Lab Assignment Instructions

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Objective

The objective of this lab assignment is to guide you through the process of executing commands and Python code as outlined in the provided PowerPoint (PPT) presentation. You will practice these commands and code snippets, capture screenshots of your work, and provide explanations for each step. Additionally, you will document any error messages encountered during the installation or execution process.

Instructions

Follow the steps below carefully:

Step 1: Access the Lab Instructions

1. Open the provided PowerPoint (PPT) file containing the lab instructions. To access the lab instructions and resources, visit the following link:
    - PPTs in GitHub Repository.
2. Download lecture PPTs. The following image 1 demonstrates how to download PPTs:
3. Review the slides thoroughly to understand the sequence of tasks.

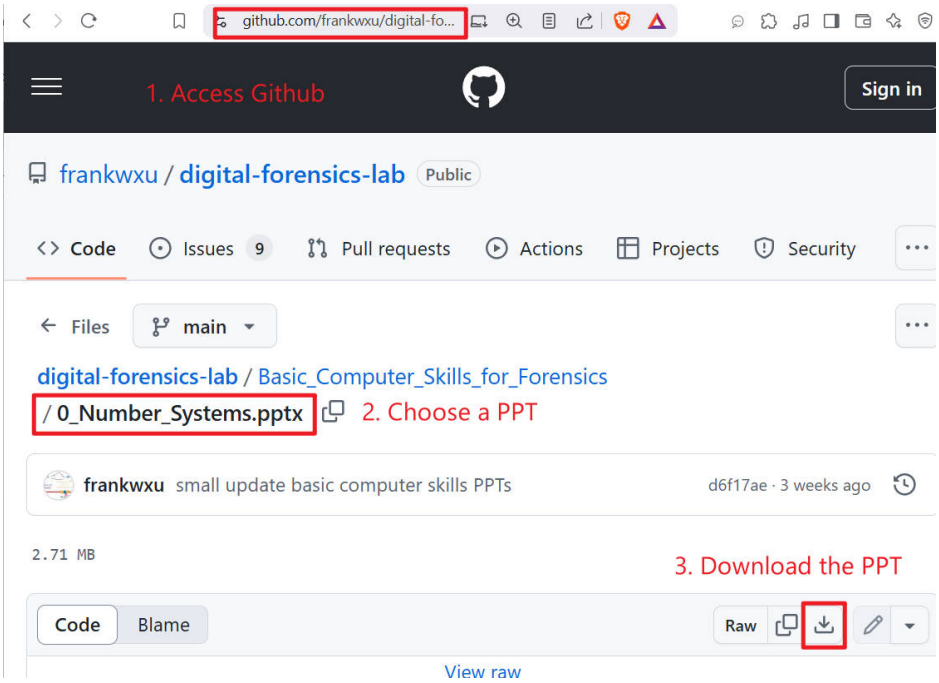

Figure 1: Steps to download PPTs

Step 2: Execute Commands and Python Code

1. Open your terminal or command prompt.
2. Follow the commands listed in the PPT slides. For example:

```
# Example Command
ls -l

```

3. Execute the Python code provided in the slides. For example:

```
# Example Python Code
import numpy as np

arr = np.array([1, 2, 3, 4, 5])
print("Array:", arr)

```

4. Ensure that you test each command and code snippet in the correct order.

Step 3: Capture Screenshots

1. After executing each command or Python code, take a screenshot of the output.
2. Include these screenshots in your submission document.
3. Label each screenshot clearly with the corresponding task or step number.

The example screenshot for the command `ls -l` is shown in Figure 2

Step 4: Explain Your Work

1. For each command or Python code snippet, write a brief explanation of what it does.
2. For example:
   - **Command:** `ls -l`

     The `ls` command stands for "list" and is used to display the contents of a directory.

     The `-l` option modifies the behavior of `ls` to display the contents in a **long listing format**, providing detailed information about each file or directory.

     .
   - **Python Code:** The code imports the NumPy library and creates an array, then prints it.
3. Screen capture software: Snipaste from https://www.snipaste.com/ or Snipping tool from Microsoft.

Step 5: Handle Errors

1. If you encounter any error messages during the installation or execution process, record them.
2. Take a screenshot of the error message and include it in your submission.

In a Word/PDF file

The **ls** command stands for list and is used to display the contents of a directory **~/lab**. The **-l** option modifies the behavior of **ls** to display the contents in a long listing format, providing detailed information about each file or directory.

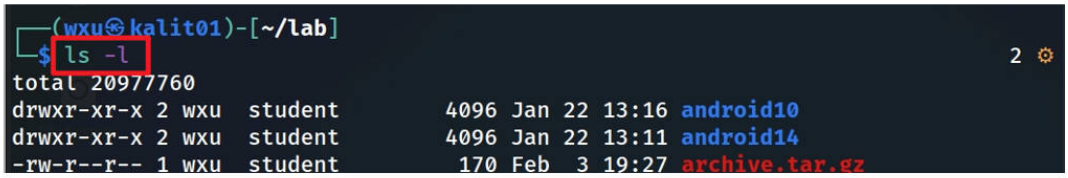

Figure 2: An sample screenshot of the command `ls -l`

3. Provide a brief description of the error and any troubleshooting steps you attempted.
4. Note: Errors caused by differences in operating system versions or software versions will not impact your grade.

Submission Guidelines

- Compile your screenshots, explanations, and error logs into a single PDF document.
- Use the following naming convention for your submission file: `LastName_FirstName_LabAssignment_XXX.pdf`.
- Submit the PDF file via the course management system by the specified deadline (one week by default).

Grading Criteria

Each lab is worth 10 points by default, unless otherwise specified during the class. A different problem-solving assignment will be provided if there is no hands-on practicing lab. Each problem-solving assignment is also worth 10 points.

- Completion of all tasks: 50%
- Accuracy of explanations: 30%
- Quality of screenshots and documentation: 20%

Additional Notes

- If you have any questions or need clarification, contact the instructor or teaching assistant.
- Ensure that you save your work frequently to avoid data loss.