

CS112 Homework 1: – **Groups Allowed** – Installation and Warm-up

Due: Wed, Jan 30th, 11:59pm

Note: This is the only homework not due at the regular Sunday time.

For the first homework, we will install all needed tools, write a simple program, and demonstrate that we can run the code. Lastly, we'll turn a copy in on Blackboard to practice the code submission process as well. As the semester begins a bit hectically, you have a little more time than usual to complete this; we really want you to get things installed and ready! Later on, homework will have shorter deadlines, usually due the Sunday following their announcement.

If you have your own laptop, then your first goal is to get Python 3 installed as well as a code editor. Both are free. The lab machines always have Python and an editor available for when you don't have your machine with you, so feel free to use those computers if you want.

Download and Run Python

Go here: <https://www.python.org/downloads/> to **download** python 3 for your computer and **install** it. Below are some basic instructions, but remember that you can also get additional help in lab or attend any GTA/professor's office hours for help!

1. Run the downloaded file
2. Make sure to tick the "Add Python 3.7 to PATH" option
3. Click Install Now

Accessing a Command Line Interface

Windows users:

- Your command line interface is referred to as the "command prompt".
- Hold the "Windows" key and press "r" and you will get a "run" dialog.
- Where it says "open" type "cmd" (without the quotes) and select "ok".
- You are now at the command prompt.

Mac users:

- Your command line interface is referred to as "the terminal".
- Go to the applications and under "utilities" you should see "Terminal".
- You are now using the terminal.

Linux users:

- Linux users should know this already.

Running Python

From the command line, make sure you can open Python in interactive mode! If this doesn't work yet, ask for help (or on PC, make sure you've added python to your path).

- on Mac (or on the Windows lab computers), from the command line type:
`python3`
- on PC, from the command line type:
`python`

All semester long, you need to use the appropriate command for your machine. Lecture slides will match the professors' machines.

Download a Code Editor

When we edit code, we want far more features than we'd get with something like Notepad or TextEdit. Some good suggestions are Sublime (all platforms), jEdit (all platforms), Notepad++(Windows), TextWrangler(Mac), and countless others that may suit your taste. The important thing is to get a text editor designed for editing code, meaning you have options like listing line numbers, monospace fonts, ability to save to whatever extension you choose, and so on. All the above editors will do that, as will basically any editor that claims to be for editing code.

Play with Python

We want to be able to create a text file, using whatever editor you've chosen (perhaps Notepad++ or TextWrangler), run it in the terminal/command prompt, and show your results to the instructors.

First, use your code editor to create the file containing the following text:

```
print("hello, world!")
```

You can also add as much other code as you want while you play around with Python.

Naming the file: `userID_2XX_HX.py`

You will name this the way we'll be naming most everything this semester: first with your user ID, then an underscore, then your lab section number (in the 200's), then an underscore, then the letter describing what sort of assignment this is (P for project, H for homework) and the number of the item, and then `.py` as the extension. For instance, George Mason (with gmu email ID gmason76, enrolled in lab section #205) would name his first homework as: `gmason76_205_H1.py`

When you're done creating the (very short) file, you should be able to run this file at the prompt. Open the terminal or CMD prompt, run the file (as either `python3 gmason76_205_H1.py` on a Mac/lab machines or alternatively as `python gmason76_205_H1.py` on a PC). Create a screenshot that captures your terminal or CMD window. It should clearly show how you run the `.py` file and what is the print-out. Name the screenshot following the same convention, for example, `gmason76_205_H1.png`. Note: **do NOT double-click your `.py` file to run it.**

Turning it in

You need to **submit two files to Blackboard** for this homework – your python source file (`gmason76_205_H1.py`) and the screenshot (`gmason76_205_H1.png`). There will be a menu for all homework assignments to be turned in; navigate to the correct homework (this is homework #1) and upload your files, and be sure to actually submit it. You can and should always download your submitted file and double check whether it is the right submission. **Submitting wrong files or corrupted files will usually result a zero for the corresponding assignments.**

Blackboard Notes

It's annoyingly possible to upload files and "save" the submission's progress to complete later, but the files haven't actually been turned in yet when you do this. If you're unsure whether you've turned in your work, you can always look back and download the submitted files from your submission. Also, early on, please ask the GTA to double check that you've turned in your work correctly if you've not used Blackboard before. We're happy to help.

Multiple uploads – all work that you'll turn in on Blackboard in the course will have some deadline; up until that deadline, you can turn in as many updated versions of your work as you want, and only the last (on-time) one will be considered, automatically. If Blackboard tells you no further submissions are allowed, let us know and we'll fix the sometimes-overlooked settings.

Grading Rubric:

Submitted correctly:	5
Python file as required:	2
Screenshot as required:	3

TOTAL:	10