Project Summary:
To design a home automation system that allows its users to control any device in their house from their phones, and to build a prototype model of that system.

Home Automation Examples:
- Letting a friend into your house while away on vacation
- Scheduling your laundry machine to run while no one is home
- Getting notified when your kids get home from school

System Goals
The HomeAlive system offers remote access to household devices and demonstrates the possibility of advanced features.

Remote Access:
- Devices can be interacted with from afar
- Increases convenience and also helps individuals with limited mobility live independently

Time Saved:
- Scheduling, location-based triggers, and device-to-device commands save users time
- Adds convenience and productivity to their lives

Energy Reduction:
- Power consumption monitoring and triggering help control energy usage
- Reduces a house's energy consumption

Usage:
- Plug it in between an outlet and any other machine, then turn it on and off remotely or using a schedule

Energy Monitoring:
- Tracks power consumption, allowing users to view energy usage trends

Design:
- All custom circuitry controlled by an Arduino microprocessor, uses an RF XBee chip

Server
- Manages the entire system and stores information in a database
- One worldwide

User Interfaces
- Seamlessly and intuitively provides a portal for user interaction with the system
- Website & Phone Applications