Linux Management_Pramoda Medis

Assignment 01 (6p)

Install gcc

Make a small C program "mycalc.c" to ask user 2 numbers, and print the sum Install Node.js and npm. Make a new directory "myserver", cd there and install Express web server Copy example javascript code to "myserver.js" and modify it to use also route "/user" that returns information about client user (Hint: use process.env) Install python3 and pip install bpytop (, run, and take screenshot) Return in one zip file containing mycalc.c and myserver.js, and screenshot (jpg/png) from bpytop screen

1. Install GCC (GNU Compiler Collection)

To install GCC, use the following commands based on your operating system:

sudo apt update

sudo apt install gcc

```
medis@lab-robotics-virtualization:~$ sudo apt update
sudo apt install gcc
Hit:1 http://azure.archive.ubuntu.com/ubuntu noble InRelease
Hit:2 http://azure.archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:3 http://azure.archive.ubuntu.com/ubuntu noble-backports InRelease
Hit:4 http://azure.archive.ubuntu.com/ubuntu noble-security InRelease
Hit:5 https://deb.nodesource.com/node_18.x nodistro InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
33 packages can be upgraded. Run 'apt list --upgradable' to see them.
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
gcc is already the newest version (4:13.2.0-7ubuntu1).
0 upgraded, 0 newly installed, 0 to remove and 33 not upgraded.
medis@lab-robotics-virtualization:~$
```

Install gcc

Already have installed gcc compiler we do not need to install the compiler again.

- gcc --version

```
medis@lab-robotics-virtualization:~$ 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.

medis@lab-robotics-virtualization:~$
```

Creating and Writing the C Program (mycalc.c)

Navigate to your directory

mkdir -p calculator && cd calculator

```
medis@lab-robotics-virtualization:~$ mkdir calculator
medis@lab-robotics-virtualization:~$ ls
 calculator  'gcc mycalc.c -o mycalc'   medis   myenv   myserver   snap
medis@lab-robotics-virtualization:~$ cd calculator
medis@lab-robotics-virtualization:~/calculator$ ls
```

Create the mycalc.c file using nano:

nano mycalc.c

```
medis@lab-robotics-virtualization:~/calculator$ nano mycalc.c
```

Write a basic Hello World program first:

#include <stdio.h> int main() { printf("Hello, World!\n"); return 0; }

Save (Ctrl + S) and exit (Ctrl + X).

Compile the Hello World program:

gcc mycalc.c -o mycalc

```
medis@lab-robotics-virtualization:~/calculator$ nano mycalc.c
medis@lab-robotics-virtualization:~/calculator$ gcc mycalc.c -o mycalc
medis@lab-robotics-virtualization:~/calculator$ ./mycalc
hello, World!
medis@lab-robotics-virtualization:~/calculator$
```

Now we can modify to add our calculator codes.

Updating mycalc.c to Perform Addition

Open mycalc.c

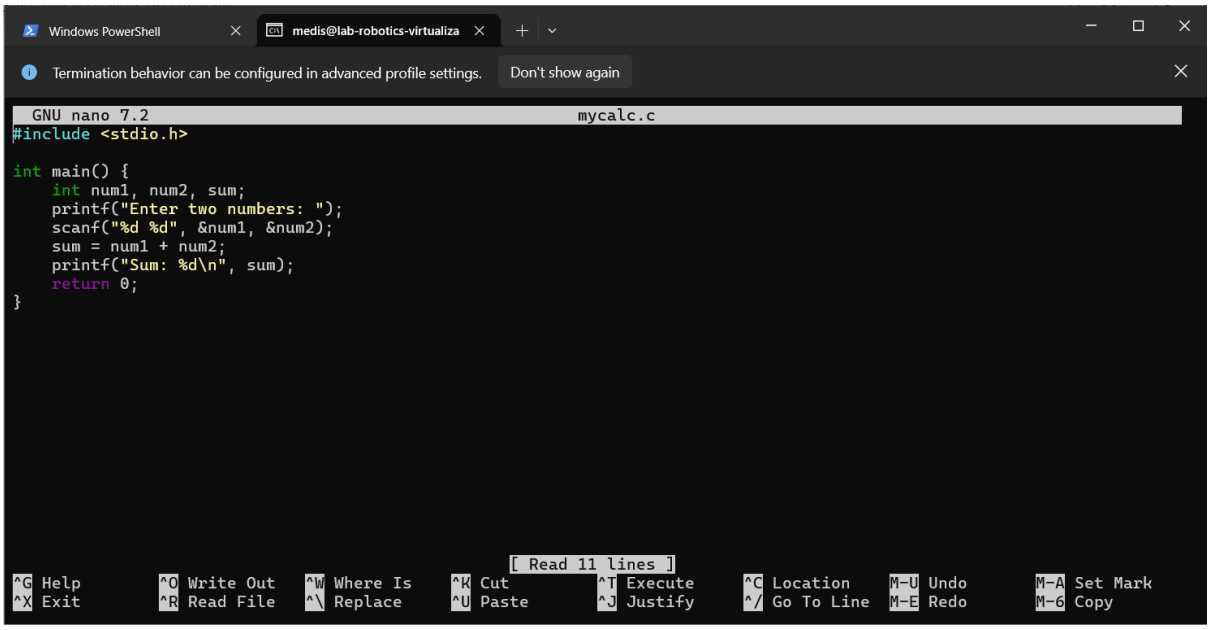
nano mycalc.c

Modify the code to:

#include <stdio.h>

int main() { int num1, num2, sum; printf("Enter two numbers: "); scanf("%d %d", &num1, &num2); sum = num1 + num2; printf("Sum: %d\n", sum); return 0; }

Save (Ctrl + S) and exit (Ctrl + X).



Recompile:

gcc mycalc.c -o mycalc

Run the updated program:

./mycalc

```
medis@lab-robotics-virtualization:~$ nano mycalc.c
medis@lab-robotics-virtualization:~$ gcc mycalc.c -o mycalc
./mycalc
Enter two numbers: 25 25
Sum: 50
medis@lab-robotics-virtualization:~$
```

Find below the GitHub link for the following assignment:

https://github.com/PramoGIT/Linux-Management_Pramoda-Medis/blob/main/Assignment%2001%20(6p)/README.md