CPSC Development Environment Setup

Step 1: GitHub.com Setup

Account Setup (if you do not already have a GitHub account)

1. Go to www.github.com
2. Click on “Sign Up”
3. Choose a username (can be anything), use your CNU email address, and choose a password. Verify and create your account.
4. Verify your email address (the email will be sent to you by GitHub).
5. Complete the profile questions

CPSC 250 Repository Setup

1. In your GitHub account, in a browser, in the Search bar in the upper left corner, search for “owner:brash99”. This will take you to my GitHub repo pages
2. Click on the Repositories tab
3. Find the repository called cpsc250, and click on that
4. Near the upper right corner of the page, click on “Fork”. Accept the default choices, and then click on the green “Create Fork” button to create your own fork of my CPSC 250 repository.
5. Now, you have a copy (fork) or my CPSC 250 repository. See below for how to keep this up-to-date!

Configuring GitHub.com Security

1. In your GitHub account, in a browser, go the Settings, by clicking on your profile picture in the upper right corner, and choosing “Settings”.
2. In the long menu shown on the left side, choose “Developer Settings”, which is all the way at the bottom of the list of options.
3. Choose “Personal access tokens” -> Tokens(classic) from the new menu on the left.
4. Choose Generate new token -> Generate new token (classic)
5. In the “Note” field, enter cpsc250
6. Choose “No expiration” for the Expiration time
7. Select ALL of the radio buttons in the “Select scopes” region
8. Click on “Generate token”
9. This will generate a new token that looks like ‘ghp_******’. Copy this

token to the clipboard!!! This is important, as you are going to need this in the next steps!
10. On your local computer, open up a simple text file, and copy this token into that file. Save the file, giving it some name of your choice.

Git and GitBash - If you are running Windows

1. Go to gitforwindows.org
2. Download and run the installer, following the default instructions

Python 3.10 (if you have not already installed Python on your system previously)

Windows:

1. Go to python.org
2. Click on Downloads
3. Click on 'Looking for Python with a different OS? Python for Windows
4. Download the Windows 64-bit Installer (and NOT the embeddable package!!!) for Stable Releases - Python 3.10.11
5. Run the installer, and follow the default instructions

MacOS:

1. Go to https://www.python.org/downloads/macos/
2. Download the Python 3.10.11 MacOS 64-bit universal2 installer
3. Run the installer, and follow the defaultt instructions

Ubuntu:

On Ubuntu 22.04.02 LTS, Python 3.10 is installed by default.

PyCharm

1. Go jetbrains.com/pycharm/download/
2. Download the Community Edition installer
3. Run the installer and follow the default instructions

4. Start Up PyCharm

Configuring PyCharm

Step 1: Clone your GitHub.com repository, created above

1. In the "Welcome to PyCharm" window, click on: Get from VCS. Or alternatively, you can choose Git->Clone from the top-level menubar.
2. In the URL area, enter the location of your GitHub.com repo … the format is as follows: https://edwardbrash:ghp_UZJZ2GUZORidXcg3wAfsUP1tUbCRt0Hdt5@github.com/edwardbrash/cpsc250.git

   Where you need to:

   - Replace 'edwardbrash' with YOUR GitHub.com username, in both places!
   - Replace ghp_UZJZ2GUZORidXcg3wAfsUP1tUbCRt0Hdt5' with YOUR Personal access token
   - If necessary, replace 'cpsc250' with whatever you called your repository

3. Choose to Trust this repository, and choose to trust all repositories in PyCharmProjects, when asked

Step 2: Create a new "Hello World" program, for testing

1. Highlight "cpsc250" in the Project window (left side of the main window)
2. Open a new file with File -> New -> File, and call it 'helloworld.py'
3. You should see that this new file has been opened in the editor window. Add the line: print ("Hello World!") to this new file

Step 2: Configure Local Interpreter

1. In the bottom left corner of the PyCharm window, you may (probably!) see that it says <No interpreter> … this means we have to tell PyCharm where the Python interpreter is located (the one that you installed above).
2. Click on <No interpreter> -> Add New Interpreter -> Add Local Interpreter

Step 3: Install useful Python packages

1. Click on View -> Tool Windows -> Python Packages
2. In the new bottom left window that opens, in the search area, look for: matplotlib … click on Install package, in the bottom right window
3. Repeat Step 2 for the following: numpy, pandas, scipy
4. We may need other packages at some point, and any package can be installed in this way! :)

Step 4: Keeping your fork up-to-date

The following will pull all changes from my GitHub.com cpsc250 repository into your forked copy:

1. Choose Git -> GitHub -> Sync Fork
2. The first time that you do this, you will have to authorize PyCharm (a JetBrains app) to access your GitHub account. Just follow the instructions when this happens, and once you have provided this authorization, it should work seamlessly going forward.