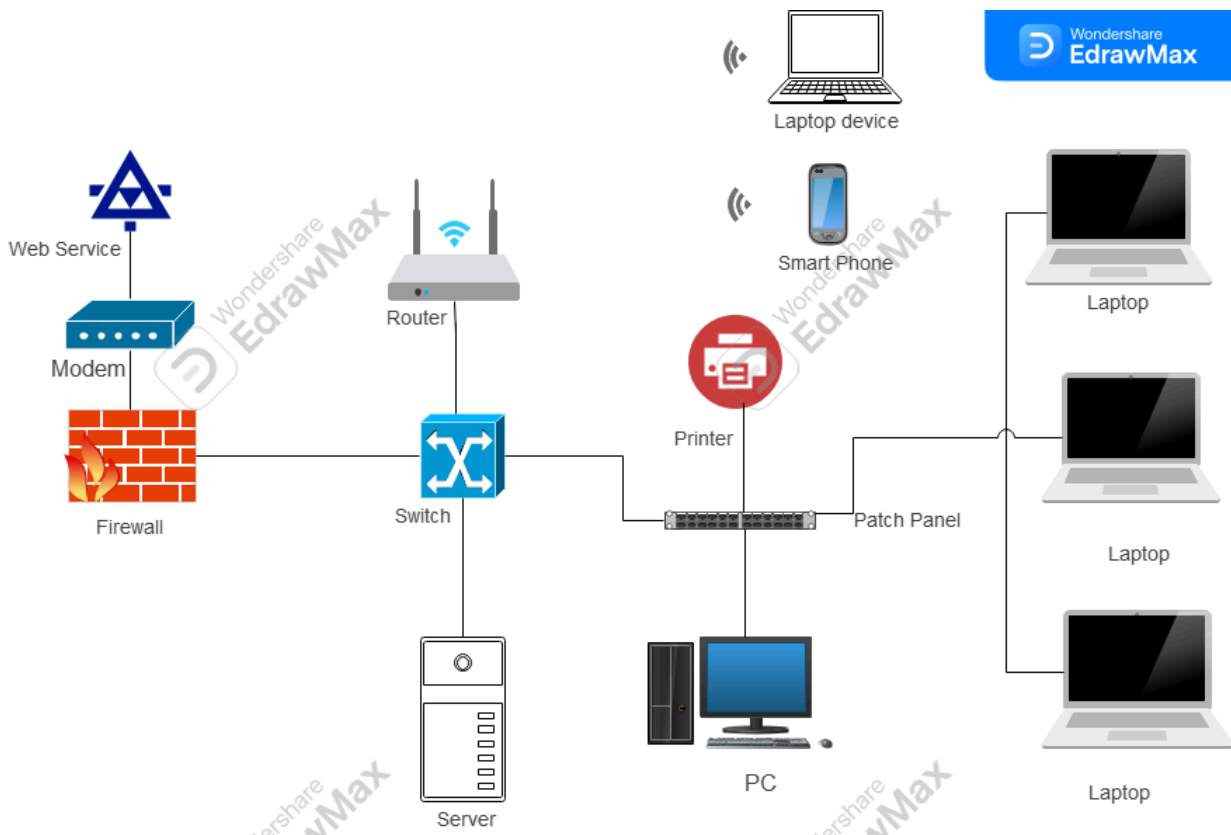


Assignment 1: Draw your Home Network Topology and explain how you are accessing the RPS Lab environment.



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.

Ans.

One real-world application that leverages both parallel computing and networked systems is weather forecasting.

Parallel computing is crucial in weather forecasting because it allows meteorologists to process massive amounts of data simultaneously, enabling complex simulations and predictive models to run efficiently. Weather prediction involves analyzing data from various sources such as satellites, weather stations, radars, and ocean buoys. Parallel computing enables these data sources to be processed concurrently, speeding up the generation of forecasts.

Networked systems are equally important in weather forecasting as they facilitate the collection, sharing, and distribution of data among different weather prediction centers and research institutions globally. Meteorological agencies worldwide rely on networked systems to exchange observational data, model outputs, and forecast information in real-time. This interconnected network of data exchange enables meteorologists to access a wide range of information from different geographical locations, improving the accuracy and reliability of weather forecasts.

In this context, parallel computing and networked systems work together to enhance the accuracy and timeliness of weather forecasts. By efficiently processing vast amounts of data and facilitating seamless communication between meteorological organizations, these technologies play a critical role in mitigating the impacts of severe weather events, informing disaster preparedness and response efforts, and supporting various industries such as agriculture, transportation, and energy.