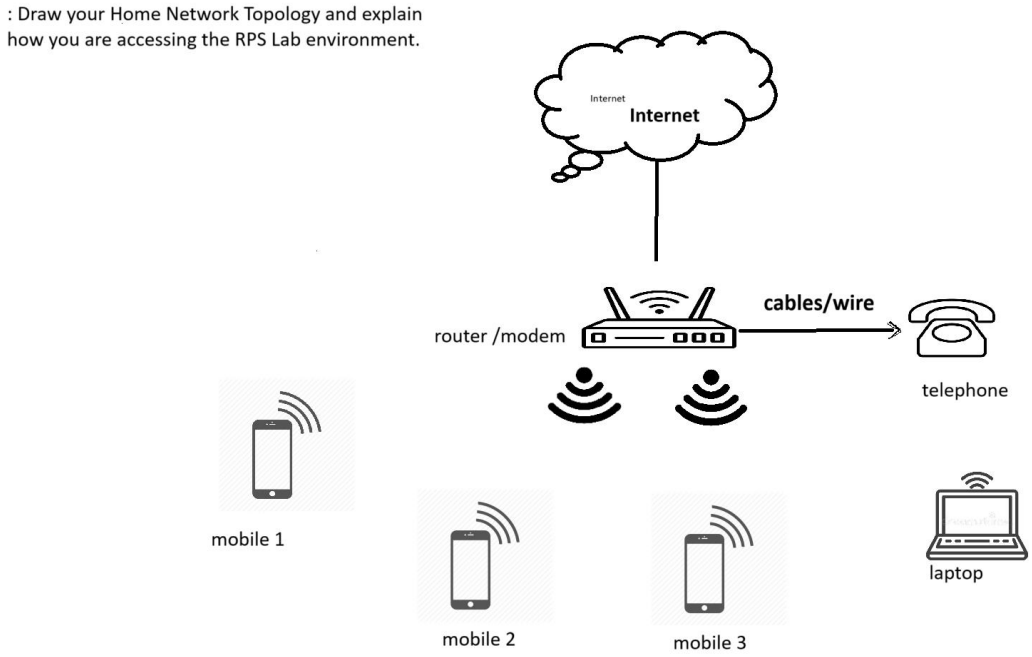
Draw your Home Network Topology and explain how you are accessing the RPS Lab environment.



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 : Parallel computing is a computing model where multiple tasks are executed simultaneously to increase computational speed

The main purpose of parallel computing is to divide the complex problems into smaller tasks and execute them parallelly

Real World Application of Parallel Computing:

Gaming and virtual Reality : heavy graphics rendering which improves the immersive gaming experiences

Image and Video Processing: image rendering and computer vision tasks

Machine learning :processing large data sets required for ML

Weather forecasting : large data modules are used by metrological people simultaneously by processing complex models

Networked Systems refer to interconnected computer and telecommunication networks that facilitate communication and data exchange. These systems encompass various technologies like telephone networks, cable TV networks, wireless networks, mobile networks, ad hoc networks, cellular phone networks, and the Internet. Networked Systems are interdisciplinary, combining software, hardware, and communication technologies, transcending traditional departmental boundaries

Some real-world applications of networked systems:

Remote Health Monitoring: Networked systems enable remote health monitoring through connected devices that collect and transmit vital health data in real-time, allowing for timely interventions in medical emergencies like heart failure, diabetes, and asthma attacks.

Telemedicine and Virtual Care: Networked systems facilitate telemedicine and virtual care solutions, allowing patients to consult with healthcare providers remotely, access medical services, and receive care in the comfort of their homes

Health Data Sharing and Security: Blockchain technology, a type of networked system, is used in healthcare to preserve and exchange patient data securely across hospitals, diagnostic laboratories, and pharmacy firms, ensuring data privacy and integrity

weather forecasting as they facilitate the sharing of data and resources among different meteorological stations and agencies

These networked systems enable real-time communication and data exchange, ensuring that meteorologists have access to the most up-to-date information from various sources

By connecting different weather monitoring stations and databases, networked systems enhance the accuracy and reliability of weather forecasts, providing timely and critical information to the public and decision-makers