Project Presentation

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Project Name:

- Home Automation Control System
What is Automation?

- Automation is the process of automatically performing everyday functions around the home to save you time, energy, money and at the same time offering improved security.

- Home automation saves your time and effort by controlling you home automatically for performing routine functions such as watering your grass, or turning off all lights, setting the thermostat to economy mode, control scheduled appliances operation and arming the security system when you retire for the night.

- The automation is performed by a central controller.
Automation

- The concept of home automation is to connect all of these systems and devices to a central controller so that they can be controlled from anywhere and react to one another. For example, as you arrive home, your home-automation system can automatically turn off the sprinklers, open the garage door, unlock the front door and disable the alarm, light the downstairs, and turn on the TV.

- Home automation provides a more convenient & elegant atmosphere for the family to compliment and match the lifestyle.
Block Diagram

Home Automation Server

Central Controller
Home Appliances

Internet Medium TCP/IP
Remote PC
System Description

- We use Telnet server to access our software from anywhere.
- Internet Medium is used to control Home Appliances from a remote PC.
- 8051 Controller is used to perform control function such as on-off.
- Telnet uses TCP\IP Protocols using a specific port to access the software.
- Electric Relays are controlled by controller for the Automation of Home Appliances.
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TELNET Working

- Telnet is a terminal emulation program for TCP/IP networks such as the Internet.
- The Telnet program runs on your computer and connects your PC to a server on the network.
- We can enter commands through the Telnet program and they will be executed as if you were entering them directly on the server.
- To start a Telnet session, you must log in to a server by entering a valid username and password.
- Telnet is a common way to remotely control Web servers.
TELNET SERVER

- Telnet Server connects remote computer with Server.
- It uses a port and network connection i.e Internet.
- Telnet Server is programmed using Visual Basic having a GUI.
Connecting to the Server

- To Connect to the server we need to use the command telnet which is available in almost all the version of windows.
- Type in the run window command telnet along with the IP address and the port number where your server is configured.
- The name of the server will be displayed in telnet widow, then connected status will be shown by typing the password.
Schematic Diagram

Control and Display section

PC Interface Section
Schematic Diagram

Appliance Section

Power Supply Section
Algorithm

- Main part of our program is in C++.
- The back bone of our project is CMD.C, the commands that are received from the user via serial window are processed.
- SERIAL.C file contains the function, which take care of the serial transmission and reception. The baud rate used for the serial transmission is 9600 bps.
- STRFUNC.C This C files handles the comparison and respective function numbers which are to be called when a command is received.
Benefits

- Convenient & Elegant
- Safer
- Long Distance Handling
- Basic Calculations Built-in
- Illuminated
- Versatile
- Automatic
- Compact
Thank You