VM Assignment

Q1 - Create 2 VMs (NAT + Host-Only) & Test Connectivity

Task

1. Set **VM-1** network mode → **NAT**

2. Set **VM-2** network mode → **Host-Only**

3. Start both VMs

4. Check IP addresses using `ip a`

5. Ping VM-2 from VM-1

6. Ping VM-1 from VM-2

Submit

- IP address of VM-1 (NAT)

- IP address of VM-2 (Host-Only)

- Ping screenshots

- Final answer:
  Explain whether NAT ↔ Host-Only communication works. Why/why not?

Q2 - Create 2 VMs in NAT Mode & Test Connectivity

Task

1. Set **VM-1** → **NAT**

2. Set **VM-2** → **NAT**

3. Check both IP addresses

4. Try pinging each other

Submit

- IPs

- Ping results

- Explanation:
  Do NAT VMs communicate inside the virtual network?

Q3 - Create 2 VMs in Host-Only Mode

Task

1. Set VM-1 → Host-Only
2. Set VM-2 → Host-Only
3. Check IPs
4. Ping VM-1 → VM-2
5. Ping VM-1 → Base Machine
6. Ping VM-2 → VM-1
7. Ping VM-2 → Base Machine

Submit

- IPs
- Ping results

Q4 - Internet Connectivity Test (Different Modes)

Task

For each mode (NAT, Host-Only):

Run:

```
ip a
ping 8.8.8.8
ping google.com
```

Submit

- IP output
- Ping output
- Internet yes/no?

Q5 - Install Basic Utility Packages

Task

1. Update package lists

   ```
   sudo apt update
   ```

2. Install the following packages:
   - **curl**
   - **tree**

3. Verify installation:

```
curl --version
tree --version
```

Submit

- Screenshot of installation commands
- Output of each verification command

Q6 - Install a Package

Task

1. Install package `htop`.
2. Launch it:

```
htop
```

Submit

- Installation screenshot
- Running `htop` screenshot

Q7 - Install Net-tools & Compare with ip Command

Task

1. Install:

```
sudo apt install net-tools
```

2. Run:

```
ifconfig
ip a
```

3. Compare both outputs
   Write differences in 3 lines.

Submit

- Screenshots
- 3-line comparison