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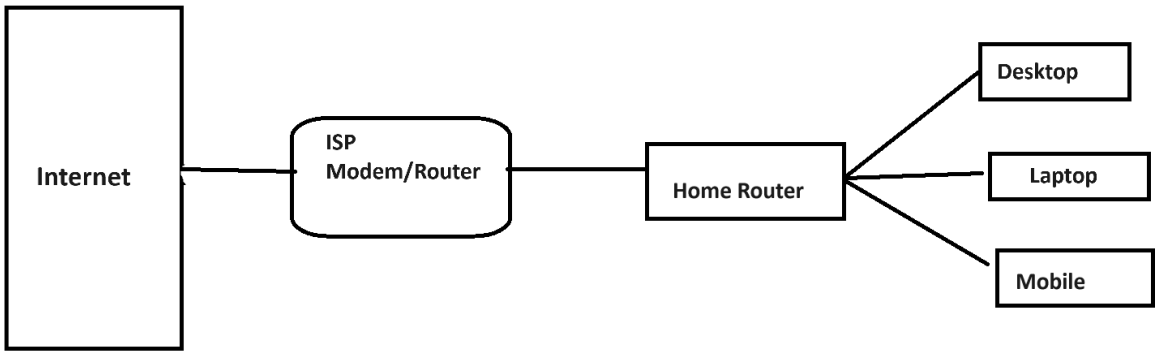
Assignment 1: Draw your Home Network Topology and explain how you are accessing the RPS Lab environment.



Assignment 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:

Video Rendering

- **Application:** Video rendering involves processing raw video footage to create the final output, which may include editing, special effects etc. Rendering can be computationally intensive, especially for high-resolution videos and complex visual effects.
- **Usage:** Parallel computing is used to accelerate video rendering by distributing rendering tasks across multiple CPU cores or GPUs. Video editing software like Adobe Premiere Pro, DaVinci Resolve utilize parallel processing techniques to divide the rendering workload into smaller tasks and execute them concurrently.
  For instance, GPU-accelerated rendering engines like NVIDIA and AMD R leverage the parallel processing capabilities of modern graphics cards to significantly reduce rendering times.
- **Importance:** Parallel computing enables video creators, filmmakers, and visual effects artists to produce high-quality content more efficiently.

Networked Systems:

Social Media Platforms

- **Application:** Online gaming platforms connect players from around the world, allowing them to compete and interact in virtual game environments. Online games may involve multiplayer matches requiring low-latency communication and synchronization between players and game servers.
- **Usage:** Networked systems support online gaming by providing reliable and low-latency communication channels between players and game servers.
- **Importance**: Networked systems are essential for delivering seamless and immersive online gaming experiences. By ensuring stable and responsive network connections.