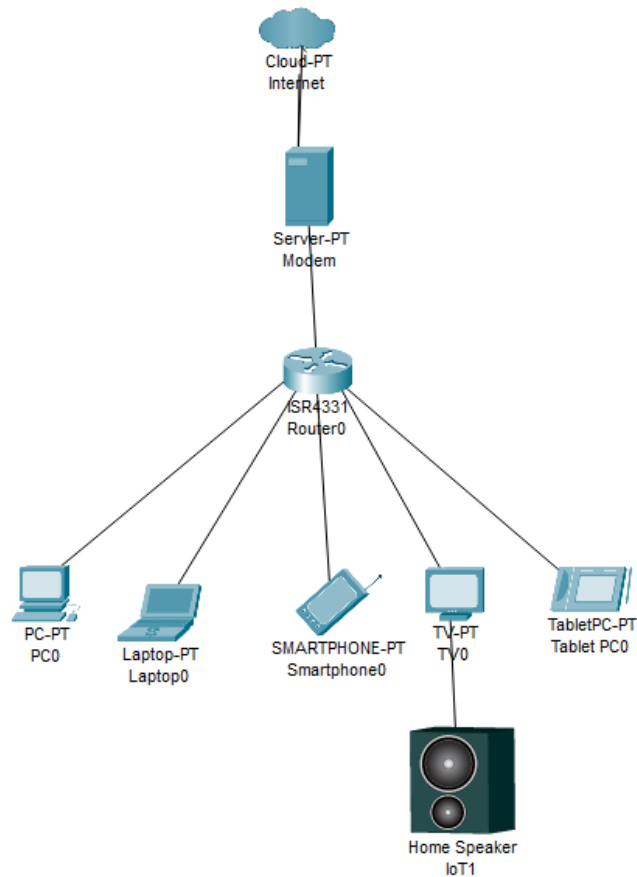


## IT 315 HW2

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**Modem:** Connects to the Internet service provider to bring the internet connection into the home network.

**Router:** Distributes the internet connection to various devices in the home, both wired and wireless. It also manages internal network traffic and provides security features like a firewall.

**Devices:**

- **PC & Laptop:** Wired or wireless connections for reliable and high-speed internet access.
- **Tablet & Smartphone:** Wireless connections for mobility and convenience.

- **Smart TV:** Connected via Wi-Fi or Ethernet for streaming services and other smart features.
- **Speaker:** Connected via Wi-Fi or Ethernet for amplifying sound from smart tv.

The router serves as a central point for managing all network traffic and devices, simplifying configuration and troubleshooting. Adding more devices or upgrading network components is straightforward with a router-based setup. Wireless connections for portable devices like tablets and smartphones allow for flexibility in device placement.

### **Plans for the Future**

Plan to upgrade to a more advanced router with better range and higher speeds like Wi-Fi 6 to accommodate increased network traffic and support for more devices. Integrate smart home devices such as smart locks, lights, and thermostats. This will require ensuring sufficient network coverage and possibly setting up a separate network for IoT devices for security reasons. Implementing additional security measures, such as a dedicated firewall or VPN, to protect against potential vulnerabilities from increased connected devices.