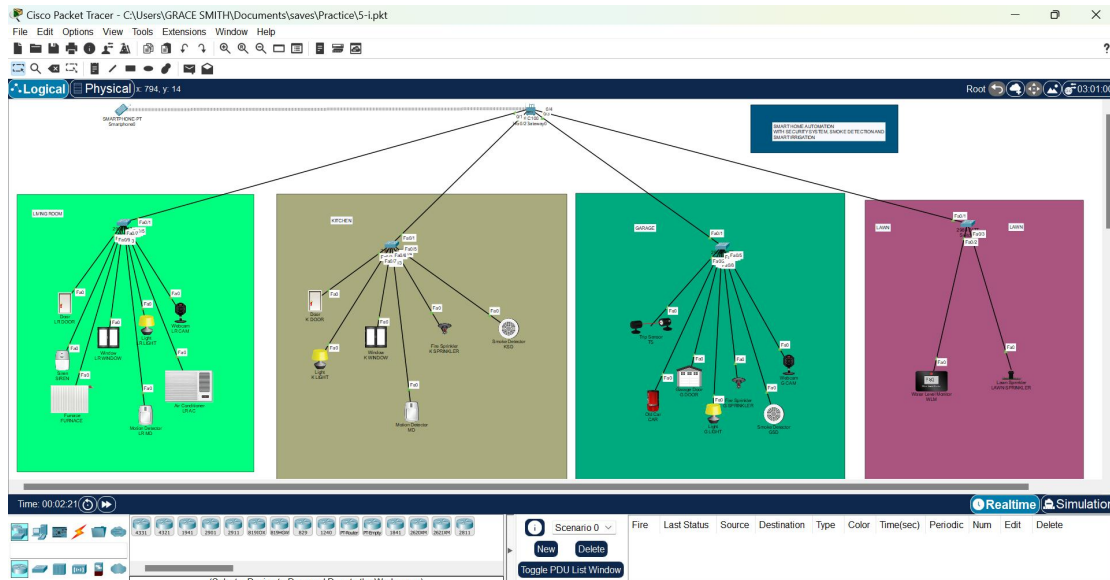
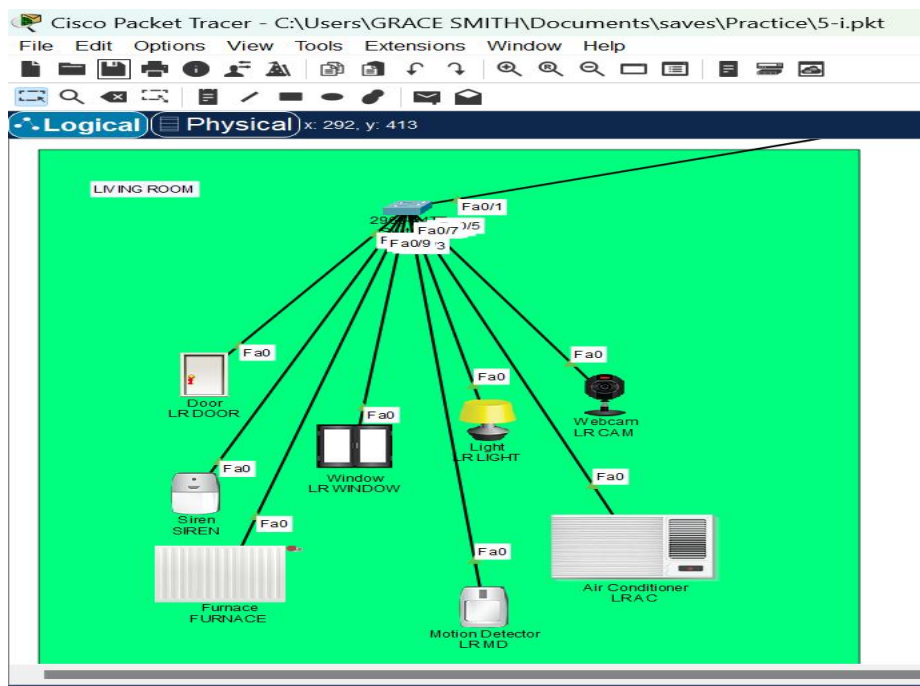


NETWORKING (IoT) PROJECT- SMITH GRACE

SMART HOME AUTOMATION WITH SECURITY SYSTEM, SMOKE DETECTION AND SMART IRRIGATION

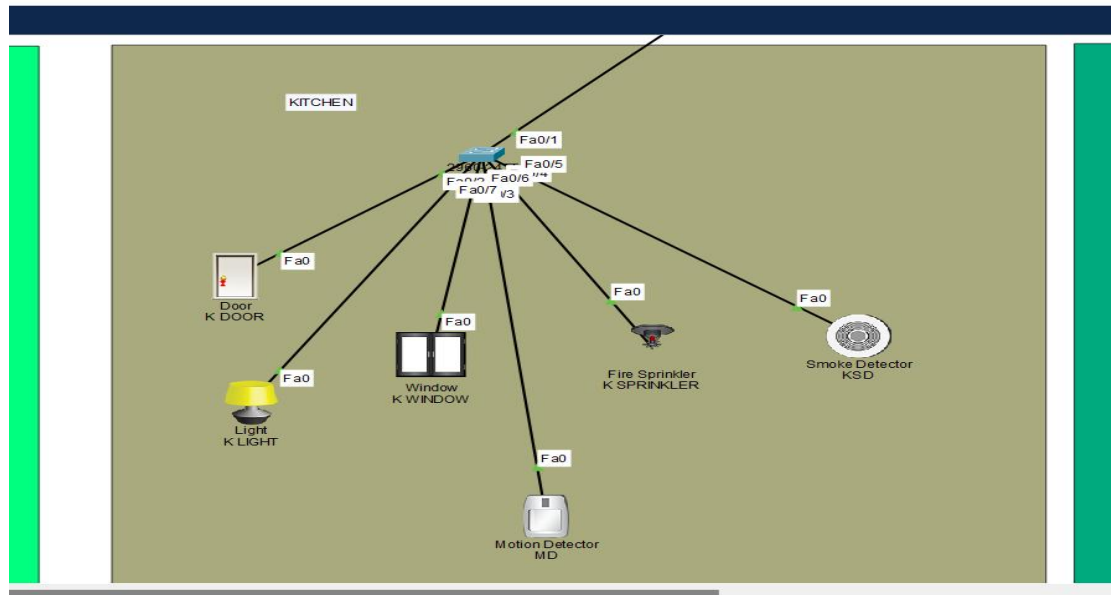


A **smart home automation system** that includes **security, smoke detection, and smart irrigation** offers significant benefits that go far beyond convenience. It enhances safety, efficiency, and peace of mind while helping you save time and money.

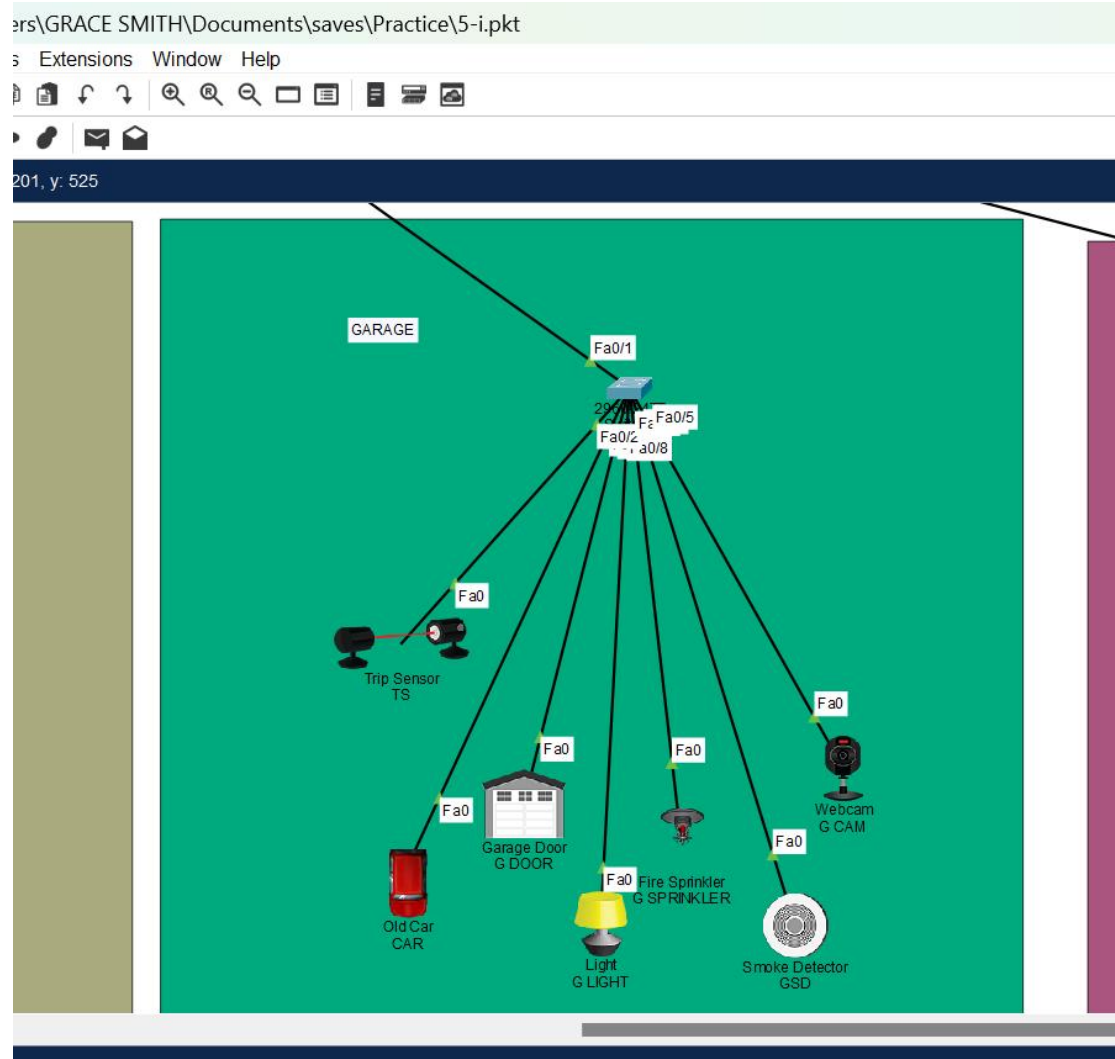


The picture above shows **the living room area**, where the motion sensor triggers a chain of events. Assuming it is an electronic security gate, movement detected triggers the door to unlock, the windows open slightly, light comes on and webcams come on. This is real time convenience and contributes to the security system.

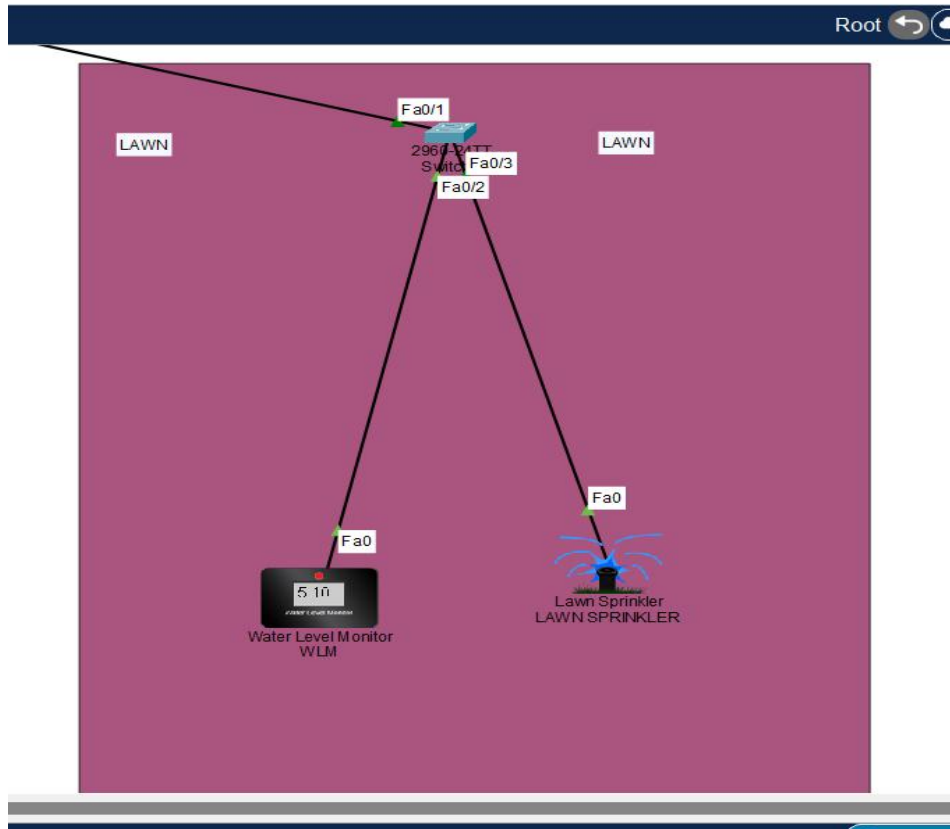
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The picture above shows **the kitchen area** where the motion detector and smoke detector trigger different series of events. With the motion detector; the door opens, the light comes on and the window opens too. With the smoke detector; the windows also open if not already open, the sprinklers come on and the door open if not already open too. This is also convenience at it peak and it contributes to the smoke detection system.



The picture above shows **the garage area** where the trip sensor and smoke detector trigger a series of different events. The trip sensor is enabled by an intruder, the siren in the living area goes off, the garage door locks, the light turns on and the webcam comes on too. With the smoke detector, the garage door opens and the sprinkler goes off. This contributes majorly to the security system and the smoke detection system.



The picture above is **the lawn area**, the automation depends on the water level. The sprinkler comes on when the water level is less than or equal to 10cm and goes off when it is greater than 10cm. This is the smart irrigation system.

The benefits of each system include:

Security System:

- 24/7 Monitoring
- Real-Time Alerts
- Remote Access
- Deterrent Effect

Smoke Detection System:

- Early Fire Detections
- Real-Time Notifications
- Automatic Actions
- Life Saving

Irrigation System:

- Water Efficiency
- Cost savings

Key Takeaways

1. Security System Logic
2. Smoke Detection System
3. Smart Irrigation System
4. Building Automation Logic
5. Remote Control and Monitoring
6. System Integration and Troubleshooting
7. Simulating Real-World Scenarios
8. Design Thinking and Systems Engineering