



National Textile University

Department of Computer Science

Subject:

Operating system

Submitted To:

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Registration No:

23-NTU-CS-1221

Lab No:

1

Semester:

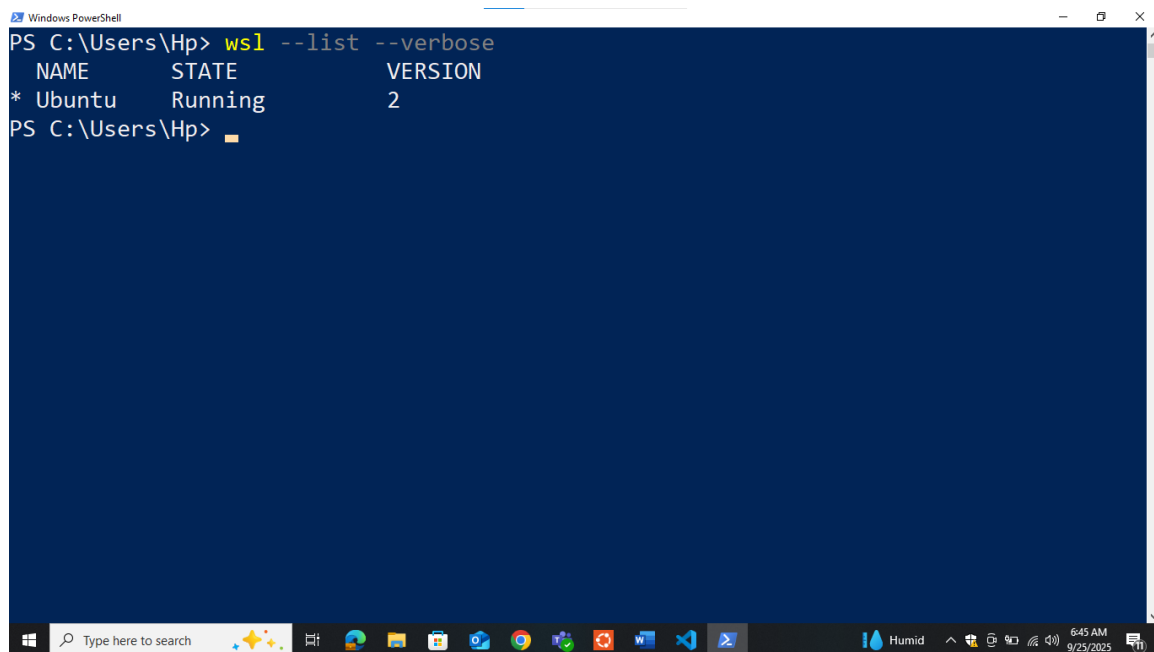
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Objective:

The purpose of this assignment is to:

1. Configure Ubuntu inside WSL2 (Windows Subsystem for Linux v2).
2. Install and configure Git in Ubuntu.
3. Generate and set up SSH keys to connect with GitHub.
4. Install the C development environment in Ubuntu.
5. Write a Hello World program in . C

Part A: WSL2 & Ubuntu Setup

A screenshot of a Windows PowerShell terminal window. The title bar reads "Windows PowerShell". The command prompt shows the user at "C:\Users\Hp" running the command "wsl --list --verbose". The output is a table with three columns: NAME, STATE, and VERSION. It lists one instance of Ubuntu in a "Running" state with version "2". The prompt returns to "PS C:\Users\Hp>". The Windows taskbar is visible at the bottom with various application icons and a system tray showing the time as 6:45 AM on 9/25/2025.

```
PS C:\Users\Hp> wsl --list --verbose
NAME      STATE      VERSION
* Ubuntu   Running    2
PS C:\Users\Hp>
```

Part B: Git & GitHub SSH Setup

```
itsgivingtech@DESKTOP-65N72IV: ~  
itsgivingtech@DESKTOP-65N72IV:~$ git config --list  
user.name=NoorulAinworks  
user.email=noorulaintalat@gmail.com  
itsgivingtech@DESKTOP-65N72IV:~$
```

Test connection:

```
itsgivingtech@DESKTOP-65N72IV: ~  
itsgivingtech@DESKTOP-65N72IV:~$ ssh -T git@github.com  
Hi NoorulAinworks! You've successfully authenticated, but GitHub does not provide shell access  
itsgivingtech@DESKTOP-65N72IV:~$
```

Part C: C Programming Environment & Practice

Gcc -version:

```
itsgivingtech@DESKTOP-65N72IV: ~$ gcc --version
gcc (Ubuntu 13.3.0-6ubuntu2~24.04) 13.3.0
Copyright (C) 2023 Free Software Foundation, Inc.
This is free software; see the source for copying conditions. There is NO
warranty; not even for MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.

itsgivingtech@DESKTOP-65N72IV:~$
```

C program:

```
1 #include <stdio.h>
2
3 int main() {
4     printf("Hello from Week 1 Home Task!\n");
5     return 0;
6 }
7
```

Execution:

```
itsgivingtech@DESKTOP-65N72IV:~$ cd Operating-system
itsgivingtech@DESKTOP-65N72IV:~/Operating-system$ mkdir Week-1-home-task
itsgivingtech@DESKTOP-65N72IV:~/Operating-system$ cd Week-1-home-task
itsgivingtech@DESKTOP-65N72IV:~/Operating-system/Week-1-home-task$ code .
itsgivingtech@DESKTOP-65N72IV:~/Operating-system/Week-1-home-task$ gcc hello.c -o hello.out
itsgivingtech@DESKTOP-65N72IV:~/Operating-system/Week-1-home-task$ ./hello.out
Hello from Week 1 Home Task!
itsgivingtech@DESKTOP-65N72IV:~/Operating-system/Week-1-home-task$ cd ..
itsgivingtech@DESKTOP-65N72IV:~/Operating-system$ git add .
itsgivingtech@DESKTOP-65N72IV:~/Operating-system$ git commit -m "Complete Week 1 Home Task (Part C: C Program)"
[main 3e14cb0] Complete Week 1 Home Task (Part C: C Program)
2 files changed, 6 insertions(+)
create mode 100644 Week-1-home-task/hello.c
create mode 100755 Week-1-home-task/hello.out
```

Git push:

```
itsgivingtech@DESKTOP-65N72IV: ~/Operating-system
fatal: Authentication failed for 'https://github.com/NoorulAinworks/Operating-system.git/'
itsgivingtech@DESKTOP-65N72IV:~/Operating-system$ git remote set-url origin git@github.com:NoorulAinworks/Operating-system.git
itsgivingtech@DESKTOP-65N72IV:~/Operating-system$ git push
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 4 threads
Compressing objects: 100% (5/5), done.
Writing objects: 100% (5/5), 2.68 KiB | 686.00 KiB/s, done.
Total 5 (delta 0), reused 0 (delta 0), pack-reused 0
To github.com:NoorulAinworks/Operating-system.git
   dd889a9..3e14cb0  main -> main
itsgivingtech@DESKTOP-65N72IV:~/Operating-system$
```

Note:

Successfully pushed to the saved directory on git using SSH key.