

Lesson 1 – What is the Shell?

Commands Practiced:

`echo, whoami, date, pwd`

Notes:

I learned what a shell is. It's a program that takes commands and passes them to the operating system.

Sample Terminal Output:

```
$ echo "Hello, Shell"
Hello, Shell
$ whoami
hande
$ date
Mon Jul 8 15:03:22 KST 2025
$ pwd
/home/hande
```

Lesson 2 – Navigating Files and Directories

Commands Practiced:

`pwd, ls, cd, mkdir, rmdir`

Notes:

I practiced moving around the file system and creating/removing directories.

Sample Terminal Output:

```
$ pwd
/home/hande
$ mkdir project_test
$ cd project_test
$ pwd
/home/hande/project_test
$ cd ..
$ rmdir project_test
```

Lesson 3 – Files and Directories Continued

Commands Practiced:

touch, cp, mv, rm, man

Notes:

I practiced creating, copying, renaming, and deleting files.

Sample Terminal Output:

```
$ touch file1.txt
$ cp file1.txt file2.txt
$ mv file2.txt renamed.txt
$ rm file1.txt
$ man mv
```

Lesson 4 – Redirection

Commands Practiced:

echo, cat, >, >>

Notes:

I learned how to write to files and append new content using redirection operators.

Sample Terminal Output:

```
$ echo "This is line 1" > sample.txt
$ cat sample.txt
This is line 1
```

```
$ echo "This is line 2" >> sample.txt
$ cat sample.txt
This is line 1
This is line 2
```

```
$ echo "Overwriting everything" > sample.txt
$ cat sample.txt
Overwriting everything
```

Lesson 5 – Pipes and Command Substitution

Commands Practiced:

|, tr, wc, date, \$(...), `...`

Notes:

I used pipes to connect commands and learned how to embed command output inside other commands.

Sample Terminal Output:

```
$ echo "Hello there" | tr a-z A-Z
HELLO THERE
```

```
$ echo "Hello again" | wc
      1      2     12
```

```
$ echo "Today is: $(date)"
Today is: Mon Jul 8 17:31:00 KST 2025
```

```
$ echo "User: `whoami`"
User: hande
```

Lesson 6 – Command Line Programs

Commands Practiced:

head, tail, sort, uniq, grep, wc

Notes:

I learned how to inspect and process text files using built-in tools.

Sample Terminal Output:

```
$ sort fruits.txt
apple
apple
apple
banana
banana
orange
```

```
$ sort fruits.txt | uniq
apple
banana
orange
```

```
$ grep apple fruits.txt
apple
apple
apple
```

Lesson 7 – Variables

Commands Practiced:

```
name="...", $name, $(...), $((...))
```

Notes:

I learned how to store values in variables and reuse them in commands.

Sample Terminal Output:

```
$ name="Hande"
$ echo "Hello, $name!"
Hello, Hande
```

```
$ today=$(date)
$ echo "Today is: $today"
Today is: Mon Jul 8 18:45:00 KST 2025
```

```
$ number1=5
$ number2=3
$ total=$((number1 + number2))
$ echo "Sum: $total"
Sum: 8
```

Lesson 8 – Shell Scripts

Commands Practiced:

nano, chmod +x, ./script.sh

Notes:

I wrote my first shell script using a variable and date command.

Sample Terminal Output:

```
$ chmod +x hello.sh
```

```
$ ./hello.sh
```

```
Hello, Hande!
```

```
Today is Mon Jul 8 18:57:00 KST 2025
```

Lesson 9 – Loops

Commands Practiced:

for ... in ...; do ... done, loop.sh script

Notes:

I learned how to repeat commands with loops.

Sample Terminal Output:

```
$ ./loop.sh
```

```
Looping... 1
```

```
Looping... 2
```

```
Looping... 3
```

Lesson 10 – Functions

Commands Practiced:

function name { ... }, \$1, function in script

Notes:

I learned how to define and call reusable shell functions.

Sample Terminal Output:

```
$ ./greet.sh
```

```
Welcome, Hande!
```