# 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 for the time remaining in today's class.
  - 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.
- If there is any time remaining, you will begin work on your homework assignment.

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.

| Name:<br>Denis | Major:<br>WMC student |
| --- | --- |
| Place of origin: Sarajevo | |
| One interesting fact about me: Likes painting, drawing and writing | |

| Name: Maroje | Major: WMC student |
| --- | --- |
| Place of origin: Dubrovnik | |
| One interesting fact about me: plays football (soccer) | |

| Name: Alen | Major: WMC student |
| --- | --- |
| Place of origin: Sarajevo | |
| One interesting fact about me: has vitiligo | |

# Problem 1

Getting to know your classmates helps to form a community of students and faculty with a shared goal: helping ***everyone*** to succeed in this course.

Creating a network of friends and colleagues will give you a base of support if you need help on your assignments or developing a better understanding of the material.

Providing help and explaining concepts to your peers is also a ***great*** way to get a more solid grasp on material. It's a win-win!

Spend some time getting to know your team. Fill out the table to the left with information about each member of your problem solving team.

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

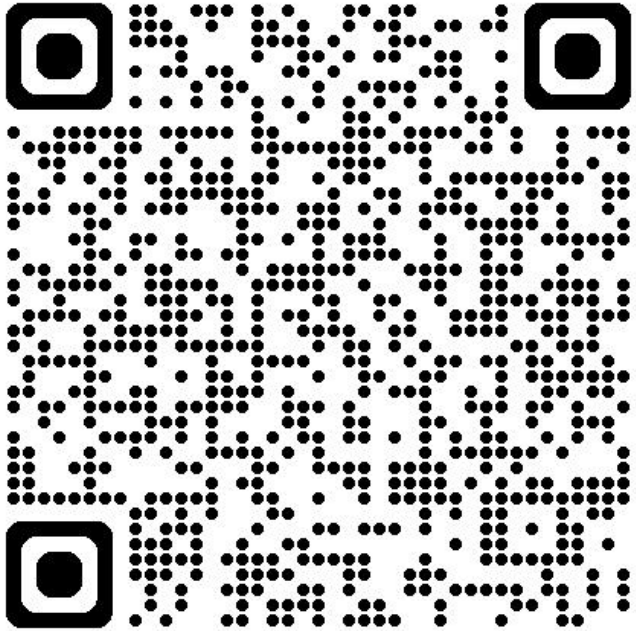
# Problem 2

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!).

Use this Google form to tell us about your prior experience. The results will be shared anonymously on the course Discord server.



You will be required to log into your RIT Google account to access the form.

# Problem 4

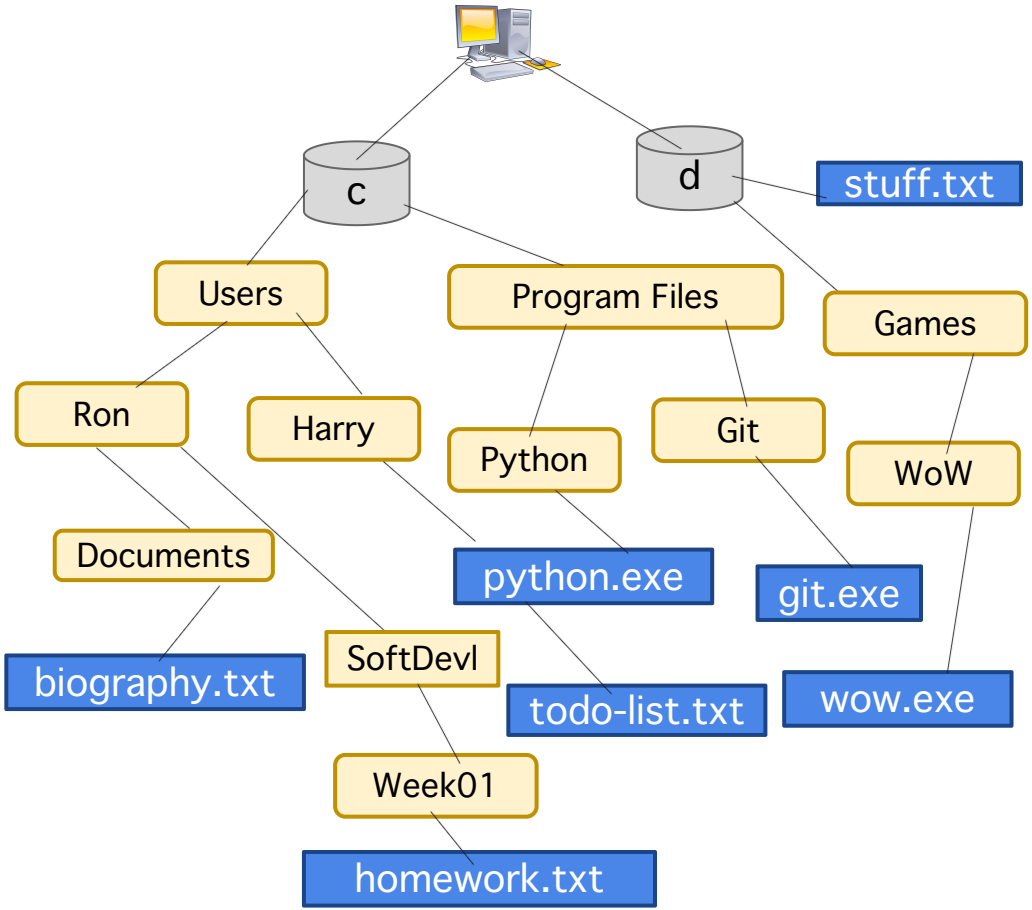
Understanding the status of the files in your repository is important! Have you made changes to any files that need to be committed? What has been added, modified, deleted, or staged since your last commit?

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

| |
|---|
| 1.When we had to add a new file, so we could put git clone on terminal to execute it, in order to join the repository, clone it, join a classroom etc... |
| 2. After we add the text we need to git it by putting a command git and put it in repository |
| 3. After putting git, we need to make a command do whatit needs to do, then it commints that added file |
| 4.after that git function does push the file so it could be executed and be finally done. It puts the file into the repository |
| 5. We add a new file, in order to also put it in the repository |

# Problem 3




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/SoftDevl/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.

| |
|---|
| 1. Yes, I think it's important because if we don't check, there would probably be a problem where computer wouldn't be able to stage certain files |
| 2. When we start a new assignment, then we need to put a report about theme, with an introduction put on header |
| 3. Not checking if we saved a file or assigment, or presentation, because all could be erased |
| 4. First thing is making your account on that new computer, by putting same email and password |

# Problem 5

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?

# Problem 6

Making and overcoming mistakes is an essential part of problem solving.

Talk with your team and identify ***at least three mistakes*** that you made and overcame throughout any of the class activities or homework assignments in this unit. Did any of you make the same kind of mistake?

Be sure to describe specifically what you did to overcome each mistake. Did you look up the solution in the slides? Ask for help on the Discord server? Go to office hours? Something else?

| |
|---|
| First made mistake was not clicking done button after submitting it, so it wasn't put on MyCourses |
| Not cloning file of git hub class so i could accept the repository. Maroje had similar. |
| Not eporting this file to PDF so I could submmit it |
| |

First has hptts, which is required for the web page at all

then second is the name of the site, git.com ,which is very important to know.

Then, the file which we wnat to put in the repository is hte third part of the Git log

Last, but not least, is the name of the repository and the file sapred by dot

# Problem 7

Each entry in a Git log contains 4 pieces of information.

Describe each piece of information and under which circumstances it might be useful.

Consider how the usefulness of the log would be affected by the the frequency of commits and the quality of the comments that you use when you commit to the repository.

# Problem 8

Together with your team, brainstorm a solution for each of the situations/problems listed to the right.

If you finish early, you should use the remaining class time to begin working on your homework.

| |
|---|
| You continue a work in progress on a new computer. |
| You accidentally delete the file “`important.txt`”. |
| You want to reuse a file from a previous assignment. |
| You want to throw away recent changes that you made to a file. |
| You forgot to push your solution before the assignment deadline. |