Home Automation System
CIS 542 Embedded Systems
Programming
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Project Objective

• The objective is to build a base framework for an automation system that can be centrally controlled using any device running android.
• We chose to show a lighting control system, temperature control and a security system as proof of concept.
• The framework makes it easier to integrate other such end applications.
Overview

- Arduino Coordinator node
- Router
- Internet
- Phone

Zigbee

- Home Security module
- Home lighting module
- Temperature control module
Coordinator Module
Screen Shots:

1. Welcome to the Home Automation System!

2. Please select your desired feature:
   - Lights
   - Camera
   - Temperature
Final Temperature Module
Screen Shots: Temperature Module

Current Temperature: 25.26\text{degrees}

Current Setting: ON

Please select your desired cooling mode:

- Auto
- Manual

Please select your desired cooling level:

Current Speed: 5

The following are the temperature statistics:

- Maximum Temperature: 31.55\text{degrees}
- Minimum Temperature: 22.21\text{degrees}
- Average Temperature: 26.42\text{degrees}
Security Module
Screen Shots: Security Module
Final Setup of the Lighting Module
Screen Shots: Lighting Module
Acknowledgements

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• Our Blog link is:
  http://home-automation-upenn.blogspot.com/

Thank you!