Practical Session 1: Using the Terminal

In this first practical session we will get to grips with navigating around the file system and working with files and directories using the terminal. Use the lecture slides and ask questions where needed.

Exercise 1. Navigating the File System

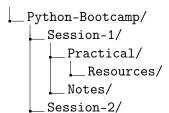
Find and open the terminal on your system, notice what your user name and computer name are.

- 1. Check your current location.

 This should be your *home directory*.
- 2. View the contents of your home directory.

 Pay attention to the different colours for the different file types.
- 3. List all files including hidden files.
- 4. List files with detailed information. When was the last file/directory created?
- 5. Use -help or -man to list only directories with 1s
- 6. Create a new directory called Python-Bootcamp.

 Check it is there by listing all contents again, and move into the new directory.
- 7. Within Python-Bootcamp, setup this filesystem of directories



Remember you can use tab-complete to move around faster.

- 8. From Resources/, output your location. Then with only one command, move to your home directory. From there use the full location of Resources/ to move back in one command.
- 9. Copy the Practical/directory into the Resources/directory under the new name Practical-stuff
- 10. Delete the Resources/ directory with everything inside.
- 11. Rename Notes to My-Notes, then move it into Practical/

Exercise 2. Working with files

- 1. Create a new file myfile.txt in Practical/.
- 2. Use vim to open the file and write some text in it over multiple lines, saving and closing it behind you.

- 3. Use the command cat to print the contents of myfile.txt
- 4. Use the commands head and tail with myfile.txt, what did they do?
- 5. Create a new directory Backup and copy myfile.txt into it
- 6. Working back on the original myfile.txt, check what the permissions are on the file. Change the permissions such that the user can execute the file, and only the user can write to the file. List the files again what's changed?

Exercise 3. Relative vs Absolute Paths

Now that you've built a directory structure in the Python-Bootcamp/ directory, let's practice navigating and manipulating files using relative and absolute paths.

- 1. From your home directory, use a relative path to list the contents of the Session-1/Practical/directory you created earlier inside Python-Bootcamp.
- 2. Create a new file called paths.txt inside Session-1/Notes/ using touch, then use a relative path to move that file into Session-1/Practical/.
- 3. Use an absolute path to copy paths.txt from Practical/ into Session-2/.
- 4. Change your working directory to Session-2/. From here, print the contents of paths.txt using a relative path from your current location.
- 5. Now use an absolute path to delete the copy of paths.txt in Session-2/.
- 6. Staying in Session-2/, try this challenge: Use a relative path in a single command to copy all contents of ../Practical/ into Session-2/.
- 7. Return to your home directory with a single command. From there, use an absolute path to delete the entire Session-2/ directory and its contents.

If you've finished this sheet ahead of time, move onto the bonus sheet to tackle some additional content not covered in the lecture. At the end of this session, feel free to delete all the files and directories on your system we made above for practice.