Problem Solving Session

- The remainder of today's class will comprise the ***problem solving session*** (***PSS***).
- Your instructor will divide you into ***teams of 3 or 4 students***.
- Each team will ***work together*** to solve the following problems over the course of ***20-30 minutes***.
  - You may work on paper, a white board, or digitally as determined by your instructor.
  - You will submit your solution by pushing it to GitHub before the end of class.
- Your instructor will go over the solution before the end of class.
- Write your name on each completed sheet.
- Submit to the designated MyCourses' Dropbox.

Class participation is a significant part of your grade (20%). This includes in class activities and the problem solving session.

Your graders will grade your participation by verifying that you pushed your solutions before the end of the class period each day.

Problem 1

Software Development & Problem Solving is designed for students of ***all*** levels of experience. There are students in this classroom with little or no programming experience, students who have been coding for years, and every skill level in between.

Spend a few minutes talking with your team members about your prior experience with programming (in any language, not just Python).

Rate yourselves on a scale of ***0*** (very little or no experience) to ***10*** (you should be teaching this class!).

Fill out the tables with each of your answers.

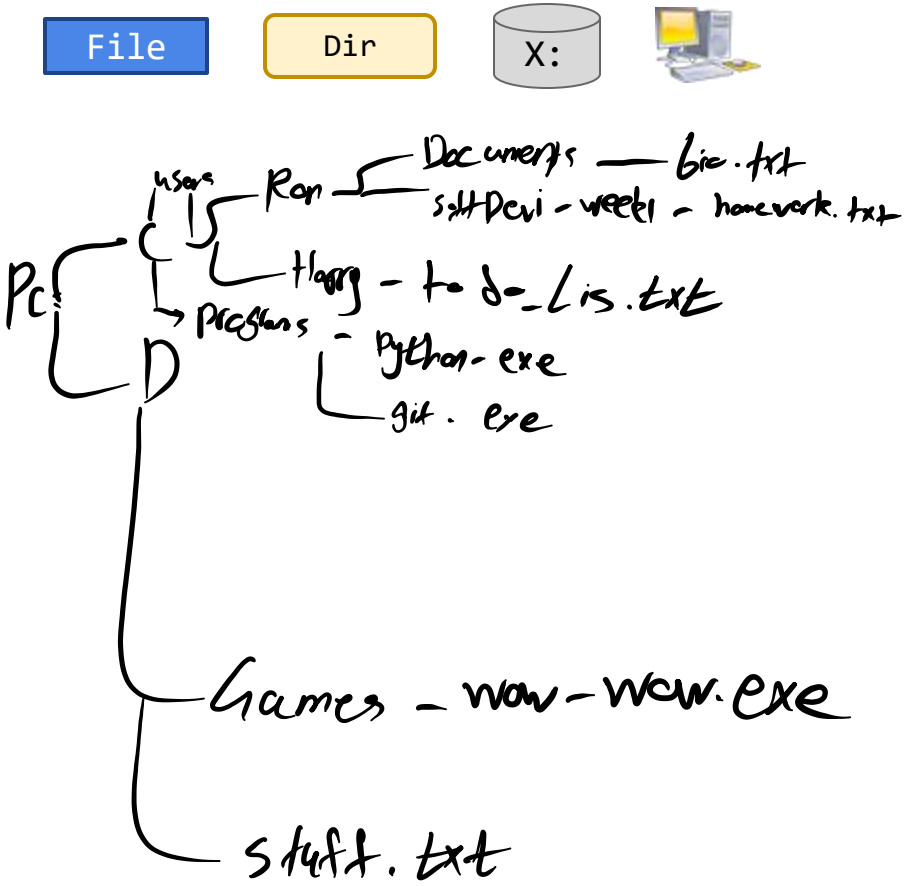
If you are working digitally and need more space, duplicate this slide.

Name: Yara Nabhan	Prior Experience 0
Comments: You never did any programing pretty new	

Name: Sohan:saimbhi	Prior Experience 5
Comments: He been programming for 8 month	

Name:Hamad Saeed Al ALi	Prior Experience 6:
Comments: I been programming for a good while around a year now I mostly code with python and recently started using C++ for modding a video game	

Problem 2



Files in the file system are organized into a ***tree structure***. Visualizing this structure can make finding files and directories more intuitive.

Assume that each of the following is an absolute path to a file in your file system. Draw the tree that represents the structure in the space on the left.

```
C:\Users\Ron\Documents\biography.txt
C:\Users\Ron\SoftDevI\Week01\homework.txt
C:\Users\Harry\todo_list.txt
C:\Program Files\Python\python.exe
C:\Program Files\Git\git.exe
D:\Games\WoW\wow.exe
D:\stuff.txt
```

Your instructor will determine if you should work digitally, on paper, or on a whiteboard. Use the icons to the left as references.

Problem 3

Understanding the status of the files in your repository is important! Have you made changes to any files that need to be committed? What has been added, modified, deleted, or staged since your last commit?

Consider the following commands executed in a Git repository on your computer. Together with your team, describe the status of the file at each step.

1. `notepad new_file.txt`
2. `git add new_file.txt`
3. `git commit -m "adding a new file"`
4. `git push`
5. `notepad new_file.txt (add text)`

1.Modified
2.added
3.staged
4.de;eted
5.added

1.to know what stage it is at
2.make a local repository
3.save your files
4.Transfer or clone files from the other computer

Problem 4

Proper use of version control means understanding ***why*** we use it and not just memorizing ***how*** to use it.

Discuss the following questions with your team, and type or write your answers in the space on the right.

1. Why do you think that it is a good idea to check the status before staging files?
2. When starting a brand new assignment, what is the first thing you should do, and why?
3. What is the last thing that you should do before taking a break from working?
4. Assume that you are getting back to work on a different computer. What is the first thing you should do?