

## Homework-1: Environment Setup and GitHub Skill Review

In this homework, you are expected to run and connect all the applications that are required for this class. In addition, you will get familiar with GitHub which will constitute the foundation for submitting future homework assignments.

Your homework submission should be a PDF file on Gradescope. This PDF file should contain the screenshots that are requested below. **Please map your PDF to the questions on Gradescope.**

Please upload your PDF file on Canvas by **January 22<sup>nd</sup>, 11:59PM ET/8:59PM PT.**

If you are a waitlisted student, we will share a Google Form on January 21<sup>st</sup> so you can upload your submission by the deadline.

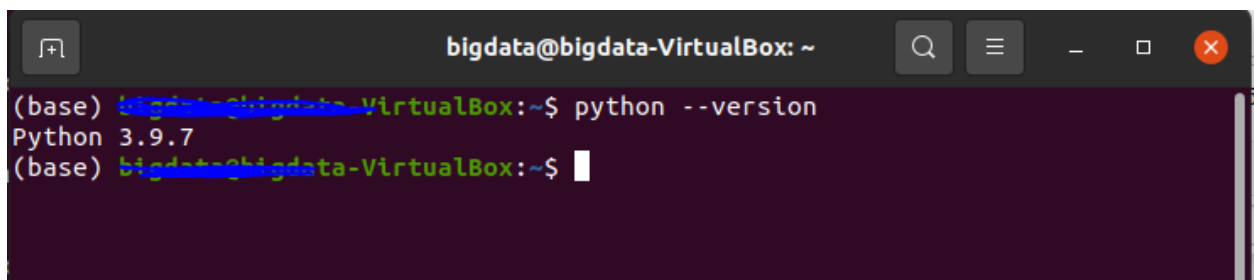
### Part-I (70%): Complete Environment Setup

In this part, you are expected to run several applications and make sure they work correctly. You are asked to submit a screenshot for every application to show that it's working properly.

- All screenshots should have an indication that it was run on your own machine (e.g., your username, your computer information, or your name written in a notepad file that is part of the screenshot taken).
- Sample screenshots are attached below.
- You can install these applications/binaries on **any operating system.**

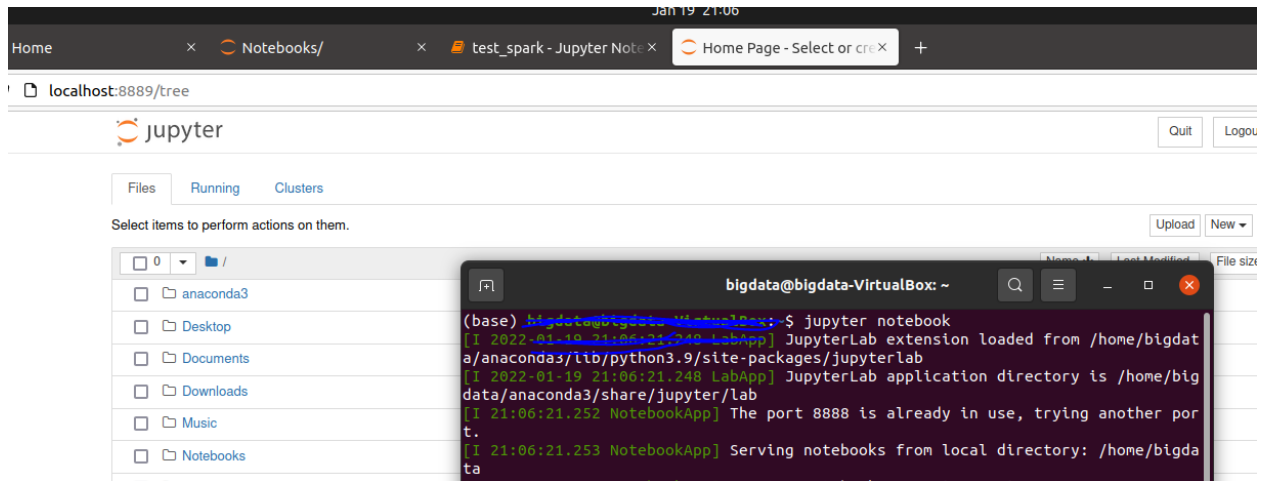
You need to get the following applications to run:

1. Anaconda Python 3.x. Provide a screenshot showing the version (username was omitted to avoid reusability). If you have Python 3.x already, you don't need to install Anaconda.

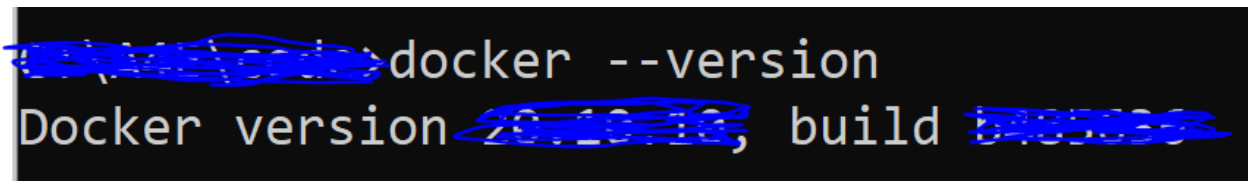
A screenshot of a terminal window titled 'bigdata@bigdata-VirtualBox: ~'. The terminal shows a command prompt '(base) bigdata@bigdata-VirtualBox:~\$' followed by the command 'python --version'. The output is 'Python 3.9.7'. The prompt then changes to '(base) bigdata@bigdata-VirtualBox:~\$' with a cursor. The terminal has a dark background with light-colored text. There are window control buttons (minimize, maximize, close) in the top right corner.

```
(base) bigdata@bigdata-VirtualBox:~$ python --version
Python 3.9.7
(base) bigdata@bigdata-VirtualBox:~$
```

2. Jupyter. Make sure you can open and run Jupyter notebooks (or JupyterLab).



3. Docker. We will use Docker for several purposes throughout the course. Submit a screenshot that reflects the version of your docker



Part-II is on the next page.

## Part-II (30%): Get familiar with GitHub

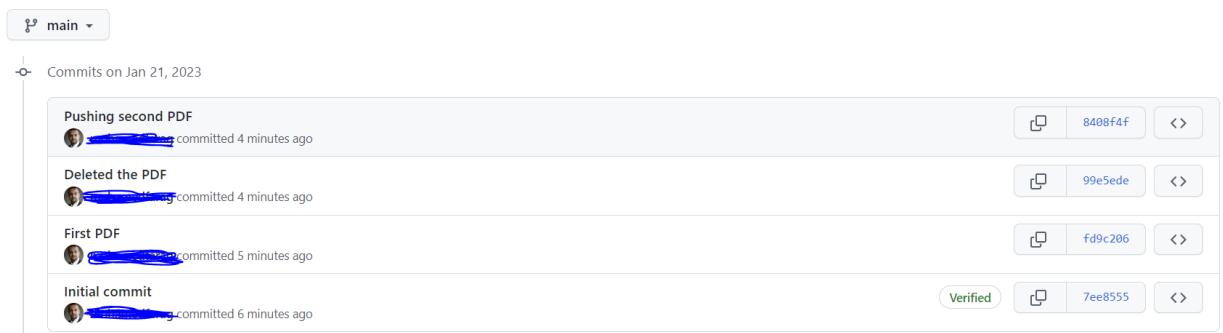
Submit screenshots for the completion of the following GitHub Skills

1. <https://github.com/skills/introduction-to-github>
2. <https://github.com/skills/communicate-using-markdown>

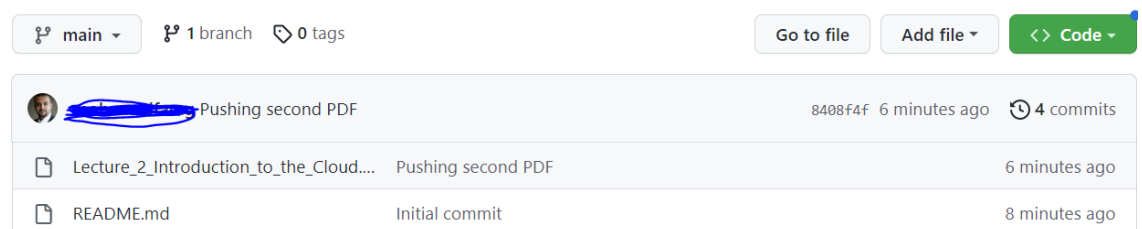
Your screenshot should reflect successful completion of the above labs.

Also, complete the following task:

- Create a Public GitHub Repository with the name “Test-Cloud-Infrastructure”
- Make sure to include ReadMe file in your repository.
- Push the PDF of the course syllabus to the repository.
- In a separate commit and push, delete the PDF file of the course syllabus
- Push the PDF of the homework PDF to your public repository.
- Submit the following:
  - a) A screenshot of your GitHub repository history



- b) A screenshot of current view of your repository (sample screenshot is shown below – using different file)



- c) The URL of your **public** repository

**Note:** If you haven't used version control systems before, you can watch the following videos:

- Version Control Systems Overview: <https://www.youtube.com/embed/ils1aehi3VU>
- Git and GitHub: <https://www.youtube.com/embed/91ZZv002etU>