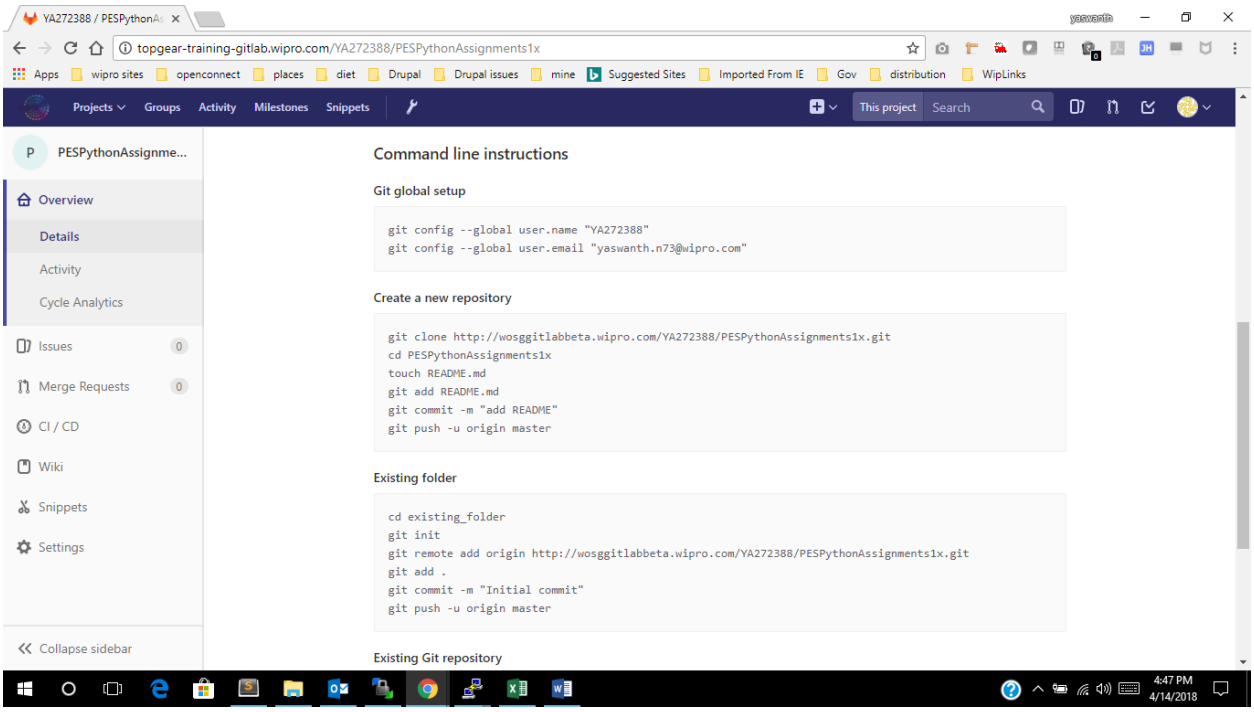
>> Then Click "**Create project**" button on this page**.**

Then user will be navigated to below shown page which displays the user's (remote) repository name and it's GITLab URL which will be used for final project submission.



Please note: By default if this URL is switched to SSH protocol whenever user navigates to this page, she/he should change this URL to HTTP before proceeding with further steps. And as this repository is still being created, it will be empty initially as mentioned on the page and there will be no "Repository" tab present.

>> Then please scroll down to "**Command line instructions**" section on this page as shown below:



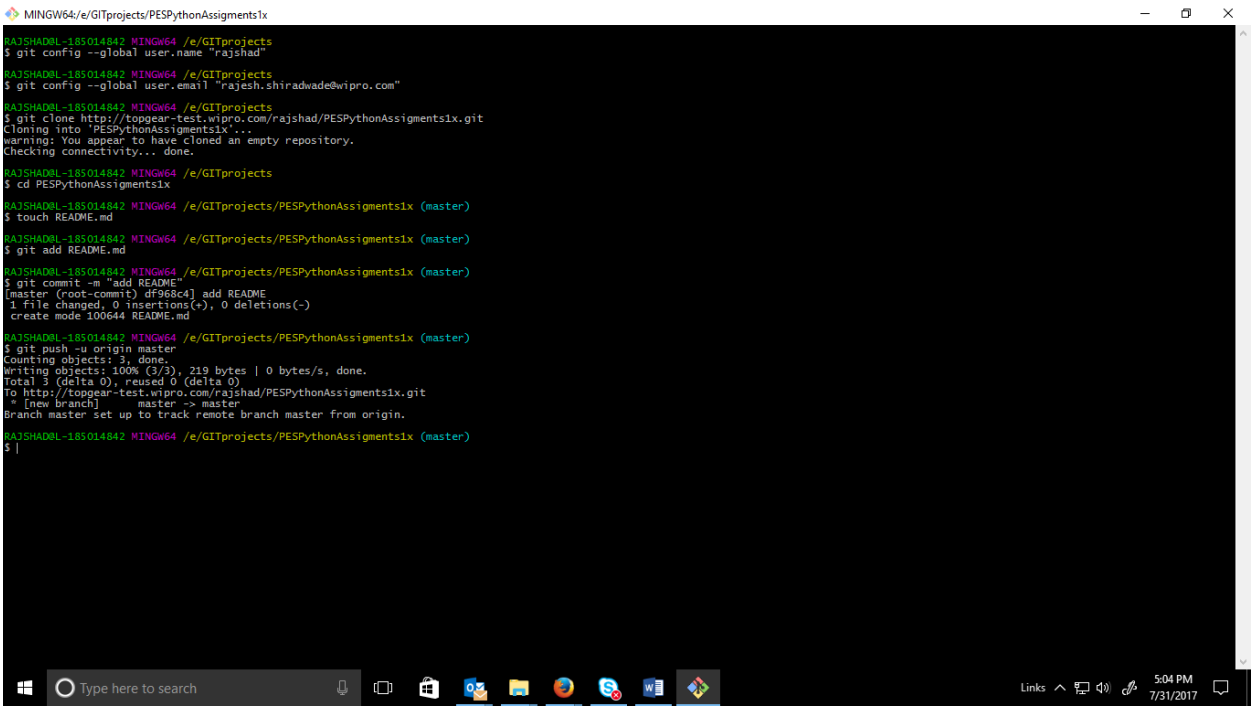
Note : Users are recommended to enlarge this page to see the commands clearly

c. Clone this repository in to your local system to create a "local git repository":

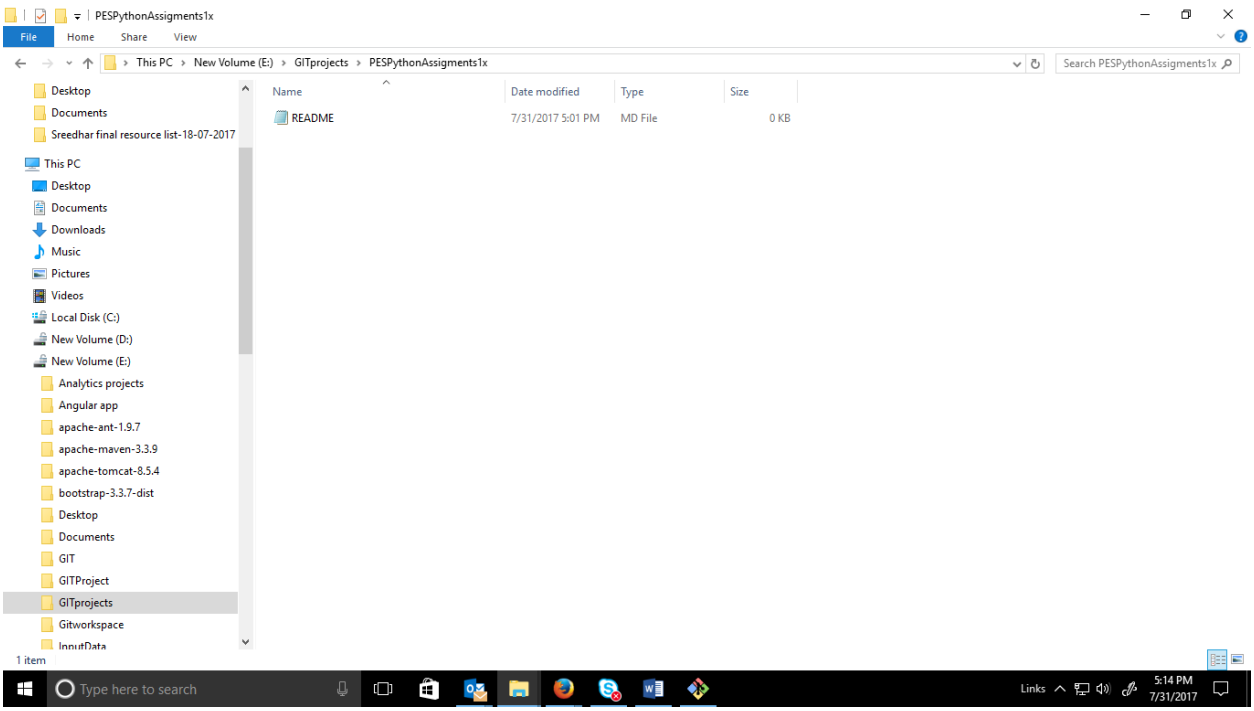
To execute the git commands given in "**Command line instructions** "section, user will need **GITBash** tool only if she/he is using Windows machine/ TopGear Windows VDI. And for the user who is using a Linux VDI /machine a **Linux terminal** is sufficient to execute these commands which supports all GIT commands by default. For user's reference below mentioned steps are demonstrated using GITBash tool on a Windows machine (similar steps can be executed on Linux machine/VDIs using terminal):

- Create a folder with name "GIT projects" on local machine (or VDI) where user has access using file explorer.
- Launch GITBash tool (**Linux based VDI users need to launch terminal**).
- Navigate to "GIT projects" folder.
- Use the above mentioned GitLab page for command reference.
- Copy and run the commands only from "**Git global set up**" and "**Create a new repository**" sections of the page one by one as shown in the below screen shot:

Note: For the first time executing "push" command on GitBash tool, user will be prompted to enter his/her credentials to proceed. But for Ubuntu (Linux) users executing a"push" command on terminal would always prompt the users to enter his/her credentials to proceed.

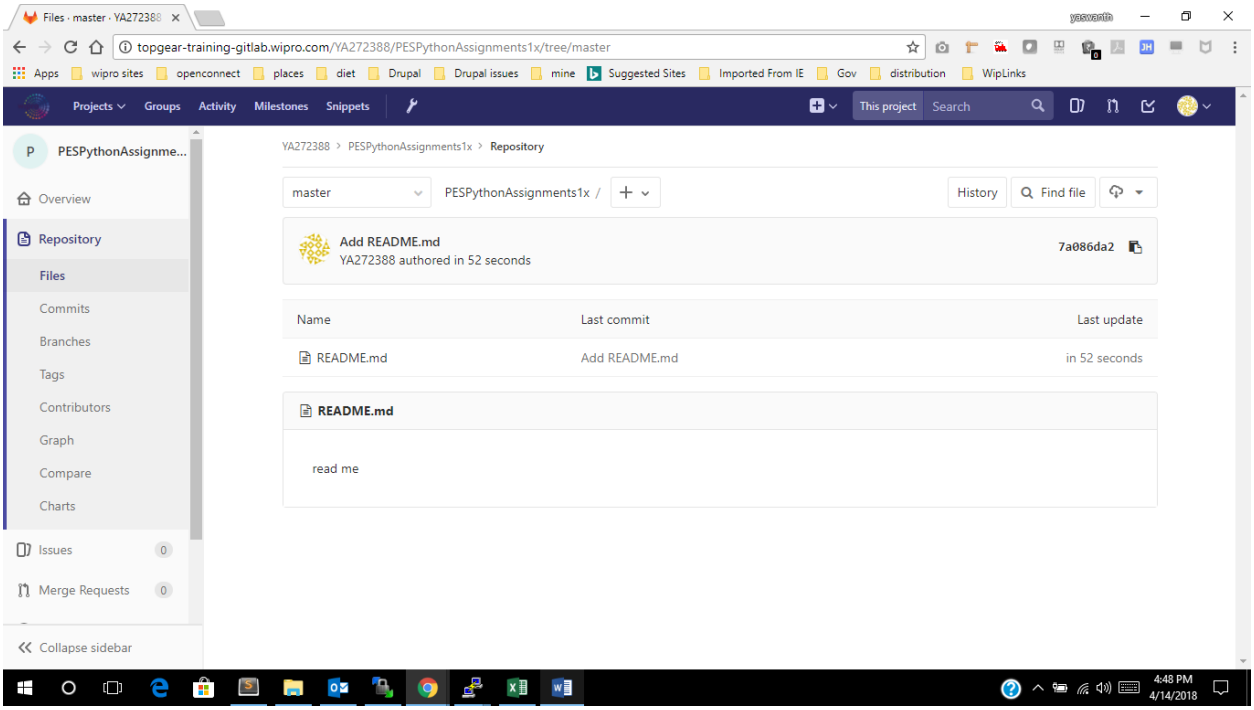


After this activity a local and remote GIT repositories for "pes-python-assignments-1x" project get created. Below image shows the content of local repository (on user's machine) which contains a blank README file.



And on the remote repository by clicking the “Repository” tab* , same blank README file will be visible on the GitLab page as shown below:

*(Please refresh the GitLab page, if you do not see the **Repository** tab)

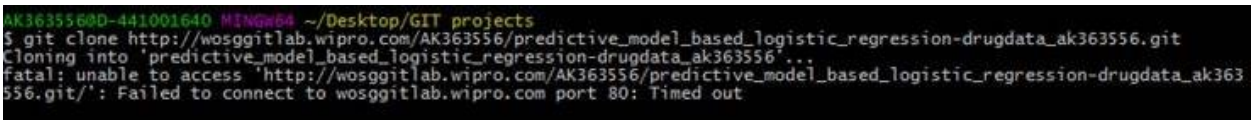


>> Now user is all set to use GIT repository for this TopGear project.

Useful tips for the user :

1. **While cloning the project (new or existing):**

- If user (from restricted ODCs) gets error which says “unable to access the GITLab location on port 80” (please refer the sample error in below shown screen shot)



User needs to set the location proxy for GITBash tool explicitly by running following command:

git Config -- global http.proxy <local proxy name>. wipro.com:8080

Example for BDC location: git config --global http.proxy proxy4.wipro.com:8080

(Please mind the spaces within above command)

Then user can continue with cloning (or other required git) command.

2. **While executing the push command:**

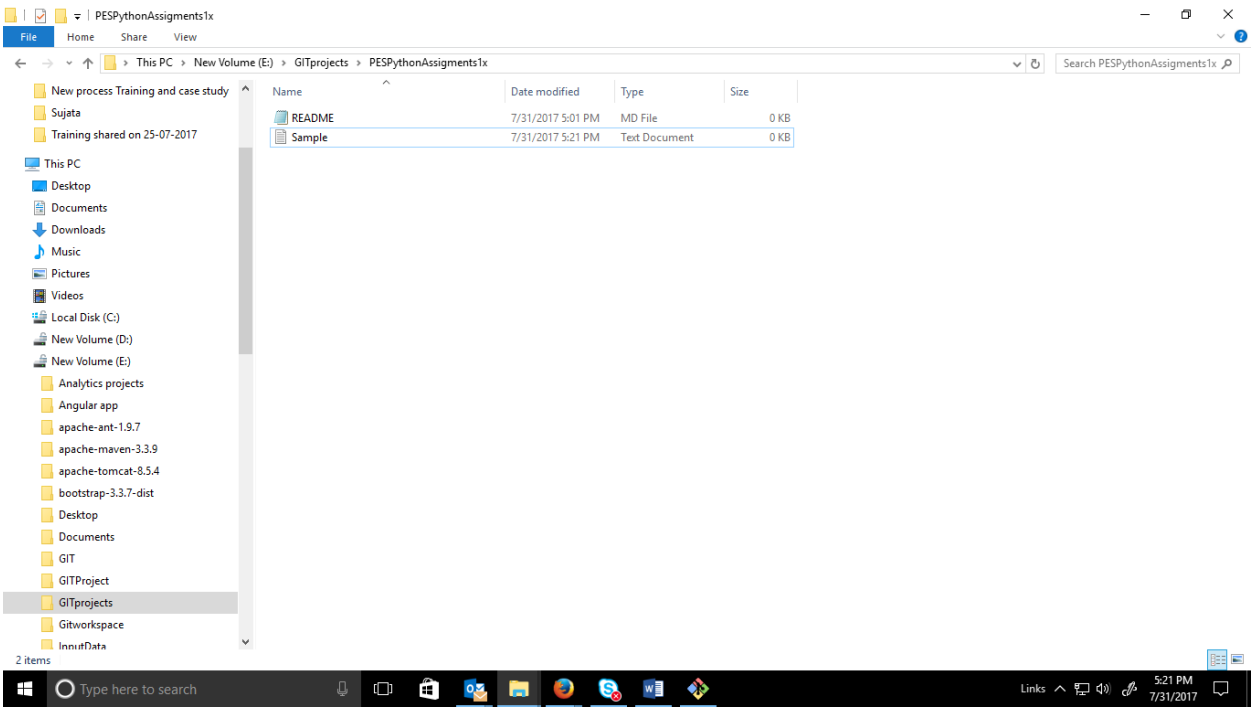
- On GitBash tool for the first time user will be asked to enter AD id and password, enter these to complete the push execution. If for the first time push command does not prompt user with popped up window to enter user id and password (will throw fatal error), run the push command again till this window shows up and credentials are entered.
- On Linux terminal every time user runs push command, he/she needs to provide ad id and password.

d. Checking in (push activity) new/modified file in to remote repository on GITLab:

Once local repository is created and the user starts with training project specific structure can be added to the local repository if required. And any new file or change done to an existing file needs to be moved in to local repository and checked in (pushed) to the remote GITLab repository to make sure both the repositories are in sync. This standard practice will ensure that all of the user’s contribution towards the project are protected

Please note: Users using TopGear provided VDIs are recommended to push their completed code regularly in to their respective GitLab repositories to avoid any source deletion of code /artifacts due to cloud server (on which VDIs are hosted) re-start.

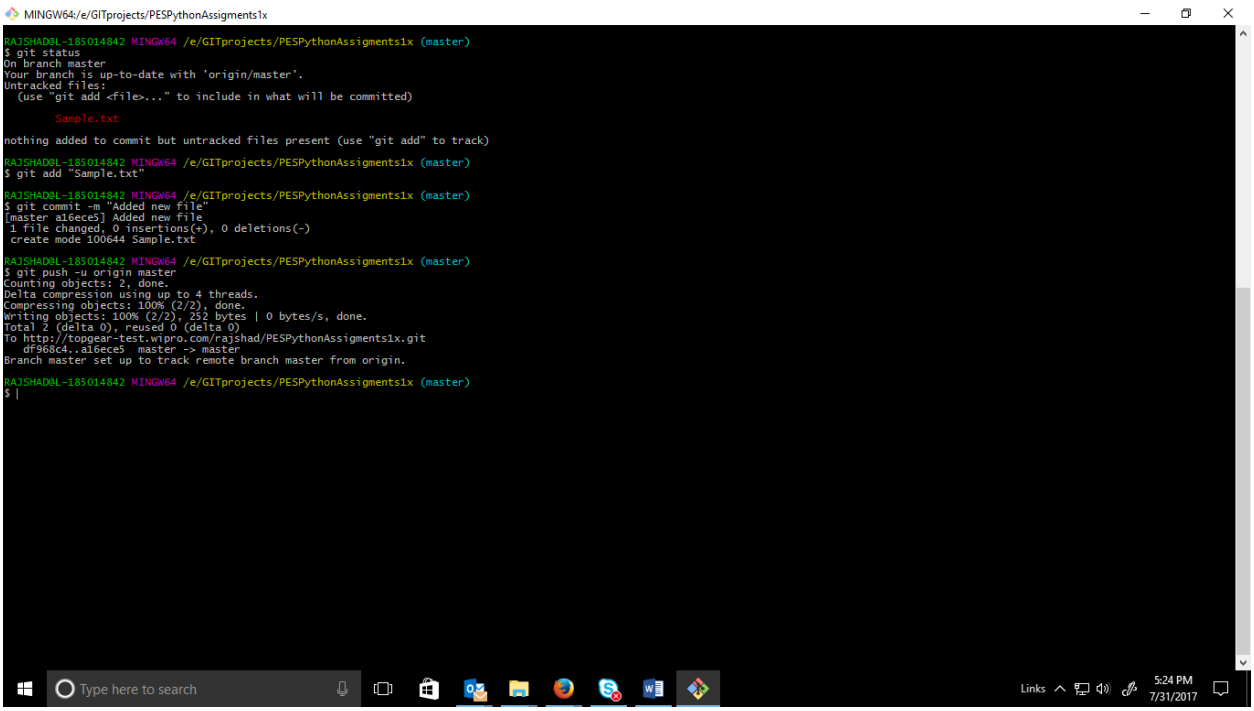
For user’s reference, below step is demonstrated to show how a new empty text file **Sample.txt** is added to the GIT repository. To do this first user needs to place the file to be added in the local repository folder as shown below:



Then use below mentioned commands:

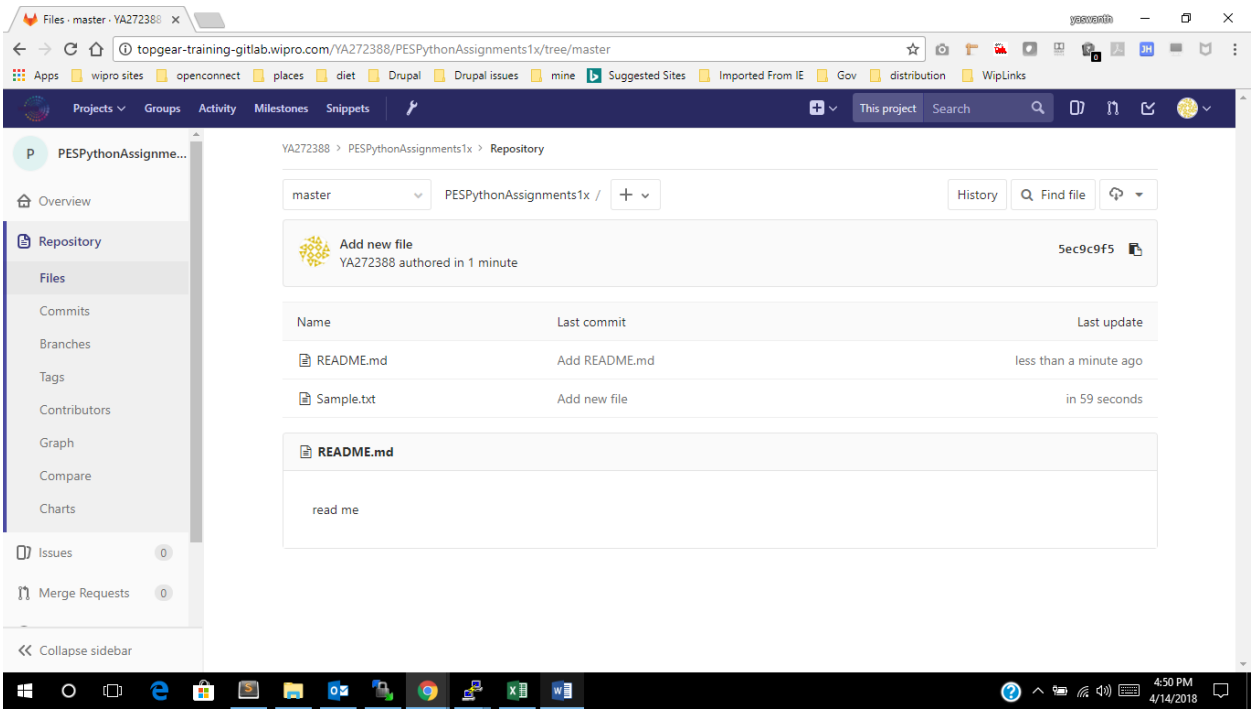
1. Run **git status** to check what is changed in local repository from the remote repository. This will list all the **new files** and **modified files** present in the local repository in red color font. These are the changes un-tracked by GIT repository.
2. Run **git add "<**file name with extension/path**>"** for individual file. Or if there are multiple changes then user can use wildcard **git add**<space>**.** for adding all the files in one shot.
3. Run **git commit –m "<**some meaningful message for this commit**>" .** This will commit the new files/modified files to the local repository.
4. Run **git push –u origin master** to push (sync) all locally committed changes to the remote repository.

Below screen shot depicts execution of these commands on GITBash tool:



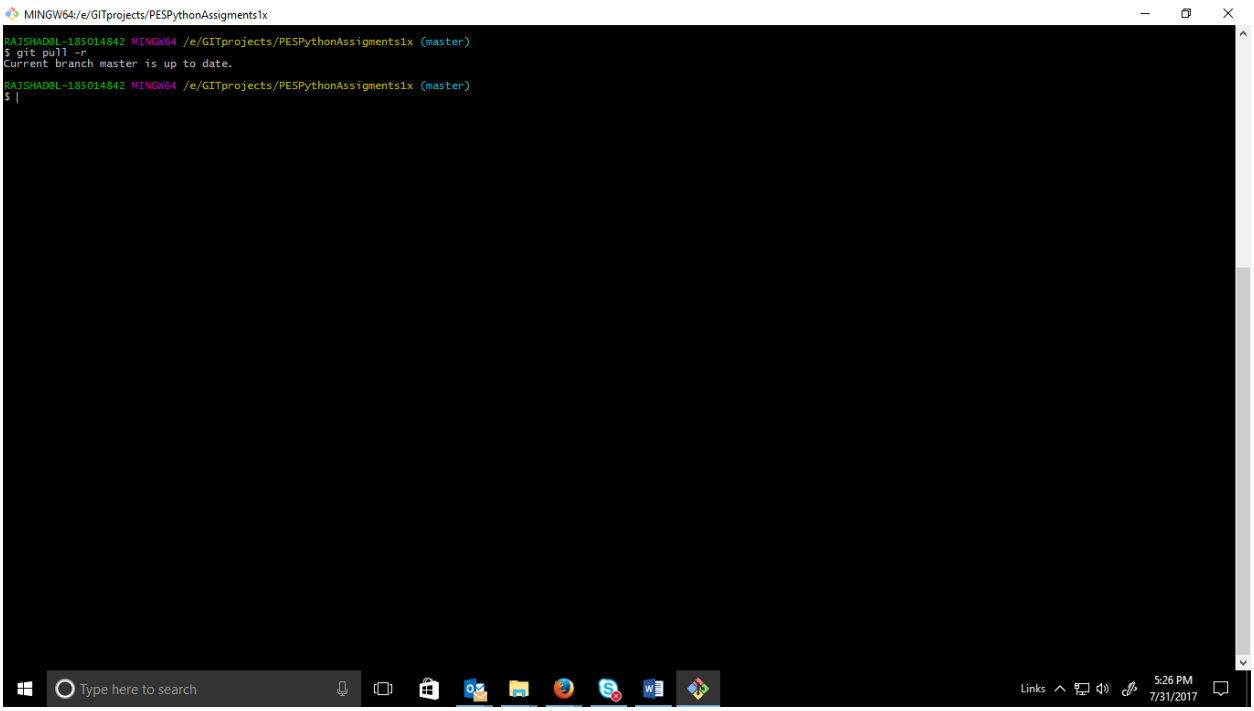
Please Note: Same steps need to be followed to push (sync) the modified file/s also.

After executing this command look in to "**Repository**" tab to find the pushed (checked in) file in GITLab page as shown below:



e. Updating local repository: (optional)

Using "**git pull –r** "command local GIT repository can be synced with remote GITLab repository. User is recommended to use this command before they add any new or modified file to avoid any merge conflicts. Below screen shot shows after running this command GIT repository is confirming synchronization between local and remote repositories.



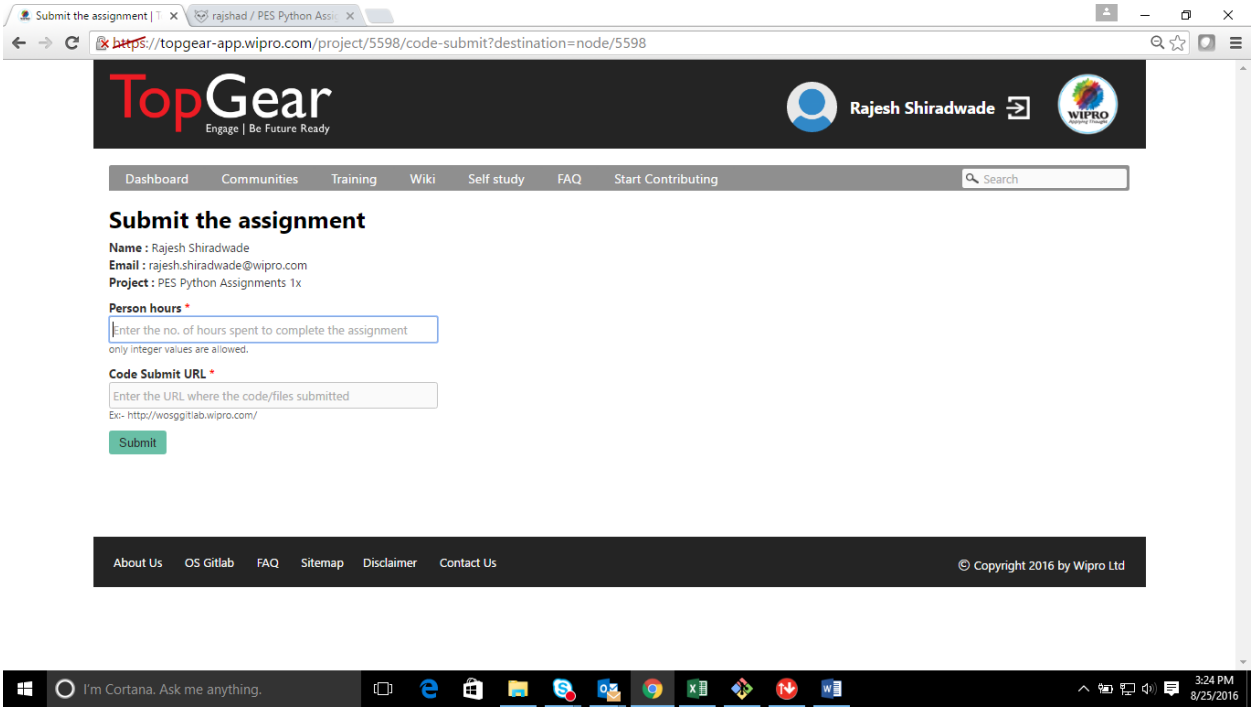
5. Step-5→Project artifacts to be uploaded as a proof of completion

Once TopGear user starts executing his/her respective project he /she needs to:

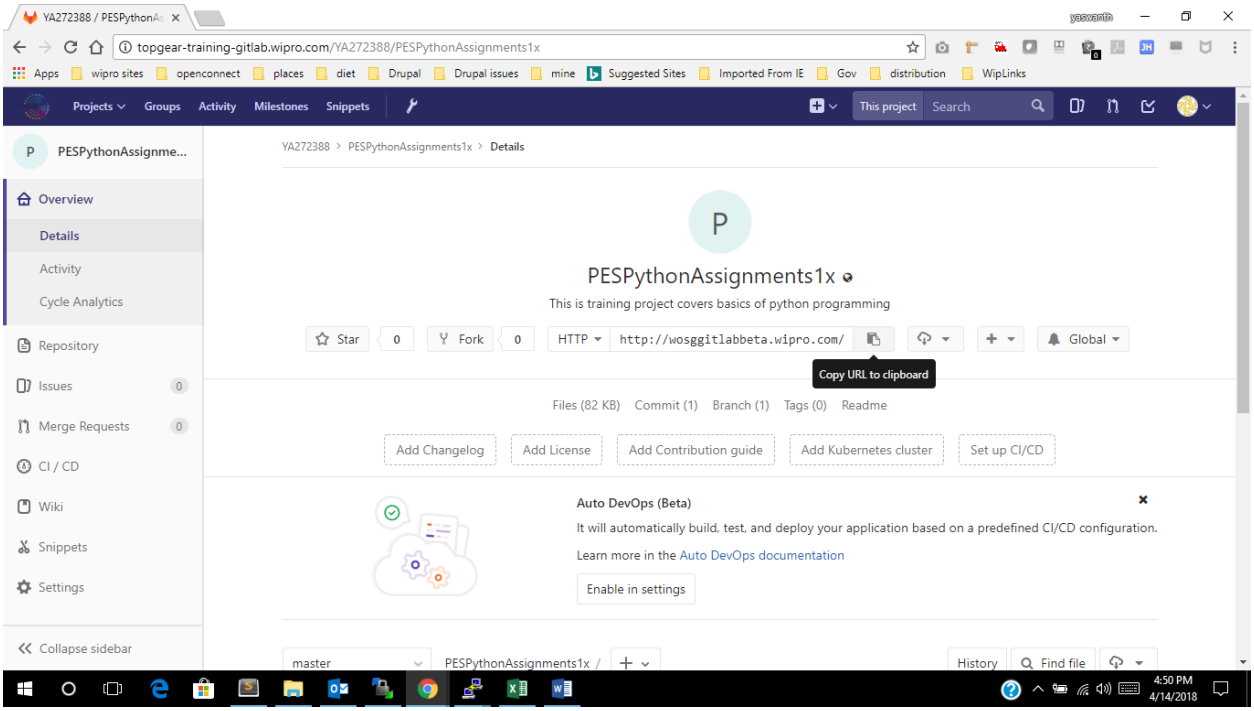
a. Keep saving screen shots of all the result pages (execution results) for exercises/scenarios /test results for that respective project in a MS Word Document.
b. Check in (add→commit→push) the changes/new files and screen shot document on regular basis in to the remote repository on GitLab so that artifacts are safe and retrievable in case they get deleted from local repository on VDIs.
c. Make sure that all the expected project artifacts and screen shot document for all execution results are checked in to GitLab without failure before submitting the project.

6. Step-6→ Project closure, submission for review and completion of training.

Once user completes his/her training project he needs submit by clicking submit button on project description page which launches below page:

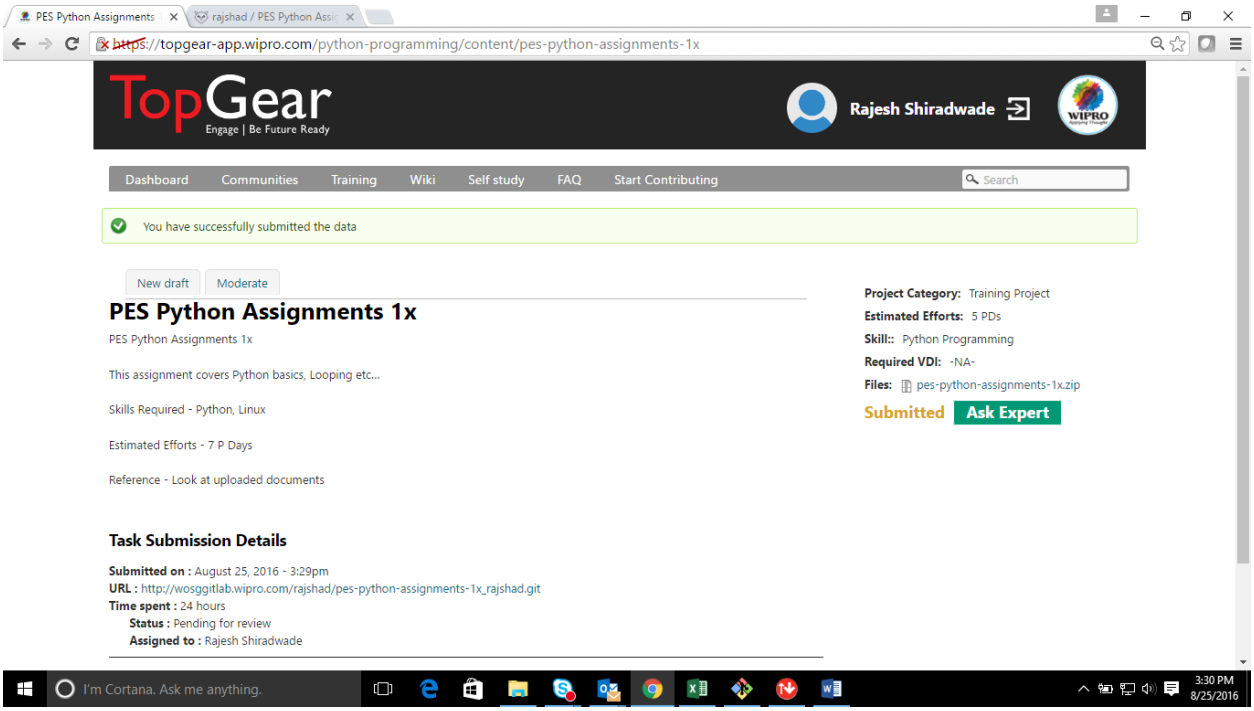


Here User needs to enter **Efforts** (actual number of hours spent) in "Person hours" field and **GITLab url** (user can copy the from GITLab page) as shown in the below screen shot:

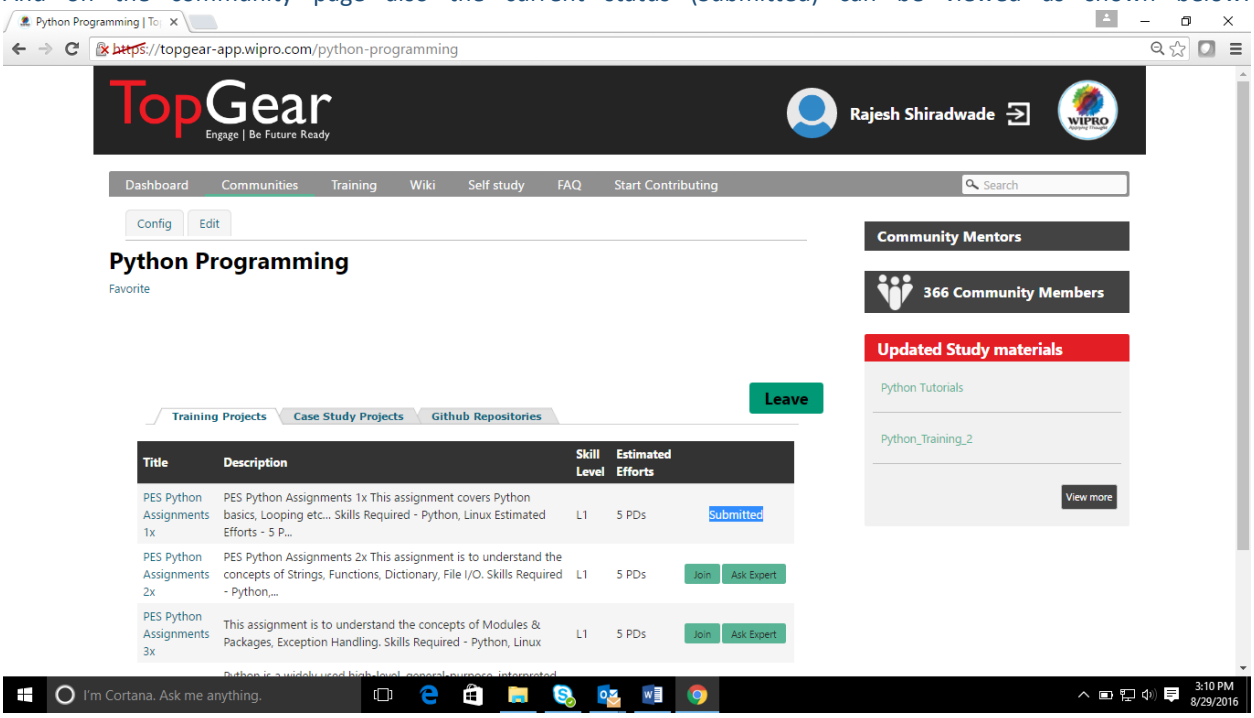


Then user clicks "Submit" button with following values (specific to this project) and below confirmation page with "Submitted " project status will be shown:

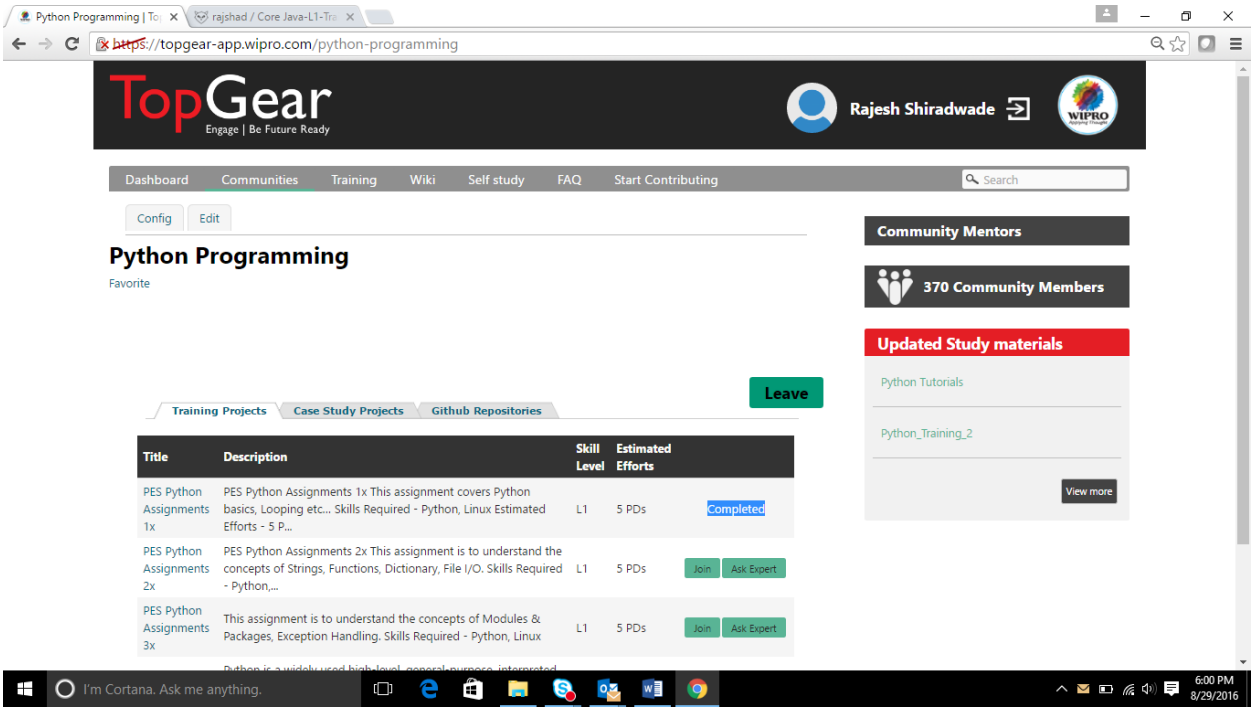
- Person hours → 24
- Code Submit URL →http://topgear-training-gitlab.wipro.com/rajshad/pes-python-assignments-1x_rajshad.git



And on the community page also the current status (Submitted) can be viewed as shown below:



- Once project submission is reviewed successfully by the reviewer he/ she will approve the submission. Then status of project submission will change to “Completed” as shown in below screen shot:



- And in case if the reviewer expects some changes /corrections, she/he will re-open the project submission with review comments. The status of submission would be "Re-Opened". User needs to work up on the review comments and submit the project again. On asserting that all the recommended fixes were done, reviewer will approve the project submission.

7. Step-6→ Viewing reward points.

Once project is reviewed and approved by the community manager/mentor it is considered as successfully completed. Reward points will be allocated to all successfully completed projects by back end process. Each user can view his/her TopGear rewards on the dashboard page of the TopGear portal.