Lab Notebook

SHIVA

for

SUMMER INTERNSHIP

May 5th, 2025- July 21st, 2025

June 5th

- Completed Reading Chapter 1 of “Learning the bash Shell”.
- Installing WSL for windows
- Creating Git Hub Repository for sharing my collaborative work

June 6th

- Continued Reading Chapter & Practiced file handling, navigation, wildcards, redirection, pipes, and background jobs using WSL.
- Tested pwd, cd, ls, mkdir, touch, cp, mv, rm, echo, cat, sort, jobs, etc.
- Ran command pipelines and I/O redirection examples in WSL.

June 7th

- Completed the compilation and recording of the Chapter 1 explanation video, including both theoretical concepts and practical Bash command demonstrations.

June 8th

- Uploaded the video of chapter 1 in classroom.
- Began Chapter 2: Command-Line Editing.
- Learned how to enable command-line editing in Bash.
- Understood the role and usage of the command history list**.**
- Practiced recalling and reviewing previously executed commands.
- Started using keyboard navigation to move through command lines efficiently.

June 9th

- Studied and practiced emacs editing mode including:
- Cursor movement within lines and words.
- Deleting, copying, and pasting portions of the command line.
- Switched to vi editing mode and practiced basic commands:
- Entering insert mode, editing text, and navigating the command line.
- Learned about the fc command**,** which allows viewing and editing previous commands using a text editor.

June 10th

- Completed the remaining sections of Chapter 2, including:

  - History expansion, allowing reuse of earlier commands.
  - Readline library features and basic keybinding concepts.
  - Developing efficient keyboard habits for improved Bash usage.

- Prepared PowerPoint slides summarizing Chapter 2 topics.
- Recorded the explanation video covering theory and command-line editing demonstrations.

June 11th

- Started reading **Chapter 3: Customizing Your Environment** from *Learning the bash Shell.*
- Learned about the different Bash startup files like `.bash_profile`, `.bashrc`, and `.bash_logout`.
- Understood when each file runs and what it's used for.
- Tried a few basic customizations in `.bashrc`, like changing the prompt and setting environment variables.

June 12th

- Continued reading **Chapter 3** of *Learning the bash Shell.*
- Learned about using **aliases** to create shortcuts for commands.
- Tried creating and using simple aliases in `.bashrc` to save time while working in the terminal.
- Also explored **shell options** and tried enabling/disabling a few using the `shopt` command.
- Practiced customizing the shell environment and noticed how it affects my terminal behavior.

June 13th

- Finished the remaining topics of Chapter 3.
- Learned about shell and environment variables.
- Looked into how customization works in subprocesses.
- Made the PowerPoint presentation for Chapter 3.

June 14th

- **Recorded and uploaded** the explanation video for **Chapter 3** along with the presentation.

June 16th

- Started reading Chapter 4: Basic Shell Programming.
- Covered positional parameters, local variables in functions, and how quoting works with `$@` and `$*`.
- Practiced writing small scripts using these concepts to understand how arguments are passed and handled in shell functions.

June 17th

- Completed the remaining topics of Chapter 4: Basic Shell Programming.
- Practiced string operators, pattern matching, command substitution, and directory stack commands.
- Created the PowerPoint presentation covering all key concepts from Chapter 4 for explanation.

June 18

- Finished the remaining topics of Chapter 4, including advanced examples like extended pattern matching and command substitution.
- Started Chapter 5: Flow Control and read the initial topics including basic `if` and `else` statements.
- Practiced writing small conditional scripts to understand flow control logic in Bash.