INSTALLING VMS

4GB SPACE

25 GB VIRTUAL DISK SPACE

EXPERIMENT 2

UBUNTU

sudo apt update

sudo apt install build-essential

sudo apt install python3

sudo apt install default-jdk

sudo apt install default-jre

// for c gcc program.c ./a.out

gcc hello.c -o hello // ./hello

// for python python3 program.py

// javac program.java// java program

FEDORA

sudo dnf update

sudo dnf groupinstall “Development Tools”

sudo dnf install python3

gcc program.c// ./a.out

python3 program.py

CENTOS

sudo yum update -y

sudo yum group install "Development Tools"

sudo yum install -y python3

EXPERIMENT 3

COMMUNICATING BETWEEN VMS

UBUNTU , FEDORA, CENTOS

CHANGE THE NETWORK SETTINGS OF ADAPTER 2 TO HOST-ONLY ADAPTER AND ADVANCED PERMISSIONS GIVE ALLOW ALL

UBUNTU

sudo apt install openssh-server

sudo apt install openssh-client

scp filename(created in ubuntu) @virtualbox user of fedora :/Location where file to be saved in fedora

ifconfig

FEDORA

sudo dnf install openssh-server

sudo dnf install openssh-client

sudo systemctl start sshd

ifconfig

scp filename(created in fedora) virtualbox user of Ubuntu @ip of ubuntu :/Location where file to be saved Ubuntu

CENTOS

sudo yum -y install openssh-server openssh-clients

sudo chkconfig sshd on

sudo service sshd start

scp sourcefile.txt username@ip.of.centos:/target/directory/

EXPERIMENT 5

sudo apt update

sudo apt install tomcat9 tomcat9-admin

**sudo systemctl start tomcat9**

**sudo systemctl status tomcat9**

**npm init –y**

**npm install express**

**Open vscode and create a simple web application and host in on**

**port 3000**

**Sudo apt install apache2**

**sudo a2enmod proxy**

**sudo a2enmode proxy\_http**

**sudo nano /etc/apache2/sites-available/000-default.conf**

**<virtual host>**

**ProxyPass /** [**http://localhost:3000/**](http://localhost:3000/)

**ProxyPassReverse /** [**http://localhost:3000/**](http://localhost:3000/)

**</virtualhost>**

**sudo systemctl restart apache2**

**Open the fedora vm and open a web browser**

**Search the following address => 192.168.56.101:3000**

**DOCKER**

**sudo apt install docker.io**

**Create a directory and create two files inside it**

**1. Python file**

**2. Dockerfile**

**Inside the docker file type the following contents:**

**FROM python: latest**

**LABEL Maintainer = “Author Name”**

**WORKDIR <Current Working Directory of the python file>**

**COPY <python file name> .**

**CMD [“python”, <python file name>]**

**Type the above code by using the following command**

**Cmd: sudo nano /home/vboxuser/Desktop/<FolderName>/Dockerfile**

**sudo nano test.py**

**sudo docker images**

**sudo docker build -t py:01 .**

**sudo docker run py:01**