



National Textile University  
Department of Computer Science  
Subject:  
Operating System

---

Submitted to:  
Sir Nasir

---

Submitted by:  
Khizar Hameed

---

Reg number:  
23-NTU-CS-1169

---

Lab no:  
01 Home Task

---

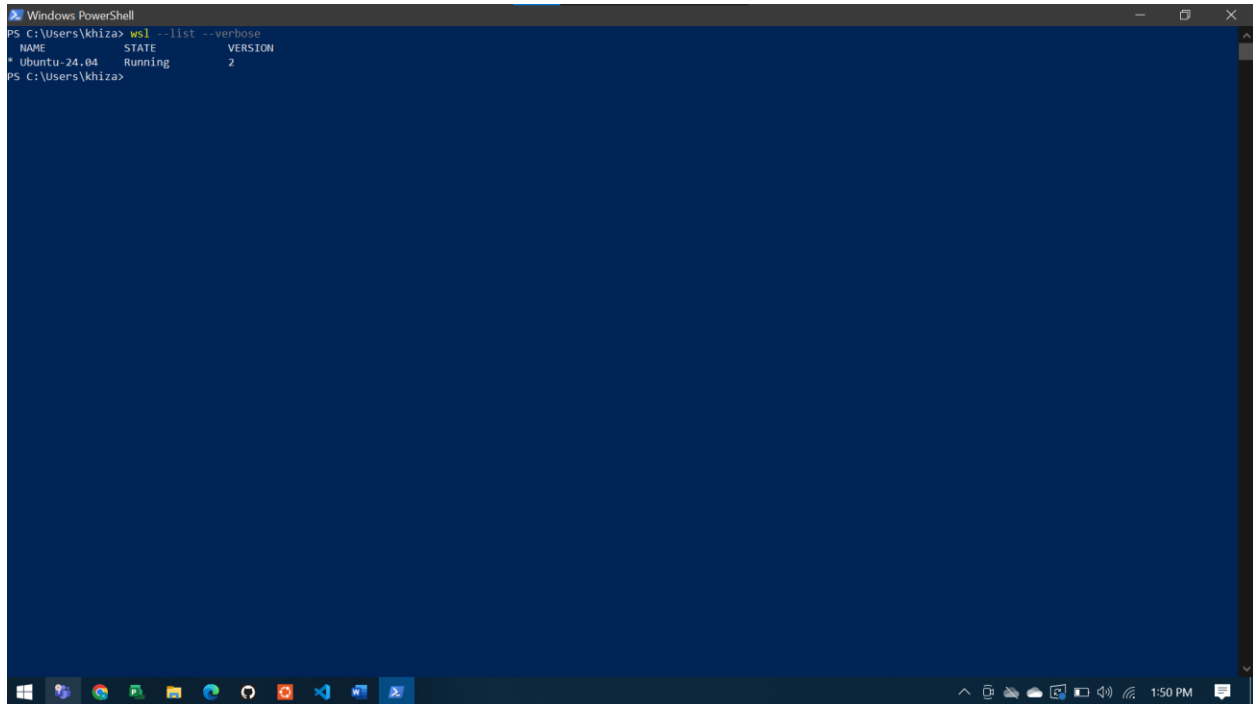
Semester:  
5<sup>th</sup>

---

---

## Part A: WSL2 & Ubuntu Setup

---



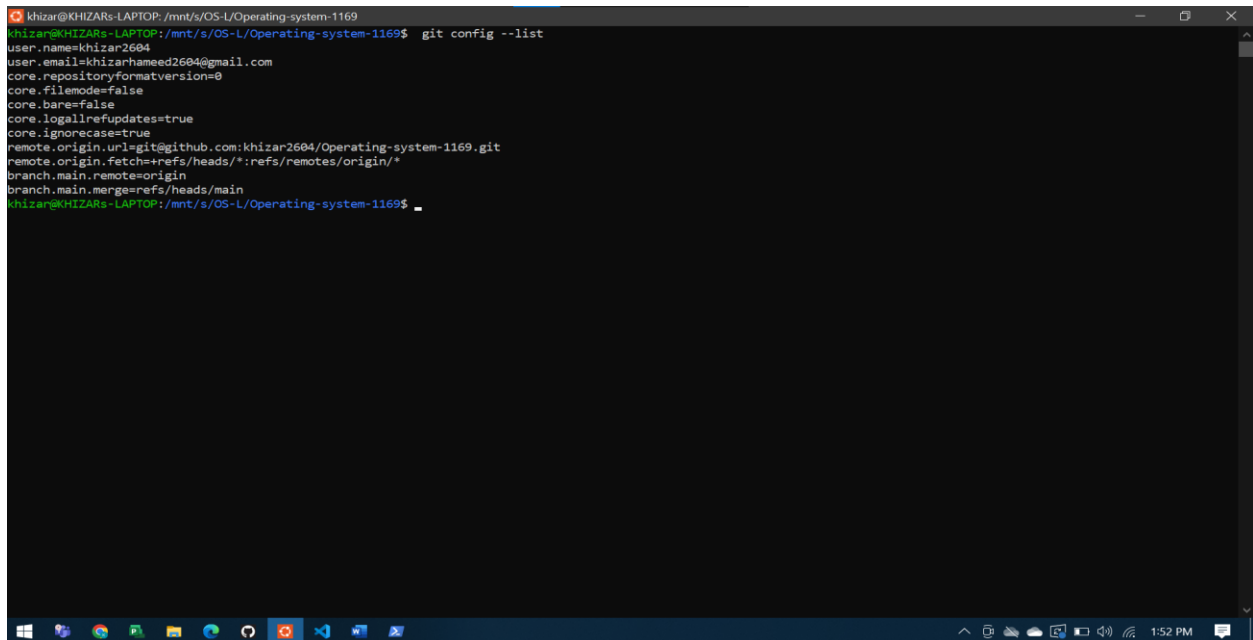
A screenshot of a Windows PowerShell terminal window. The title bar reads "Windows PowerShell". The command prompt shows the user running `wsl --list --verbose`. The output is a table with three columns: NAME, STATE, and VERSION. It lists "Ubuntu-24.04" in a "Running" state with version "2". The terminal background is dark blue, and the Windows taskbar is visible at the bottom.

```
PS C:\Users\khiza> wsl --list --verbose
  NAME      STATE      VERSION
  * Ubuntu-24.04  Running      2
PS C:\Users\khiza>
```

---

## Part B: Git & GitHub SSH Setup

---



A screenshot of an Ubuntu terminal window running on WSL2. The title bar shows the path `/mnt/s/OS-L/Operating-system-1169`. The prompt is `khizar@KHIZARS-LAPTOP: /mnt/s/OS-L/Operating-system-1169$`. The user has run `git config --list`, and the terminal displays various configuration settings including user name, email, repository format, and remote URLs. The terminal background is dark, and the Windows taskbar is visible at the bottom.

```
khizar@KHIZARS-LAPTOP: /mnt/s/OS-L/Operating-system-1169$ git config --list
user.name=khizar2604
user.email=khizarhameed2604@gmail.com
core.repositoryformatversion=0
core.filemode=false
core.bare=false
core.logallrefupdates=true
core.ignorecase=true
remote.origin.url=git@github.com:khizar2604/Operating-system-1169.git
remote.origin.fetch=+refs/heads/*:refs/remotes/origin/*
branch.main.remote=origin
branch.main.merge=refs/heads/main
khizar@KHIZARS-LAPTOP: /mnt/s/OS-L/Operating-system-1169$
```

```
khizar@KHIZARs-LAPTOP: ~  
khizar@KHIZARs-LAPTOP:~$ ssh -T git@github.com  
Hi khizar2604! You've successfully authenticated, but GitHub does not provide shell access.  
khizar@KHIZARs-LAPTOP:~$
```

---

## Part C: C Programming Environment & Practice

---

### Step 1: Install Build Tools

```
khizar@KHIZARs-LAPTOP: ~  
khizar@KHIZARs-LAPTOP:~$ 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.  
khizar@KHIZARs-LAPTOP:~$
```

### Step 2: How to run a C Program

```
khizar@KHIZARs-LAPTOP: /mnt/s/OS-L/Operating-system-1169
khizar@KHIZARs-LAPTOP:/mnt/s/OS-L/Operating-system-1169$ gcc task1.c -o task1.out
khizar@KHIZARs-LAPTOP:/mnt/s/OS-L/Operating-system-1169$ ./task1.out
Hello, World!
khizar@KHIZARs-LAPTOP:/mnt/s/OS-L/Operating-system-1169$
```

### Step 3: Write a C Program

```
#include <stdio.h>
```

```
int main() {
    printf("Hello, World!\n");
    return 0;
}
```

```
khizar@KHIZARs-LAPTOP: /mnt/s/OS-L/Operating-system-1169
khizar@KHIZARs-LAPTOP:/mnt/s/OS-L/Operating-system-1169$ ./task1.out
Hello, World!
khizar@KHIZARs-LAPTOP:/mnt/s/OS-L/Operating-system-1169$
```