



National Textile University

Department of Computer Science

Subject:

Operating System

Submitted to:

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Submitted by:

Ahmad Fawad

Reg number:

23-NTU-CS-1129

Lab no. :

01 Home Task

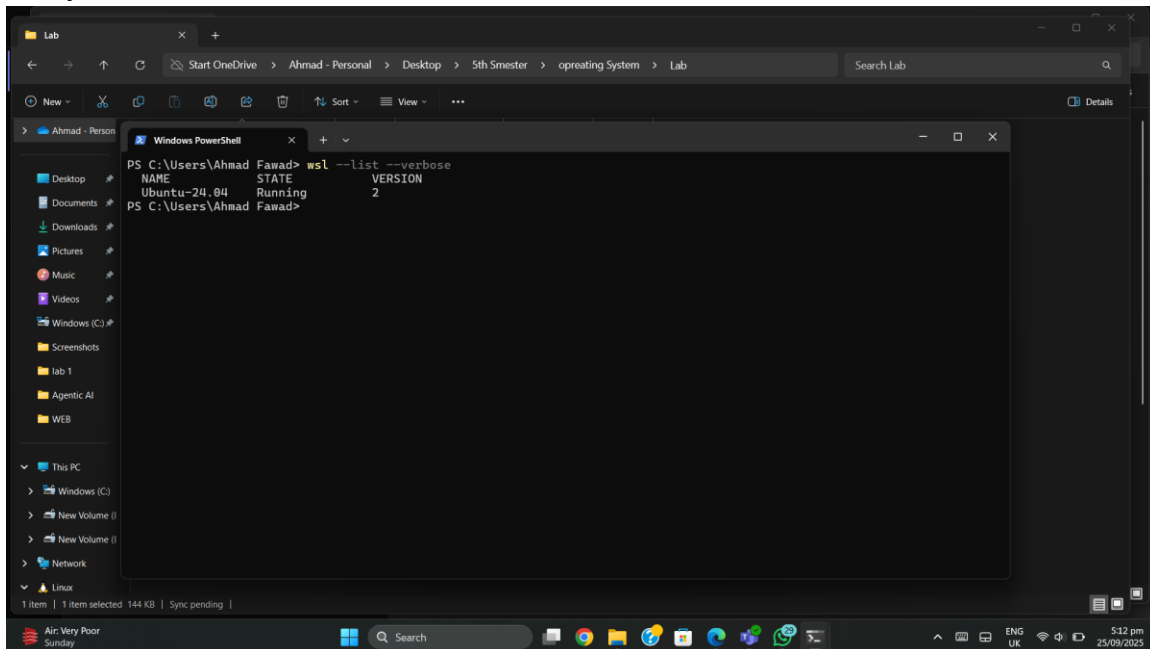
Semester:

5th

Part 1

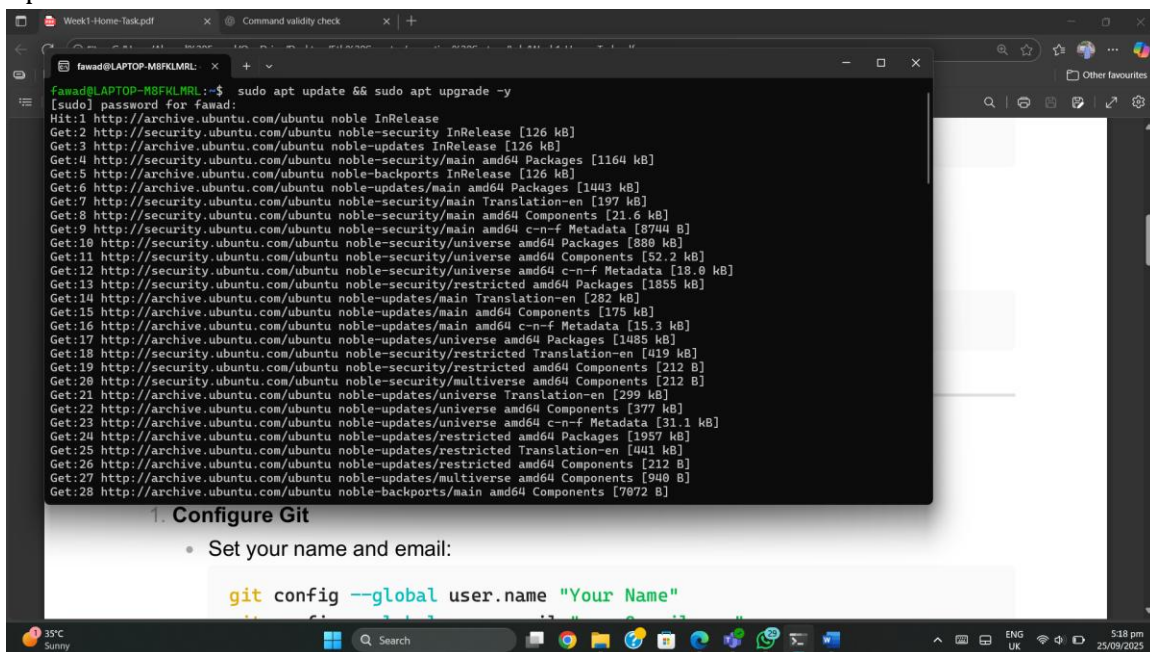
Questions 1:

Verify WSL2 and Ubuntu installation



Question2:

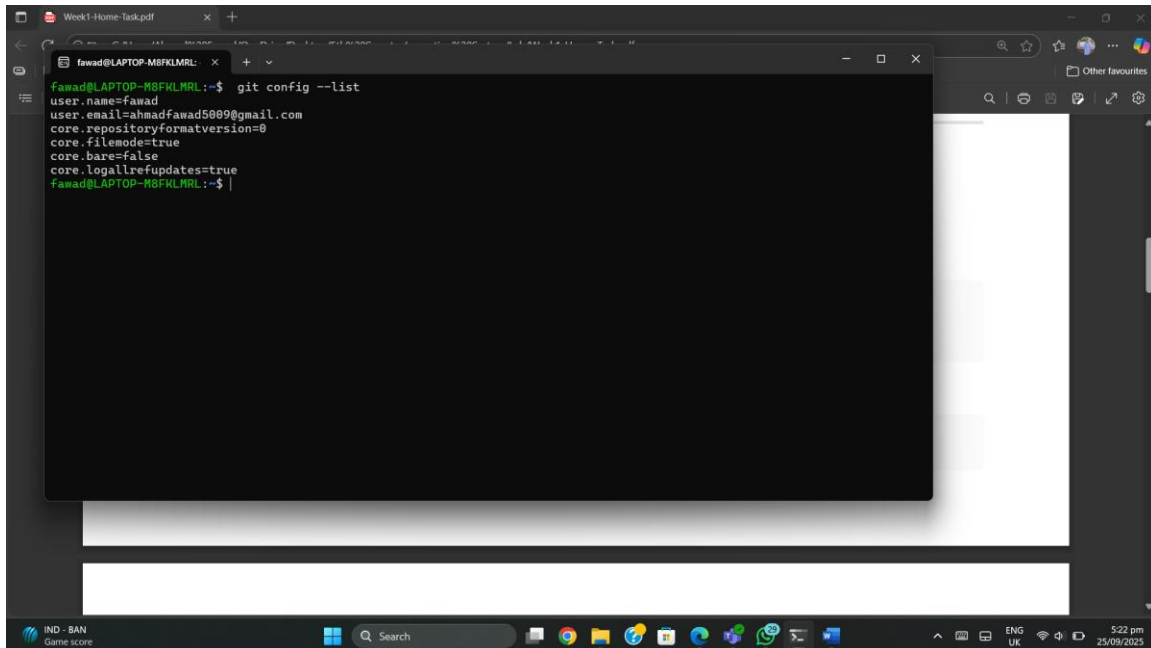
Update Ubuntu environment



Part B: Git & GitHub SSH Setup

Question1:

Configure Git:

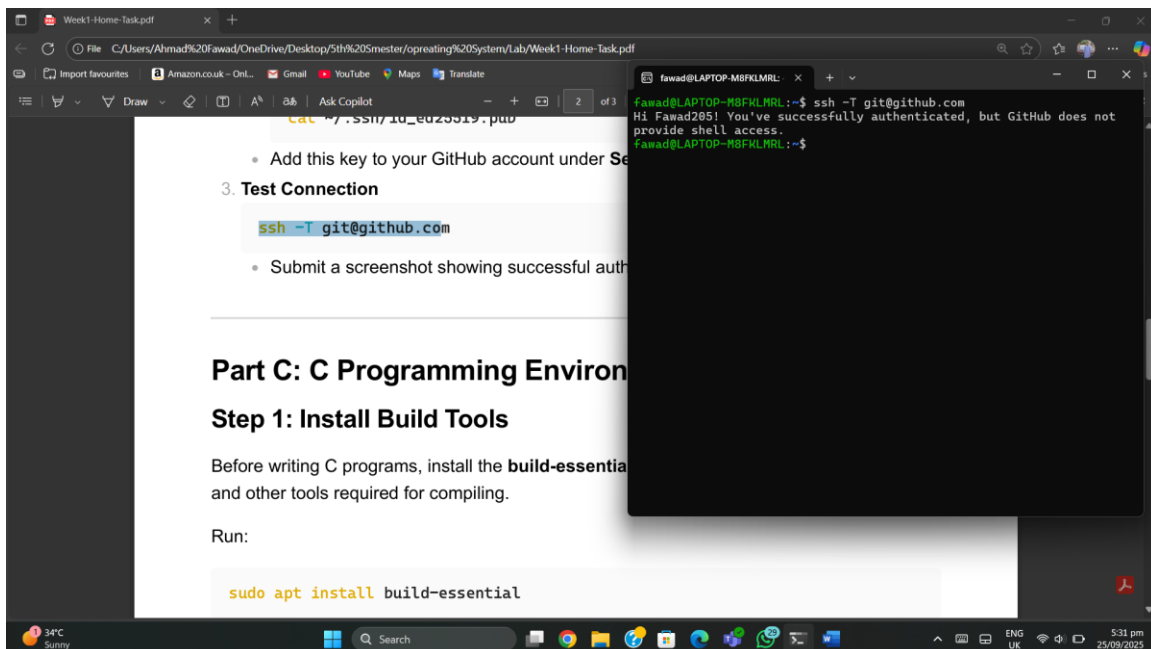


A screenshot of a Windows terminal window. The terminal shows the command `git config --list` being executed. The output lists the following configuration: `user.name=fawad`, `user.email=ahmadfawad5809@gmail.com`, `core.repositoryformatversion=0`, `core.filemode=true`, `core.bare=false`, and `core.logallrefupdates=true`. The prompt is `fawad@LAPTOP-M8FKLMRL:~$`. The terminal is overlaid on a web browser window showing a PDF document.

```
fawad@LAPTOP-M8FKLMRL:~$ git config --list
user.name=fawad
user.email=ahmadfawad5809@gmail.com
core.repositoryformatversion=0
core.filemode=true
core.bare=false
core.logallrefupdates=true
fawad@LAPTOP-M8FKLMRL:~$
```

Question2:

Test Connection:



A screenshot of a Windows terminal window. The terminal shows the command `ssh -T git@github.com` being executed. The output is: `Hi Fawad205! You've successfully authenticated, but GitHub does not provide shell access.` The prompt is `fawad@LAPTOP-M8FKLMRL:~$`. The terminal is overlaid on a web browser window showing a PDF document with instructions for testing the connection and installing build tools.

```
fawad@LAPTOP-M8FKLMRL:~$ ssh -T git@github.com
Hi Fawad205! You've successfully authenticated, but GitHub does not
provide shell access.
fawad@LAPTOP-M8FKLMRL:~$
```

Part C: C Programming Environment & Practice

Question1:

Install Build Tools

The screenshot shows a Windows desktop with a PDF document titled "Part C: C Programming Environment" open in a web browser. The document contains the following text:

Step 1: Install Build Tools

Before writing C programs, install the **build-essential** and other tools required for compiling.

Run:

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

Verify installation by checking the version of `gcc`:

```
gcc --version
```

- Submit a screenshot of successful installation and version output.

Step 2: How to run a C Program

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

Overlaid on the right side of the PDF is a terminal window with the following output:

```
fawad@LAPTOP-M8FKLMRL:~$ ssh -T git@github.com
Hi Fawad205! You've successfully authenticated, but GitHub does not
provide shell access.
fawad@LAPTOP-M8FKLMRL:~$ 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 P
URPOSE.
fawad@LAPTOP-M8FKLMRL:~$
```

Question2:

How to run a C Program:

The screenshot shows a Windows desktop with a PDF document titled "Part C: C Programming Environment" open in a web browser. The document contains the following text:

Step 2: How to run a C Program

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

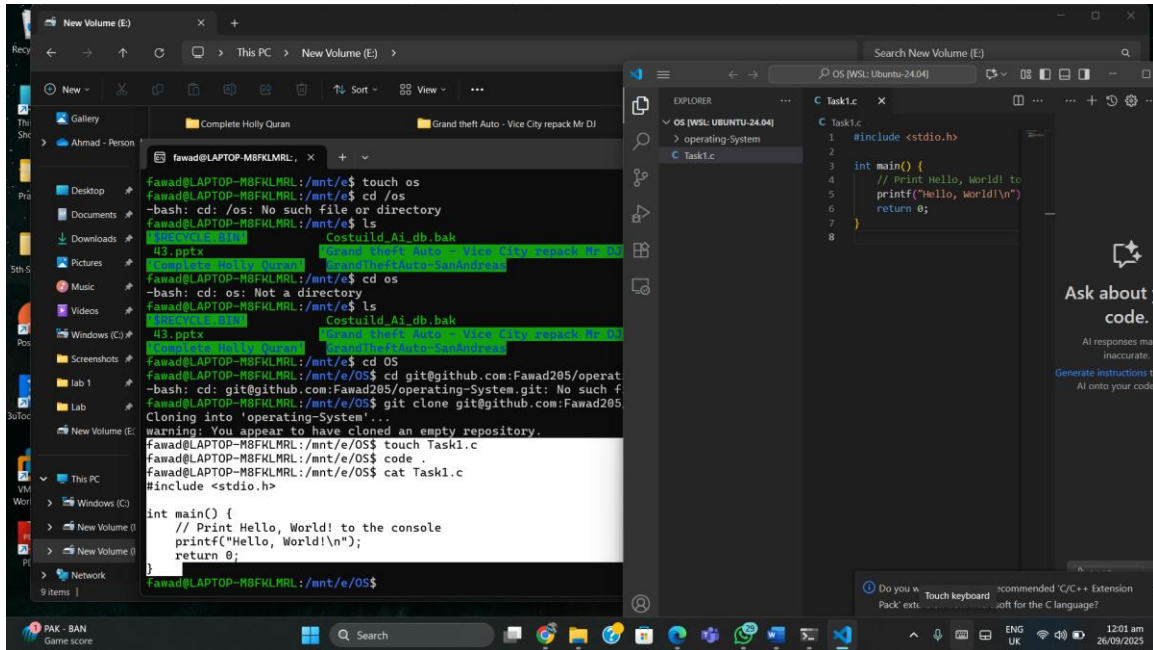
Overlaid on the right side of the PDF is a terminal window with the following output:

```
fawad@LAPTOP-M8FKLMRL:~$ cd /mnt
fawad@LAPTOP-M8FKLMRL:/mnt$ ls
43.pptx  Costuldu_Ai_db.bak  'System Volume Information'
fawad@LAPTOP-M8FKLMRL:/mnt$ cd e
fawad@LAPTOP-M8FKLMRL:/mnt/e$ touch os
fawad@LAPTOP-M8FKLMRL:/mnt/e$ cd /os
-bash: cd: /os: No such file or directory
fawad@LAPTOP-M8FKLMRL:/mnt/e$ ls
43.pptx  Costuldu_Ai_db.bak  'System Volume Information'
fawad@LAPTOP-M8FKLMRL:/mnt/e$ cd os
-bash: cd: os: Not a directory
fawad@LAPTOP-M8FKLMRL:/mnt/e$ ls
43.pptx  Costuldu_Ai_db.bak  'System Volume Information'
fawad@LAPTOP-M8FKLMRL:/mnt/e$ cd OS
fawad@LAPTOP-M8FKLMRL:/mnt/e/OS$ cd git@github.com:Fawad205/operating-System.git
-bash: cd: git@github.com:Fawad205/operating-System.git: No such file or directory
fawad@LAPTOP-M8FKLMRL:/mnt/e/OS$ git clone git@github.com:Fawad205/operating-System.git
Cloning into 'operating-System'...
warning: You appear to have cloned an empty repository.
fawad@LAPTOP-M8FKLMRL:/mnt/e/OS$ touch Task1.c
fawad@LAPTOP-M8FKLMRL:/mnt/e/OS$ code .
fawad@LAPTOP-M8FKLMRL:/mnt/e/OS$ cat Task1.c
#include <stdio.h>

int main() {
    // Print Hello, World! to the console
```

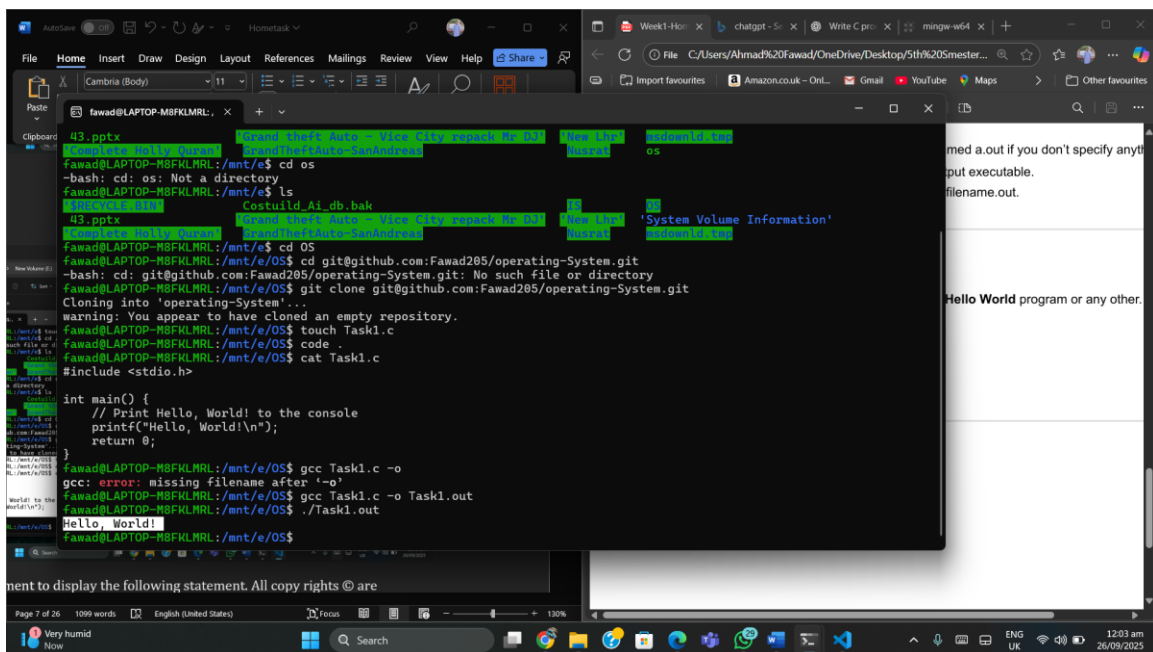
Question3:

Write a C Program:



```
fawad@LAPTOP-M8FKLMRL: /mnt/e$ touch os
fawad@LAPTOP-M8FKLMRL: /mnt/e$ cd /os
-bash: cd: /os: No such file or directory
fawad@LAPTOP-M8FKLMRL: /mnt/e$ ls
43.pptx  Complete Holly Quran  Grand theft Auto - Vice City repack Mr DJ
fawad@LAPTOP-M8FKLMRL: /mnt/e$ cd os
-bash: cd: os: Not a directory
fawad@LAPTOP-M8FKLMRL: /mnt/e$ ls
43.pptx  Complete Holly Quran  Grand theft Auto - Vice City repack Mr DJ
fawad@LAPTOP-M8FKLMRL: /mnt/e$ cd OS
fawad@LAPTOP-M8FKLMRL: /mnt/e/OS$ cd git@github.com:Fawad205/operat
-bash: cd: git@github.com:Fawad205/operating-System.git: No such f
fawad@LAPTOP-M8FKLMRL: /mnt/e/OS$ git clone git@github.com:Fawad205
Cloning into 'operating-System'...
warning: You appear to have cloned an empty repository.
fawad@LAPTOP-M8FKLMRL: /mnt/e/OS$ touch Task1.c
fawad@LAPTOP-M8FKLMRL: /mnt/e/OS$ code .
fawad@LAPTOP-M8FKLMRL: /mnt/e/OS$ cat Task1.c
#include <stdio.h>

int main() {
    // Print Hello, World! to the console
    printf("Hello, World!\n");
    return 0;
}
```



```
fawad@LAPTOP-M8FKLMRL: /mnt/e$ cd os
-bash: cd: os: Not a directory
fawad@LAPTOP-M8FKLMRL: /mnt/e$ ls
43.pptx  Complete Holly Quran  Grand theft Auto - Vice City repack Mr DJ
fawad@LAPTOP-M8FKLMRL: /mnt/e$ cd OS
fawad@LAPTOP-M8FKLMRL: /mnt/e/OS$ cd git@github.com:Fawad205/operating-System.git
-bash: cd: git@github.com:Fawad205/operating-System.git: No such file or directory
fawad@LAPTOP-M8FKLMRL: /mnt/e/OS$ git clone git@github.com:Fawad205/operating-System.git
Cloning into 'operating-System'...
warning: You appear to have cloned an empty repository.
fawad@LAPTOP-M8FKLMRL: /mnt/e/OS$ touch Task1.c
fawad@LAPTOP-M8FKLMRL: /mnt/e/OS$ code .
fawad@LAPTOP-M8FKLMRL: /mnt/e/OS$ cat Task1.c
#include <stdio.h>

int main() {
    // Print Hello, World! to the console
    printf("Hello, World!\n");
    return 0;
}
fawad@LAPTOP-M8FKLMRL: /mnt/e/OS$ gcc Task1.c -o
gcc: error: missing filename after '-o'
fawad@LAPTOP-M8FKLMRL: /mnt/e/OS$ gcc Task1.c -o Task1.out
fawad@LAPTOP-M8FKLMRL: /mnt/e/OS$ ./Task1.out
Hello World!
fawad@LAPTOP-M8FKLMRL: /mnt/e/OS$
```

