# Graded Assignment on Networking and Servers

# Q-1. Deploy a website on localhost using either apache2 or Nginx. Create a DNS name for this website as ‘awesomeweb’. You can use any web template you want or can write your own simple HTML code.

# Steps:

# Login to your ubuntu box 24.04LTS.

# Run a sudo apt-get install update command.

# Run sudo apt-get install nginx to install nginx in the ubuntu machine

# Check the status of the nginx service – sudo service status nginx

# Verify if the service is active, if not, then enter the command – sudo service nginx start

# Check the present working directory – pwd

# Go to /home/ubuntu\_ad and create a folder awesomeweb\_app

# mkdir awesomeweb\_app

# Go to the newly created folder:

# cd awesomeweb\_app

# Create a new html file – touch awesomeweb.html

# Enter the code for the new html file and save the file– nano awesomeweb.html 🡪 Ctrl+X 🡪 Y

# Copy the awesomeweb.html to /var/www/html/

# sudo cp awesomeweb.html /var/www/html/

# Edit the /etc/nginx/sites-available/default file to modify the nginx server configuration:

# server {

# listen 80;

# server\_name awesomeweb;

# root /var/www/html;

# index awesomeweb.html;

# location / {

# try\_files $uri $uri/ =404;

# }

# }

# Test the nginx configuration change:

# sudo nginx -t

# Restart Nginx

# sudo systemctl restart nginx

# Update the /etc/hosts/ file: Add an entry to your local /etc/hosts file to point awesomeweb to localhost:

# sudo nano /etc/hosts

# 10.0.2.15 awesomeweb

# Go to your browser and run the http://awesomeweb. The html page you created shall open at default port 80 with DNS awesomeweb.

# Q-2:

# Steps:

# Create a flask application – MyWebsite with subdomains –

# Login.html

# Homepage.html

# Blogs.html

# Gallery.html

# ContactUs.html

# Write a python flask code – app.py to launch the application in localhost.

# To check the subdomain status, do the below steps:

# Create a status.html page which will show the statuses of all sub-domains every minute

# Modify the app.py to render url to status.html when you click <http://localhost/status>. Also write a short method which checks the status of each sub-domains every minute based on whether the url is active or not.

# Make sure to check to add all the sub-domains link for ease of access.

# When you now run the app.py and try to access the url : <http://localhost>, below action needs to be taken:

# It redirects to login page where you enter the name and city to visit.

# Once submitted, it takes you to a welcome page with links to all sub-domains

# If you click on Status of Sub-domains, it will redirect to <http://localhost/status>, where every minute you will be able to monitor the status of each sub-domains.

# Q-3:

# Steps:

# Install VirtualBox

# Create the “VirtualBox Users” group as it didn’t exist.

# net localgroup "VirtualBox Users" /add

# Add user account – “abhas” to the VirtualBox Users group

# net localgroup "VirtualBox Users" abhas /add

# Launch VirtualBox

# Download a .iso image for Ubuntu 22.04

# Set the Ubuntu Virtual Machine by clicking on New.

# Select the .iso image and name of the virtual machine.

# 

# Update the hardware of your machine – 4GB RAM and 2CPU.

# 

# Configure the virtual Hard disk size – 101.71GB.

# 

# Click on Next 🡪 Finish and your machine will start to install.

# 

# Once installation is completed, the machine will be ready to use.

# 

# 

# Run sudo apt-get update

# Install nginx and check the status of nginx service

# sudo apt-get install nginx

# sudo systemctl status nginx

# 

# 

# To deploy a website via Nginx, follow the below steps:

# Create a awesomeweb.html file.

# Copy the file to /var/www/html/

# sudo cp awesomeweb.html /var/www/html/

# Modify the nginx server configuration:

# sudo nano /etc/nginx/sites-available/default

# Make below changes:

# Now launch the website in your browser using <http://localhost>

# 

# Install Nmap in the host machine – windows:

# Download nmap from <https://nmap.org/download#windows>

# Go to the installed path and add it in Environment Variables 🡪System Variables 🡪 Path : C:\Program Files (x86)\Nmap

# Check the nmap version in cmd

# Check the nmap from the host machine for the virtual machine

# nmap -sV <hostmachine\_ip>

# nmap -p 80 <hostmachine\_ip>

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