



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Discover. Learn. Empower.

Experiment 1.2

Student Name: Sachin Maurya
Branch: BE-CSE
Date of Performance: 22-01-2024
Subject Name: Cloud Computing & Distributed Systems

UID: 21BCS1956
Section/Group: CC-615-B
Subject Code: 21CSP-378
Semester: 6

1. Aim:

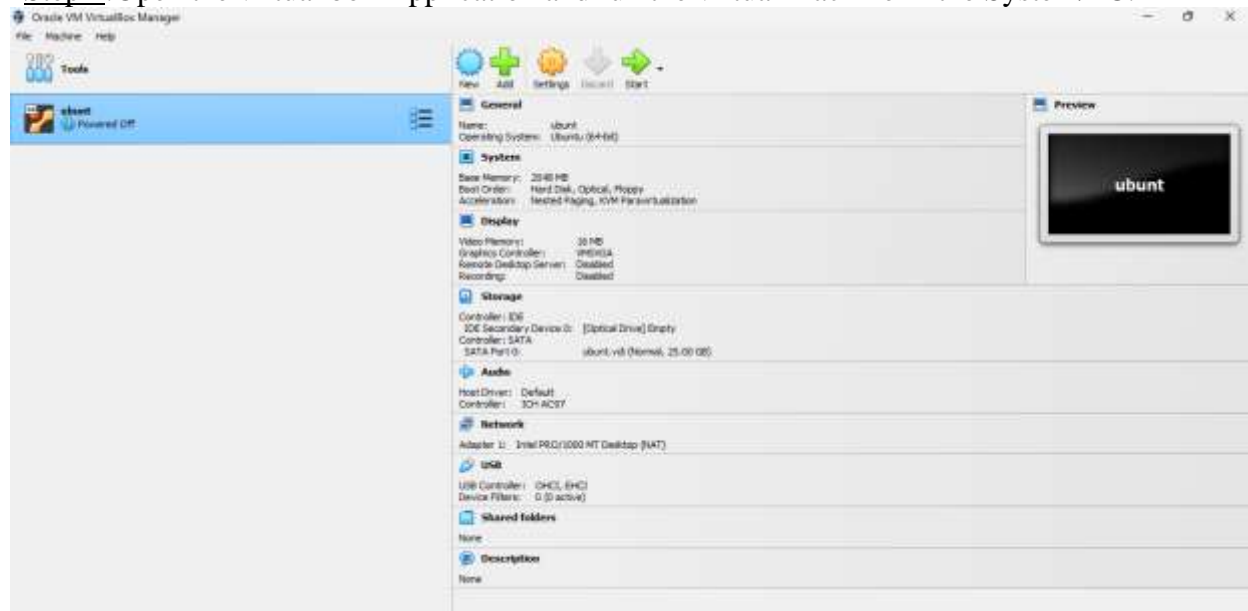
To Install a C compiler within the virtual machine established using the virtual machine established using virtual box and run basic programs.

2. Objective:

To Install C compiler within the virtual machine.

3. Steps to Install:

Step 1: Open the virtual box Application and run the virtual machine in the System/PC.

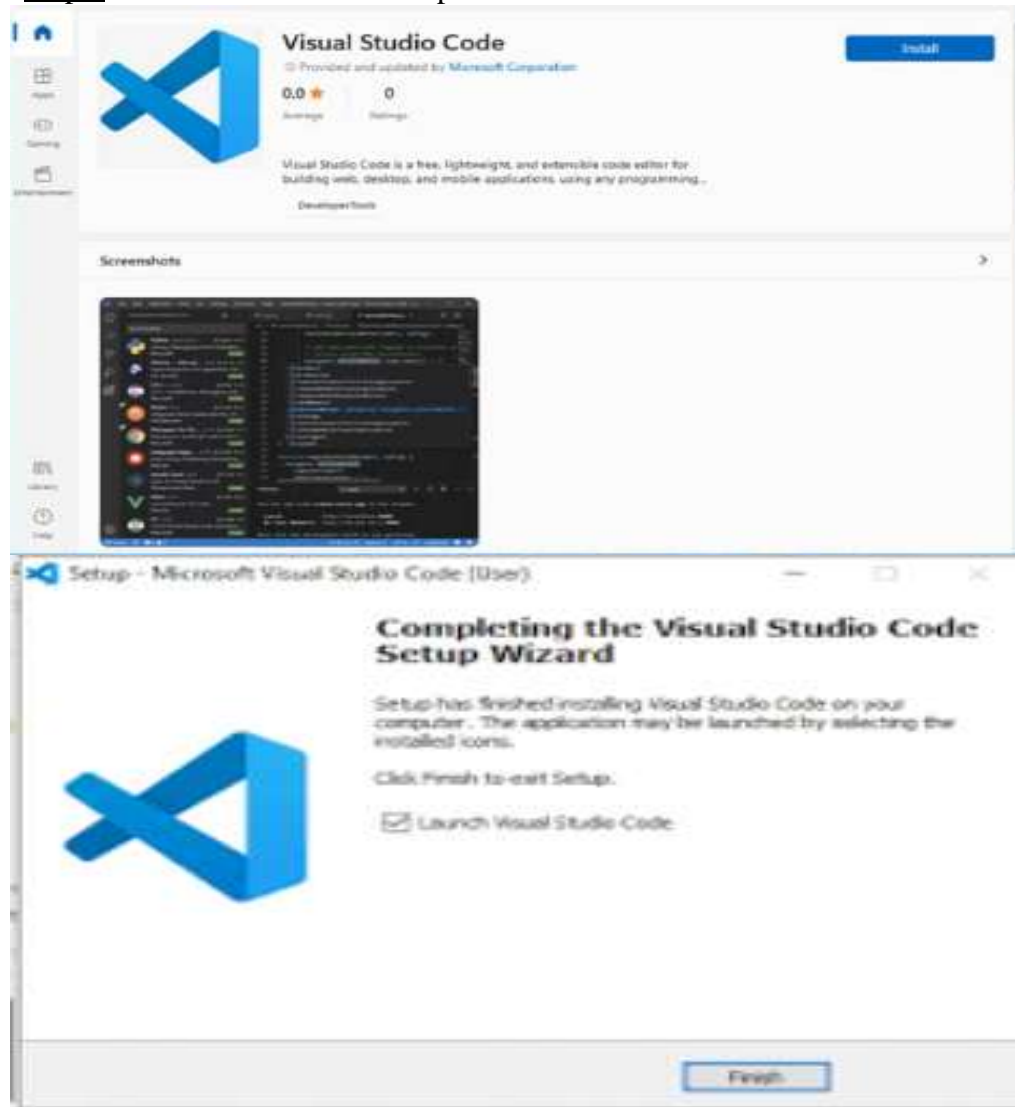




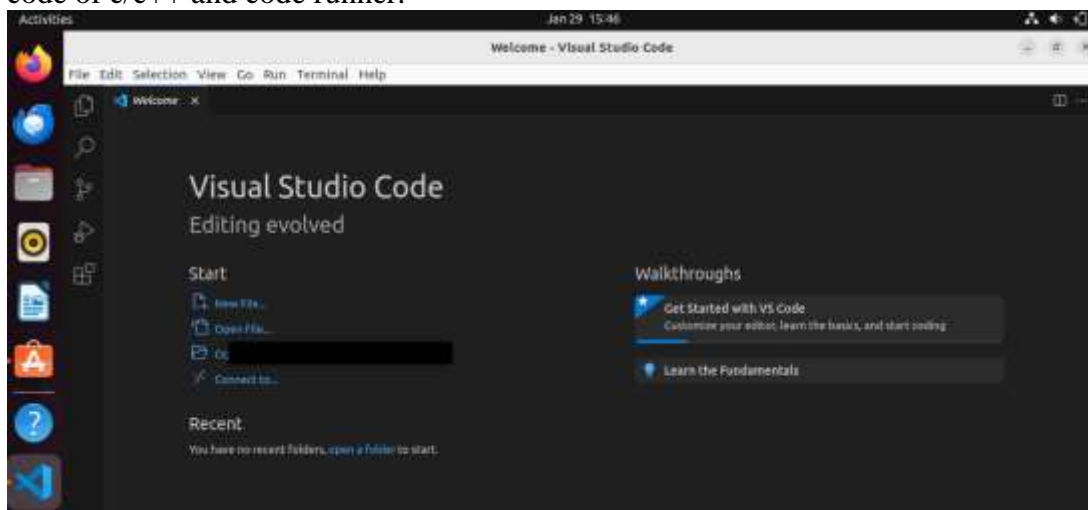
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

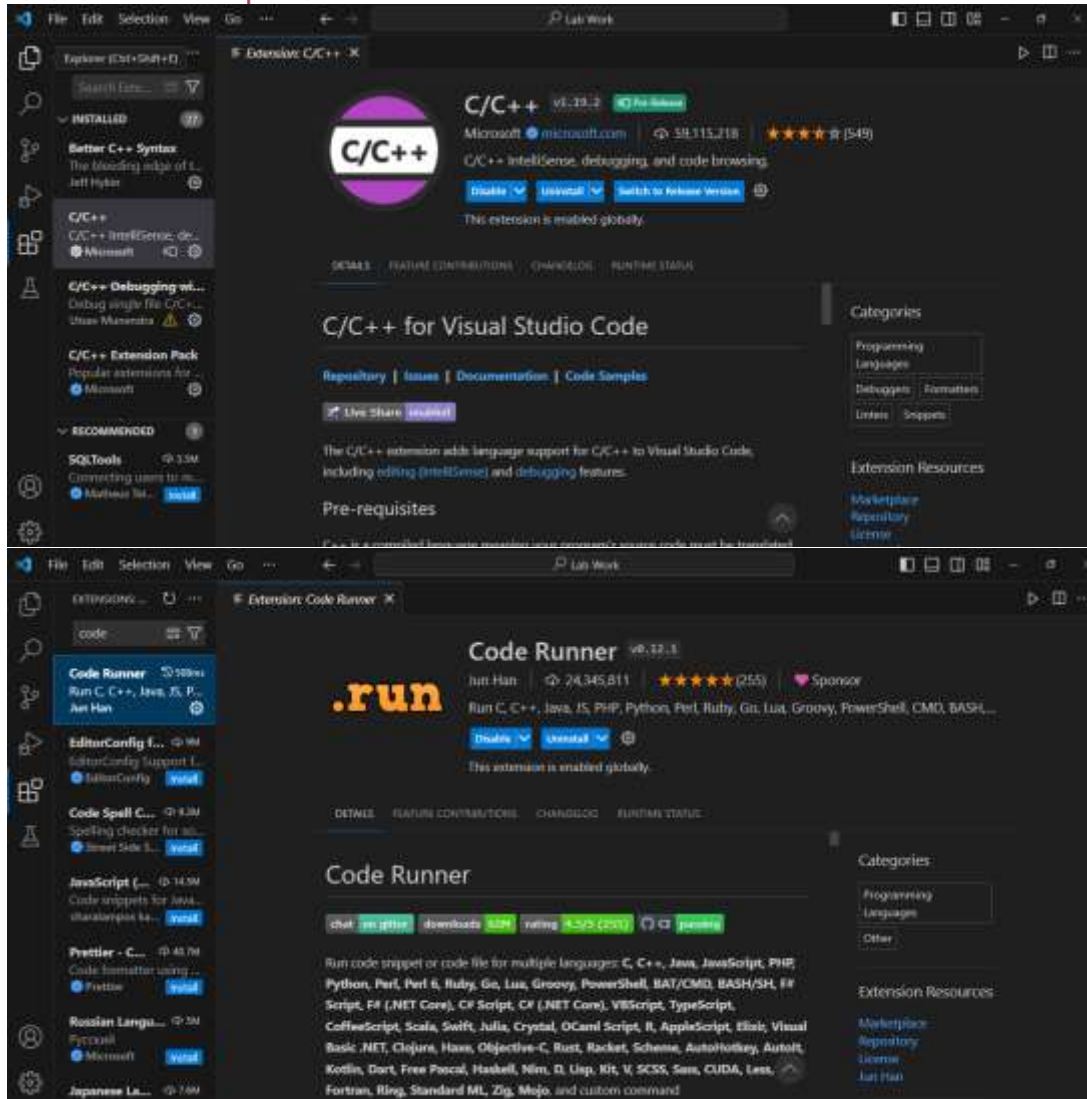
Discover. Learn. Empower.

Step 2: Once the virtual box is open the search the visual studio code and install it

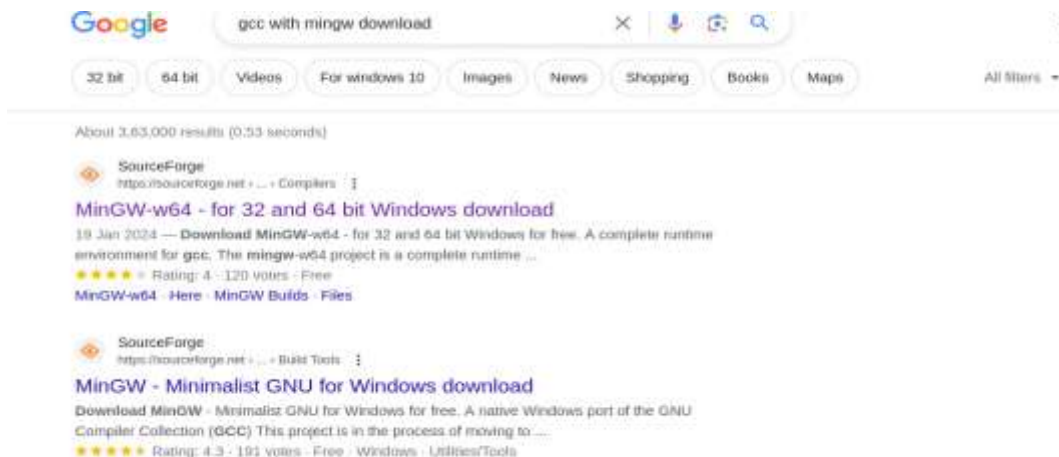


Step 3: Open the Visual Studio code in virtual box and download the extension for the visual studio code of c/c++ and code runner.





Step 4: Download the gcc-MinGW code in the OS(virtual machine-ubuntu) for the compiling the code in visual studio.





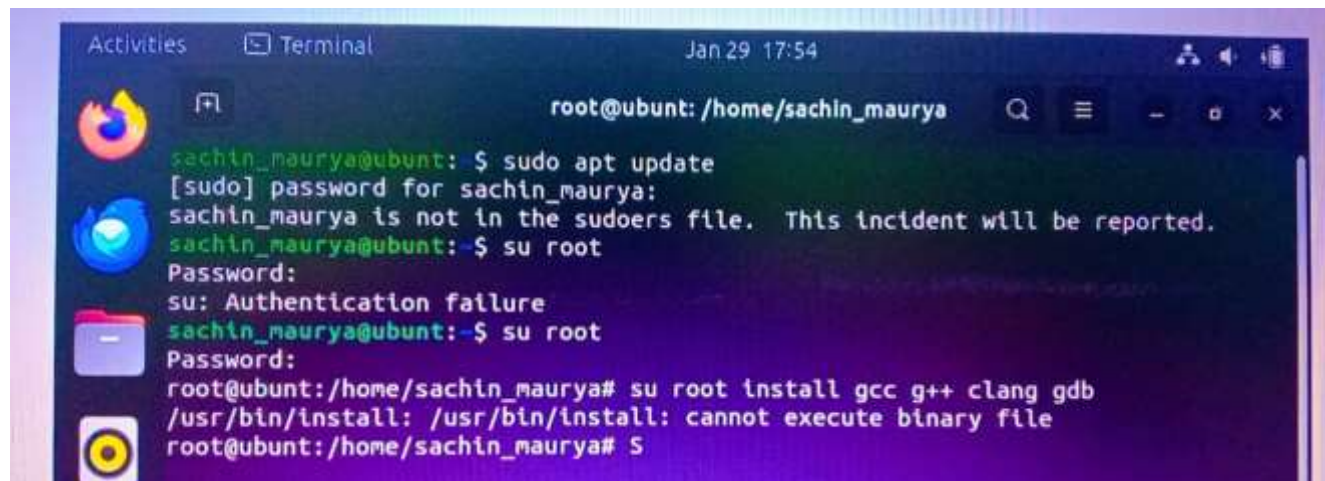
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Discover. Learn. Empower.



Step 5: Setup the gcc-minGW bin file path in the system variables environment or another option is download the gcc in the terminal/command prompt in the virtual machine and download the packages/library related to it.

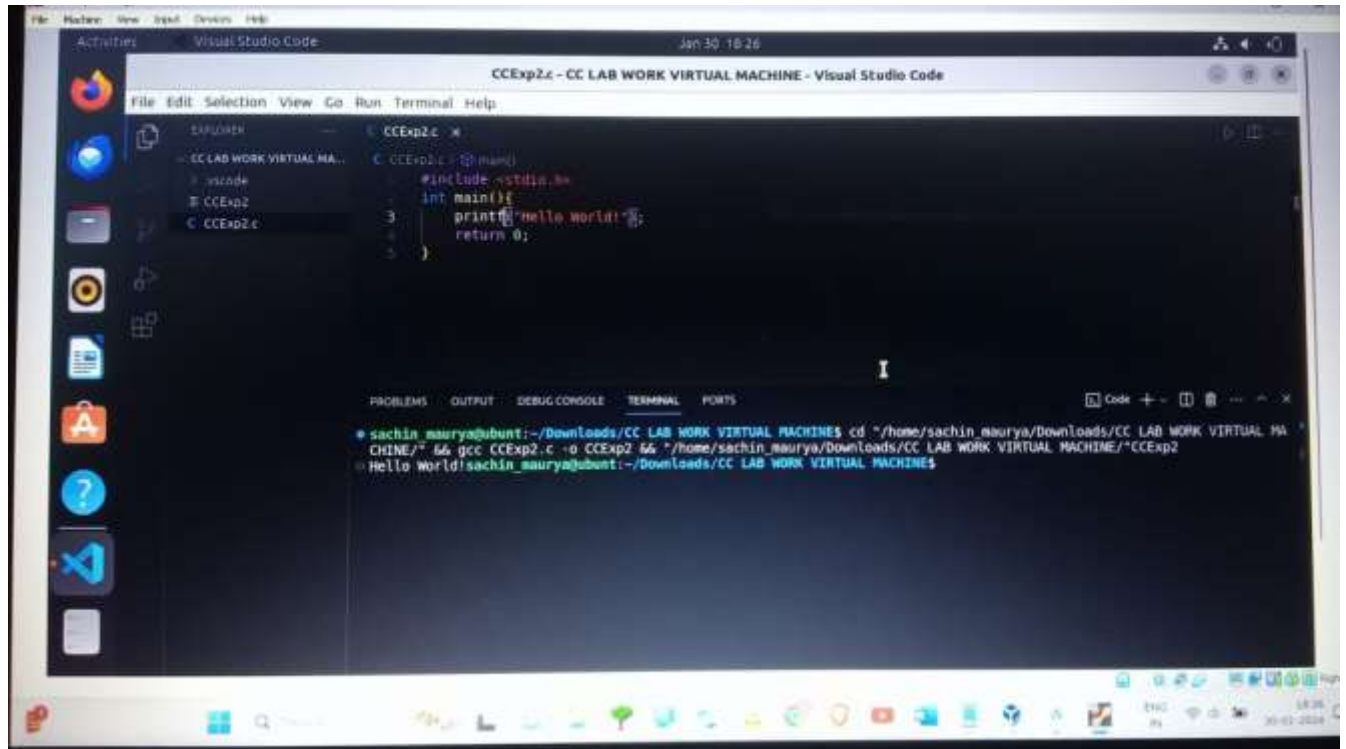
Install the gcc in the Terminal in virtual Machine(Ubuntu):



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Discover. Learn. Empower.

Step 6: After the installation of mingw in the virtual machine open the visual studio code and write the first program to execute or check that the C compiler is installed and execute successfully.



The screenshot shows the Visual Studio Code interface within a virtual machine. The file explorer on the left shows the project structure. The main editor displays a C program named CCExp2.c with the following code:

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

The terminal at the bottom shows the execution of the program:

```
sachin_maurya@ubuntu:~/Downloads/CC LAB WORK VIRTUAL MACHINES$ cd ~/home/sachin_maurya/Downloads/CC LAB WORK VIRTUAL MA
CHINE/" && gcc CCExp2.c -o CCExp2 && ./CCExp2
Hello World!sachin_maurya@ubuntu:~/Downloads/CC LAB WORK VIRTUAL MACHINES$
```

Learning Outcome:

- Learn how to install the C compiler in the virtual machine.
- Learn how to run and installation process of the gcc compiler minGW in the virtual machines.
- Understand the concept of Virtualization.
- Understand how to create the first C program in virtual machines.
- Learned to manage and allocate the system resources like RAM, CPU and Disk Space for Virtual Machines.