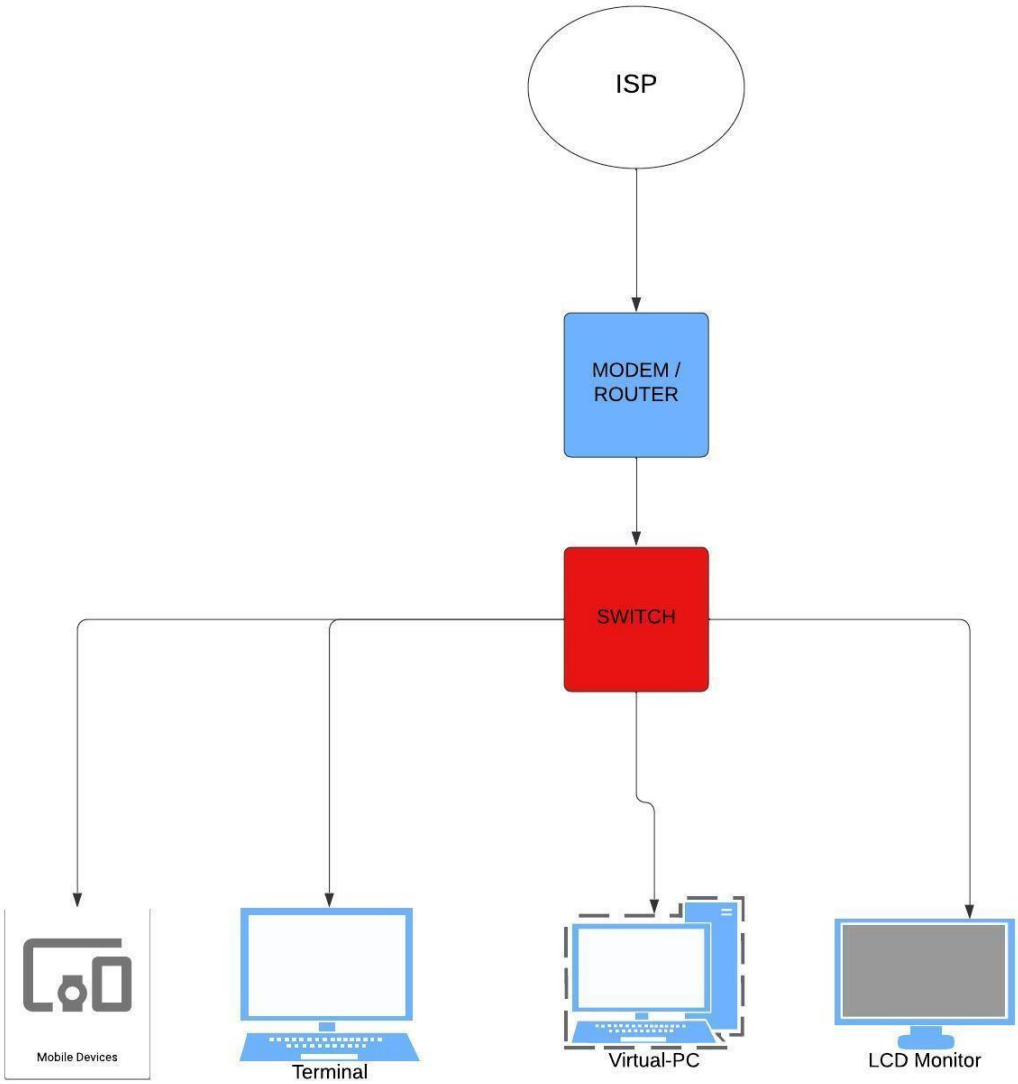
K DEEPAK **Assignment – 1 (Day-1)**

Question 1:

Draw your Home Network Topology and explain how you are accessing the RPS lab environment ?

Diagram:



ISP (internet service provider):

ISP is an organization which gives the access to the internet and connects the home network ,it is connected to the modem to pass the internet.

Modem/router:

Here the Modem Convert the signal from the ISP into a format usable by your network and passes the internet .

Router is the main hub of the network through the wired and wireless connection to devices and it connects to the devices.

Switch:

Switch is a Additional networking devices used to connect more devices to the network if the router's ports are insufficient. It is used by the ethernet ports for the wired connections .

- Here according to the home network topology to access the RPS cloud lab ,first sends an request ot the modem/router through the ISP .the request enquires on the cloud data center on the internet to host the lab servers.at last finding the request of the Rps cloud lab sends an response to devices on the request path

Question 2: Identify a real-world application for both parallel computing and networked systems. Explain how these technologies are used and why they are important in that context?

Parallel computing : computational photos on iphone

Explanation : When you take a photo using Portrait Mode or Smart HDR on an iPhone, the device utilizes parallel computing techniques to process the image in real-time and enhance its quality.

- The iPhone's processor (like the A-series chips) employs parallel computing to perform various tasks simultaneously, such as depth mapping, facial recognition, scene analysis, and tone mapping.

- Parallel computing accelerates image processing tasks, allowing the iPhone to capture and process photos rapidly while delivering high-quality results This enhances the user experience by providing advanced photography features without significant delays.

Networked Systems : Telecommunication Networks

Explanation: Telecommunication networks enable voice and data communication between individuals, businesses, and devices over long distances.

- Networked systems such as cellular networks, satellite communication, and internet infrastructure facilitate connectivity and data exchange across diverse geographical locations.

- Enables global communication, information sharing, and digital connectivity, driving economic growth, social interaction, and technological innovation.

- Taking as example of the assignments we can share to the trainer from the telecommunication networked system through this we send the data individually or grouped for the evalution of the training program.