

National Textile University, Faisalabad



Department of Computer Science

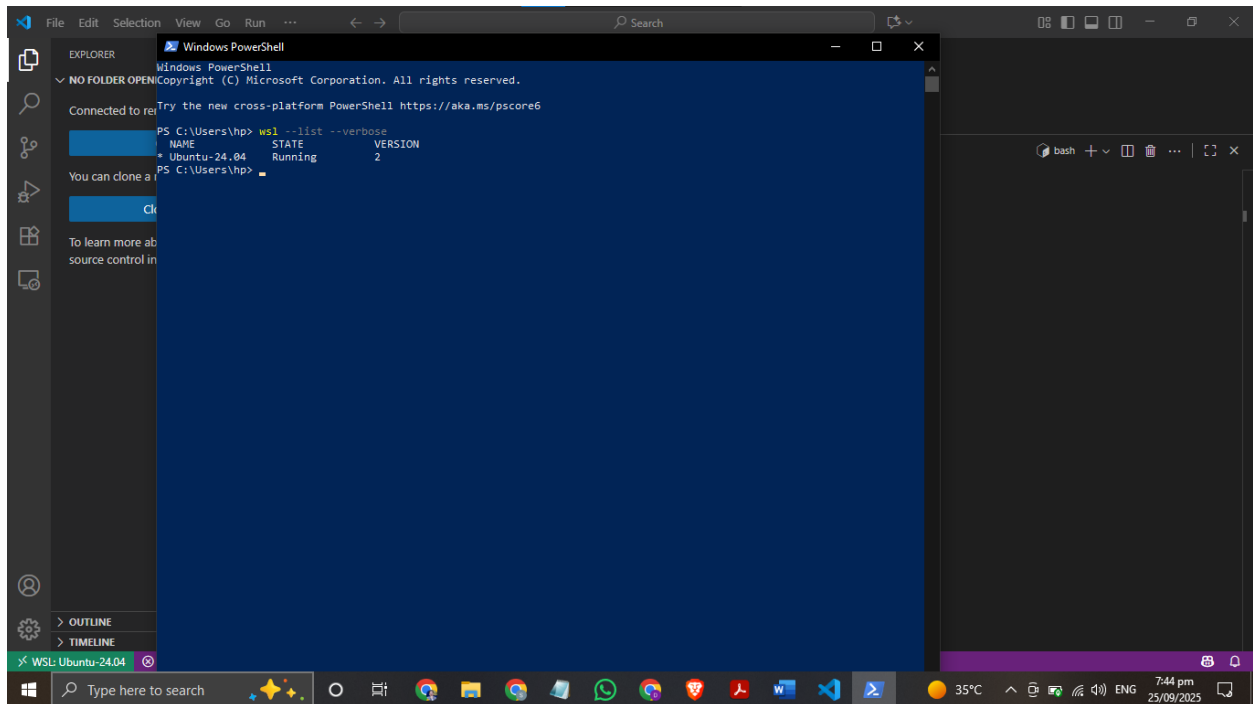
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Course	Operating System
Submitted To	Sir Nasir Mehmood
Submission Date	25/09/2025
Lab No.	1 (Home work)

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Task 1 Verify WSL2 and Ubuntu installation

Verify installation by running the following command in powershell:

I had already installed the wsl2 on my laptop before 1st lab so it is okay here the screenshot



Task 2 Git & GitHub SSH Setup:

Configure Git

Set your name and email:

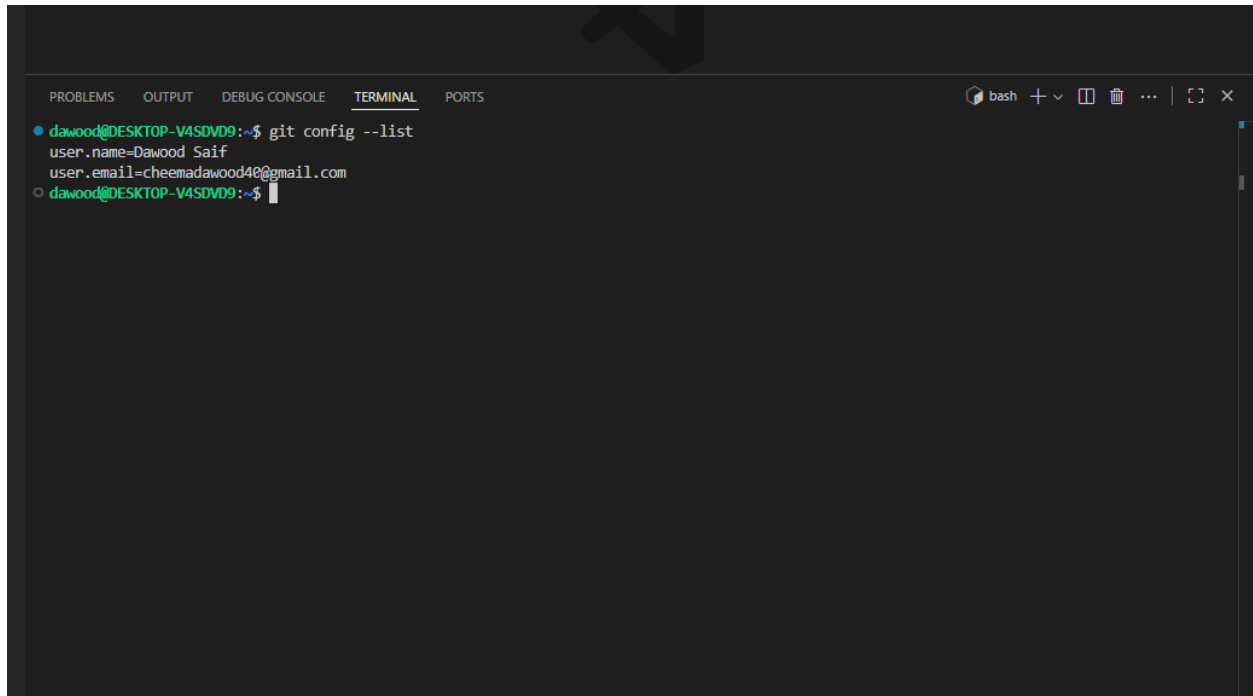
`git config --global user.name "Your Name"`

`git config --global user.email "your@email.com"`

- By using the above command I set up my username and email with git hub and checked that weather it is really done

Show your config:

`git config --list`

A screenshot of a terminal window with a dark background. The terminal shows the command 'git config --list' being executed. The output displays two configuration entries: 'user.name=Dawood Saif' and 'user.email=cheemadawood40@gmail.com'. The terminal interface includes a top bar with tabs for 'PROBLEMS', 'OUTPUT', 'DEBUG CONSOLE', 'TERMINAL', and 'PORTS'. The 'TERMINAL' tab is active. On the right side of the terminal window, there are icons for a shell (bash), a plus sign, a minus sign, a window icon, a trash icon, and a close icon. The prompt 'dawood@DESKTOP-V4SDVD9:~\$' is visible at the start of the command line.

Task 3: Generate SSH Keys;

Now in this task I have to generate ssh key and paste it to git hub that will help me to clone repositories and push and pop my code

For this I have Run following command :

```
ssh-keygen -t ed25519
```

Now I Copy the public key by unsing this command that will show me my key :

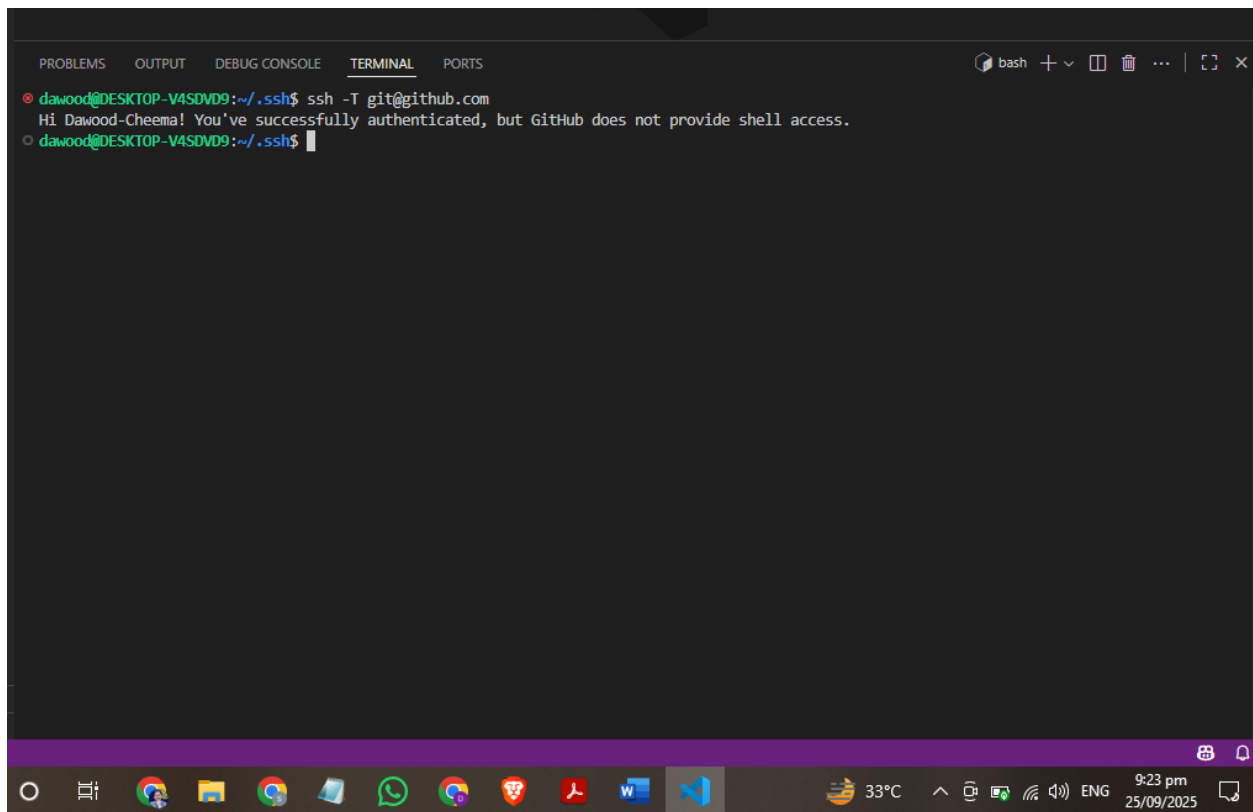
```
cat ~/.ssh/id_ed25519.pub
```

Added this key to my GitHub account under Settings → SSH and GPG keys.

Task 4: Test Connection

In this now we have to see wearher the link has been established or not here is its screenshot

`ssh -T git@github.com`



The screenshot shows a terminal window within a code editor. The terminal has tabs for PROBLEMS, OUTPUT, DEBUG CONSOLE, TERMINAL (selected), and PORTS. The prompt is `dawood@DESKTOP-V4SDVD9: ~/.ssh$`. The command `ssh -T git@github.com` has been entered. The output shows a successful authentication message: `Hi Dawood-Cheema! You've successfully authenticated, but GitHub does not provide shell access.` The prompt is now `dawood@DESKTOP-V4SDVD9: ~/.ssh$` with a cursor. The bottom of the image shows a Windows taskbar with various application icons and a system tray displaying the temperature (33°C), time (9:23 pm), and date (25/09/2025).

Task 5: Install Build Tools

Before writing C programs, install the `build-essential` package which contains `gcc`, `g++`, and other tools required for compiling.

Run:

```
sudo apt install build-essential
```

Verify installation by checking the version of `gcc` :

```
gcc --version
```

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
● dawood@DESKTOP-V4SDVD9:~/Lab01-hometask$ 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.
○ dawood@DESKTOP-V4SDVD9:~/Lab01-hometask$
```

Task 6: How to run a c program :

First write a C program in a file with .c extension.

- Here how I created .c file
firstly I cloned my repository from github by using its command
- then I make the folder on my github using some command and then
created .c file
and run the code

```
gcc lab1-task1.c -o lab1-task1.out
```

- and then to show output I run:

```
./lab1-task1.out
```

Here is the screenshot of the code:

C lab1-task1.c X

C lab1-task1.c

```
1  #include <stdio.h>
2
3  int main() {
4      printf("Hello Yarr, finally created it Dawood\n");
5
6
7      return 0;
8  }
9
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

bash - Lab01-hometask +

```
● dawood@DESKTOP-V4SDVD9:~/Lab01-hometask$ gcc lab1-task1.c -o lab1-task1.out
● dawood@DESKTOP-V4SDVD9:~/Lab01-hometask$ ./lab1-task1.out
Hello Yarr, finally created it Dawood
○ dawood@DESKTOP-V4SDVD9:~/Lab01-hometask$
```