Assignment 2: Home Network Topology and Accessing the RPS Lab Environment
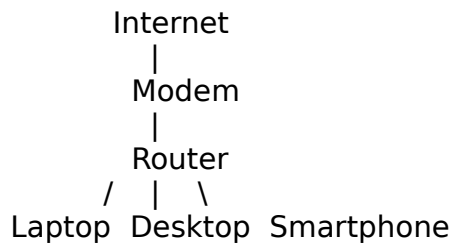
Home Network Topology

```
            Internet
               |
             Modem
               |
             Router
          /    |    \
     Laptop  Desktop  Smartphone
```

1.Modem: Connects to the ISP (Internet Service Provider) and provides internet access.
2.Router: Distributes the internet connection to various devices within the home network.
3.Devices: Examples include a laptop, desktop, and smartphone connected to the router either via Wi-Fi or Ethernet.
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Accessing the RPS Lab Environment
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To access the RPS Lab environment from this home network,
        the following steps are typically involved:

1. Secure Remote Access:

VPN (Virtual Private Network): Establish a secure connection to the RPS Lab
    network. This encrypts the data and provides a secure tunnel through the
    Internet to the lab   environment.

SSH (Secure Shell): A protocol used to securely log in to remote systems. Often
    used for accessing command-line interfaces on servers within the lab.

2. Lab Environment:

RPS Lab Network: The network infrastructure within the lab where various
    servers, workstations, and other resources are located.

Accessing Lab Resources: Once connected to the VPN, use SSH or other remote
    access tools (like Remote Desktop Protocol (RDP) for graphical interfaces) to
    interact with the lab environment.

Detailed Access Workflow:

1. Connect to VPN:
Use VPN client software on the Desktop Computer or Laptop.
Enter VPN credentials to establish a secure connection to the RPS Lab network.

2. Use SSH:
Open a terminal on the Desktop Computer or Laptop.

Use the ssh command to connect to a specific server or workstation within the RPS Lab.

Example command: ssh username@lab-server-ip-address

3. Perform Tasks in RPS Lab:

Once logged in via SSH, execute commands, run programs, or manage resources within the lab environment as needed.

By following these steps, a user can securely access and interact with the RPS Lab environment from their home network.