SSN COLLEGE OF ENGINEERING

Department of Computer Science and Engineering

CS8711 Cloud Computing Laboratory

Assignment -2 : Creation of Virtual Machine and Executing a C Program in VM

Assigned Date: 27.08.2020.   **Due Date: 03.09.2020 & 04.09.2020**

I.   Creating a Virtual Machine (Hosted- Virtual Machine)
1.   Install Virtual Box in Host Operating System (amd- 64 bit processor architecture).
2.   Check whether the processor supports virtualization or not by giving following command in terminal

Command to check if CPU supports Virtualization or Not.
]$ grep --color vmx /proc/cpuinfo
]$ cat /proc/cpuinfo| egrep "vmx|svm"
]$ grep –E 'svm|vmx' /proc/cpuinfo

vmx – Intel VT-x, virtualization support enabled in BIOS.
svm – AMD SVM,virtualization enabled in BIOS.

3.   Create a Virtual Machine (VM) with 2GB RAM and 10 GB Hard Disk and install Ubuntu 16.04 Desktop as guest OS. Name the VM as VM1.
4.   Switch the login into root user privilege mode by using the command
]$ sudo -i
When asked for password, give your system password
give *]$ ifconfig* and check default IP address

5.   Set up Network in Virtual Machine for connecting to internet.

For **Wireless** internet connectivity, use **NAT** in the virtual machine's network settings.
For **LAN** connection set **Bridged Adaptor**.

Network Confirguration in

sudo gedit /etc/network/interfaces

auto eth0

iface eth0 inet static

address 10.6.15. X

netmask 255.255.0.0

gateway 10.6.0.1

DNS server list 10.101.1.10

Network Confirguration in

sudo gedit /etc/resolv.conf

nameserver 10.101.1.10

Check Virtual IP in Terminal]$ **ifconfig**

and Check for Internet connection in terminal]$ **sudo apt-get update**

I. Install C and execute a C program for the following requirement.

> **To install C, C++ compilers in Ubuntu 20.04**
>
> **]$ sudo apt-get install basic-utilities**

Write a C program to count and display number of words in a file.

II. Install Java Development Kit in VM.

> **In Ubuntu 16.04.1**
>
>]$ **sudo apt-get install openjdk-8-jdk**
>
> **In Ubuntu 20.04**
>
> **]$ sudo apt-get install default-jdk**

Set path variables in bashrc file

https://www.wikihow.com/Set-Up-Your-Java_Home-Path-in-Ubuntu

Check the java version installed

]$ **java -version**

Execute a simple Java Program in a Virtual Machine.

III. Install Python in VM.

Execute a simple Python Program in a Virtual Machine.