Using Git and Github

We have established a repository at Github (github.com) of the homework assignments and other supplementary materials. Github hosts repositories that use the git source control system. Source control is a way to manage your files; they do not have to be program source code files. Git will track changes and do many other management tasks for you.

Our repository is at

github.com/kah3f/uva-python-video-materials

If you do not wish to learn git at this time, you may download the entire repository from the above URL by selecting "download ZIP" from the green "Clone or download" button. Unzip the file to extract the materials.

To use git, first create an account at github.com. If you are new to git, we recommend a graphical user interface. Several are available, but we will use Github Desktop as our example.

Download Github Desktop from desktop.github.com and follow the procedure for your operating system to install it. For the Mac, unzip the file and drag the icon into the Applications folder. The application is cross-platform and looks very similar on Mac OSX and Windows, but our illustrations will be from Windows. When you first run Github Desktop, it will ask for your Github account information. You can then close the application.

At the Github site, click on the green Clone or Download, then select Open in Desktop. You will be able to browse to the folder under which you wish the repository to be located. Once you have selected the destination, it will clone the repository to your local system, using the same name for the new folder as the repository is named at Github. This is all you can do with the course repository.

If you wish to store your own programs in Github as you work through the video series, log in to Github. Click the green New Repository button and create a new repository of your own named Python_Programs. Clicking the Clone or Download button as you did before, clone your new repository to your local computer. As you create new files that you wish to check in to your repository, log in to Github, select your Python_Programs repository, and upload files from the local directory to the repository. You can drag and drop files or browse. Uploading the file adds it to your repository, but you must enter a comment and *commit* the file before it will be tracked by git. Then in Github Desktop, click Sync to download the new file to your local (cloned) repository. When you make changes to existing files in your local repository, the top bar will show the number of uncommitted changes. Click that tab and it will bring up the commit menu. You can then *push* your changes to Github through the menu.

Github Desktop is not an editor; you will create and change your files in an editor like Spyder's, then upload or commit/push them to your repository. The purpose of git is to keep track of changes.