

COMP311 Liux Lab



Project No. 2

Comp311 (Summer 2023): Linux OS Laboratory

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1 | Second Project Objectives

The following are the objectives of the first project:

- Demonstrate your understanding of Shell configuration.
- Demonstrate your ability of job control and processes.
- Demonstrate your ability to manipulate text and use regular expressions.

2 | Project Guidelines

On your virtual machine, do the following:

- Create a sub-directory under your home directory called youruserid_proj1 (e.g. **u11342145_proj2**), *Please stick closely with the naming conventions!!*.
- Every created file must contain your full name and registration ID on the top of the first page. (*ALL files*).
- The file structure of what shall be delivered.

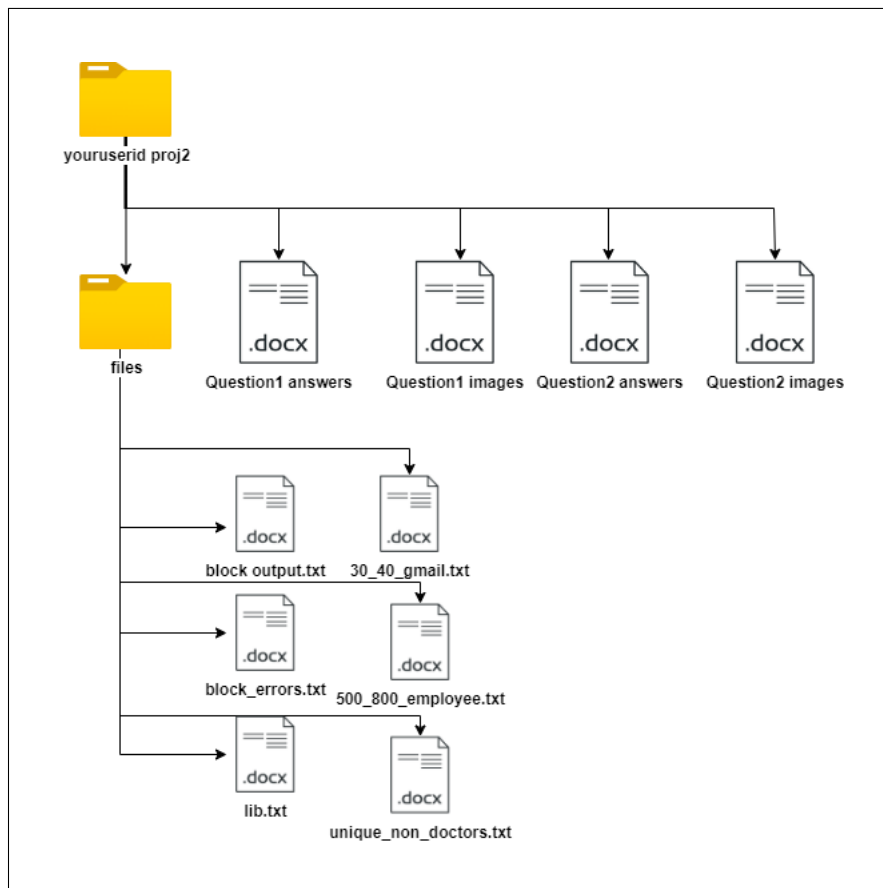


Figure 2.1: Deliverable File Structure

3 | Question 1

On your Virtual machine, document the commands necessary to perform each of the tasks outlined below. Record the number of questions and their corresponding answers in a file named **"Question1_answers"**. Additionally, ensure that you capture screenshots or images that clearly display the executed commands and the resulting outputs for each question. Organize these screenshots in a Word file named **"Question1_images"** while maintaining their sequential order.

3.1 | Part One

Q1: Using variables, find out what your hostname, username, shell, and home directories are currently set to.

Q2: Create an alias called mypass that displays the contents of the `/etc/passwd` file on your screen in such a way that it is available every time you log in or open a new shell from your user account.

Q3: List all processes running on the system with the option `aux`, and sort those processes by the process id.

Q4: Start the `gedit` (Text editor) process from your desktop. From the terminal, write the command to find the process of the `gedit` from all the system processes, Using the `kill` command, send a signal to the `gedit` process that causes it to pause (stop).

Q5: Install the `xeyes` command (in Ubuntu Linux, use the command `sudo apt-get install xeyes`). Run the `xeyes` command about 20 times in the background so that 20 `xeyes` windows appear on the screen. Move the mouse around and watch the eyes watch your mouse pointer. When you have had enough fun, kill all `xeyes` processes in one command.

3.2 | Part Two

Q1: Using the `find` command, search for files of type `block` under the `/dev` directory. The command must redirect the output so that the list of block files ends up in a file called **block_output.txt**.

Q2: Using the `find` command, search for all directories whose names start with `"lib"` on the entire system. The command must redirect the output so that the list of directories ends up in a file called **lib.txt** and the list of error messages in a file called **lib_errors.txt**. Provide the command you would use

Q3: How can you use the `find` command to locate all files with the **"java"** extension within the entire system? Provide the command to achieve this

Q4: Using the `find` command, how can you identify symbolic links that start with the letter **"z"** within the directory `/usr/bin`? Provide the command to achieve this.

4 | Question 2

Given the **employees.txt** text file, use your Virtual machine to write a single command to do each of the following (Write the number of the question and the answer to a file called (**Question2_answers**). You MUST also take screen captures or images clearly showing the commands you executed on your system for each of the questions below and whatever results were displayed on the screen. The screen captures, or images should be included in sequence in a Word file called (**Question2_images**).

Note: the columns in the employees.txt files are as follows:
id,firstname,lastname,email,email2,profession

Q1: Display the full names of all users in uppercase whose first name is Tressa (all cases). The output should appear like the following example **TRESSA_BONILLA**

Q2: Display the last names in lowercase of all unique employees (all cases) with **doctor** as their profession, sorted by the numerical value of their ID numbers in descending order.

Q3: Display employees from row number 500 to row number 800 into an **500_800_employee.txt** file. The name in this file should appear in lowercase and sorted in ascending order (i.e., first name and last name separated by a space).

Q4: Display the unique first names of all employees (all cases) whose last names end with the letter between k-w and their profession is not a doctor, and save the result to the **unique_non_doctors.txt** file

Q5: Extract the email addresses of individuals whose ages are between 30 and 40 and the email domain is gmail ordered descending using their ID's. store the result in a text file called **30_40_gmail.txt**

Q6: List the first names of individuals whose last names start with "L" or "M."

Q7: Extract the professions of individuals with ages less than 50 and their profession is a firefighter

Q8: Extract the first names of individuals with ages less than 30 and professions not containing "developer. And their first names start with "A-N"

Q9: Display the IDs of individuals with ages greater than 40 and less than 50, and whose last names contain "e"

Q10: Find the total count of individuals with ages ending in 6 or 7

Q11: Replace "officer" in professions with "cop", for all individuals whose ages end in 5

5 | Deliverable

The project submission deadline is *Sunday, August 27, 2023*. All project submissions are expected to be completed using the **ITC**

Please turn in the file **youruserid_proj2.tar** and upload it to the ITC by the due date and time.

Note:

- You should do all the work above completely on your own.
- No projects will be accepted after the due date (*27/08/2023*).
- *We want to emphasize that cheating in any form is strictly prohibited. If any student is found to have engaged in cheating, whether from external sources or otherwise, appropriate actions will be taken according to our established policies.*

Good luck!