Room Automation System using Cisco Packet Tracer

Aim

To design and simulate a room automation system in Cisco Packet Tracer for remote monitoring and automatic control of the fan and room lamp.

Problem Statement

In modern smart homes and offices, manual control of appliances like fans and lamps can lead to energy wastage and inconvenience. A cost-effective, simulated system is needed to remotely monitor and control these devices, enabling automation based on user inputs or sensor feedback without physical hardware.

Scope of the Solution

- Enables remote ON/OFF control of room appliances (fan, lamp) via Cisco Packet Tracer simulation.
- Demonstrates IoT concepts using Packet Tracer's smart devices and networking.
- Can be extended to additional devices (AC, door locks, etc.) or connected to real networks.
- Serves as a learning model for students exploring IoT and home automation.

Required Components

Software & IDE:

- Cisco Packet Tracer (v7.x or above)

Simulated Devices:

- Smart Fan
- Smart Lamp
- Home Gateway / IoT Server
- PC / Mobile device (for monitoring & control)
- Optional: Sensors (temperature, light)

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