

# The Home Monitoring and Control System

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ENGR 422 – Engineering Design Spring 2008

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**The Home Control and Monitoring System** provides users with a comprehensive home system which will offer them round the clock home protection as well as the ability to monitor their home environment from anywhere in the world, through a Web Browser.

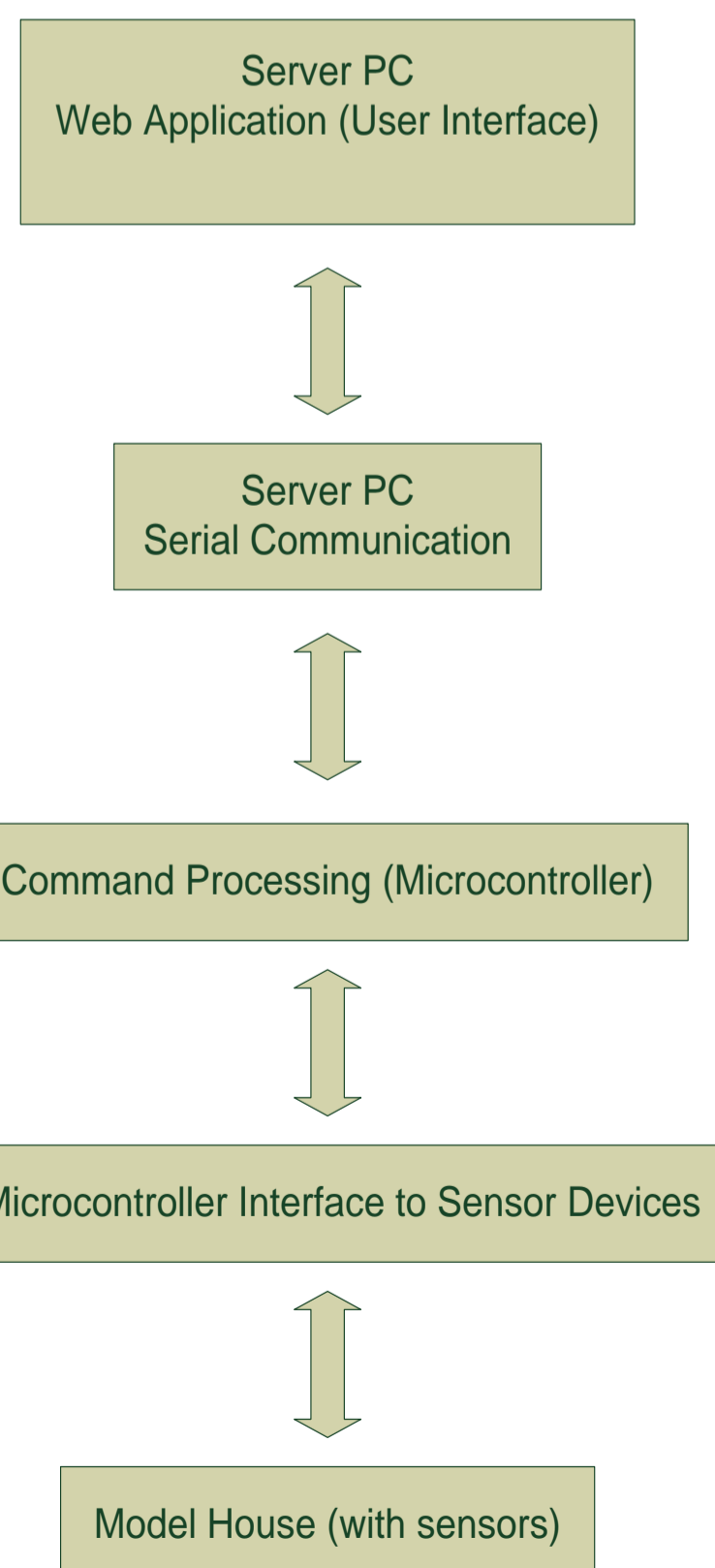
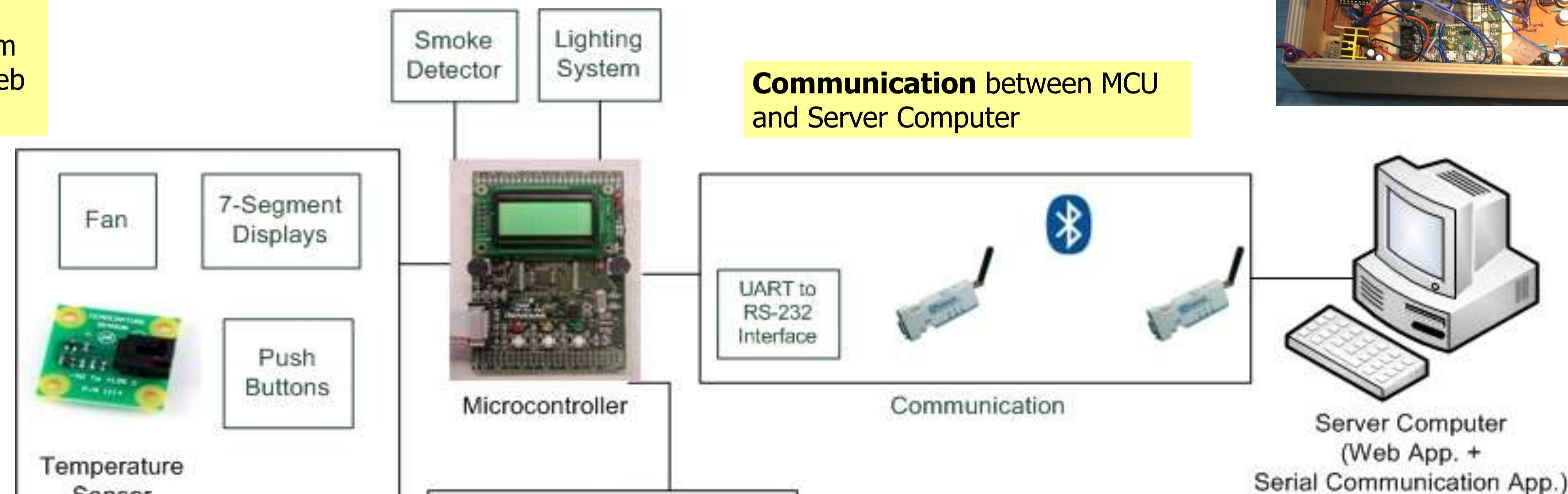
**Smoke Detector** → Sounds off alarm + send email

**Lighting System** → Turn on/off lights from house (switch) or Web site

**Communication** between MCU and Server Computer

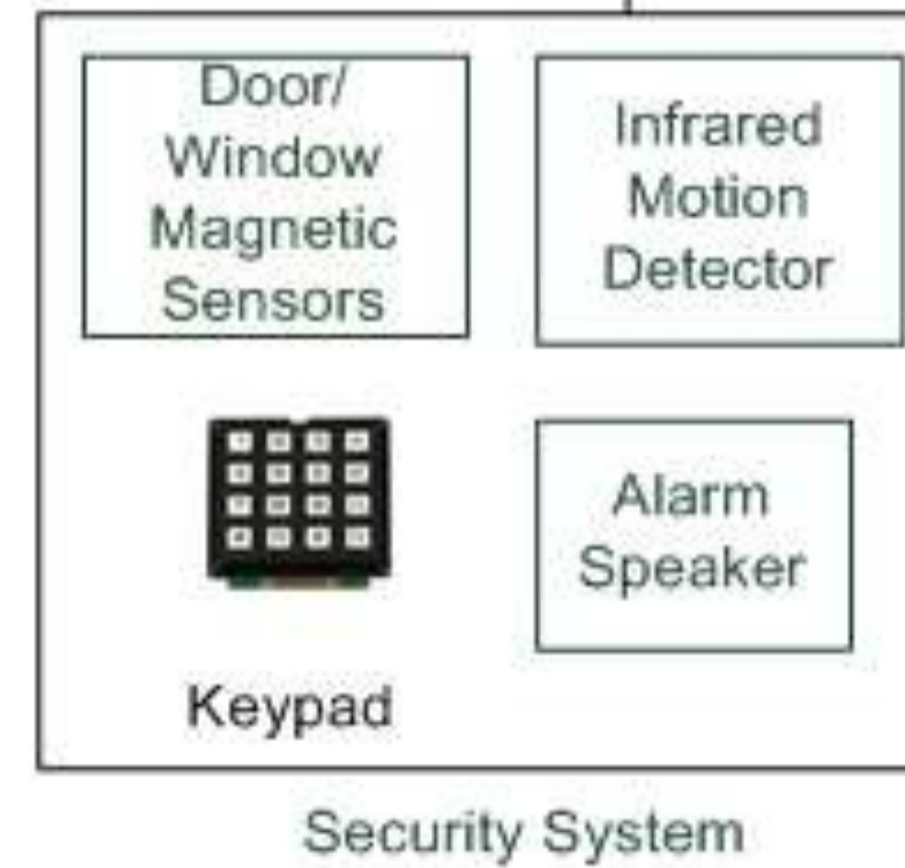
**Web Application**  
→ J2EE based → User Access to system through Internet

**Temperature System** → temperature sensors to measure temperature → display on 7-segments → Use push buttons to adjust

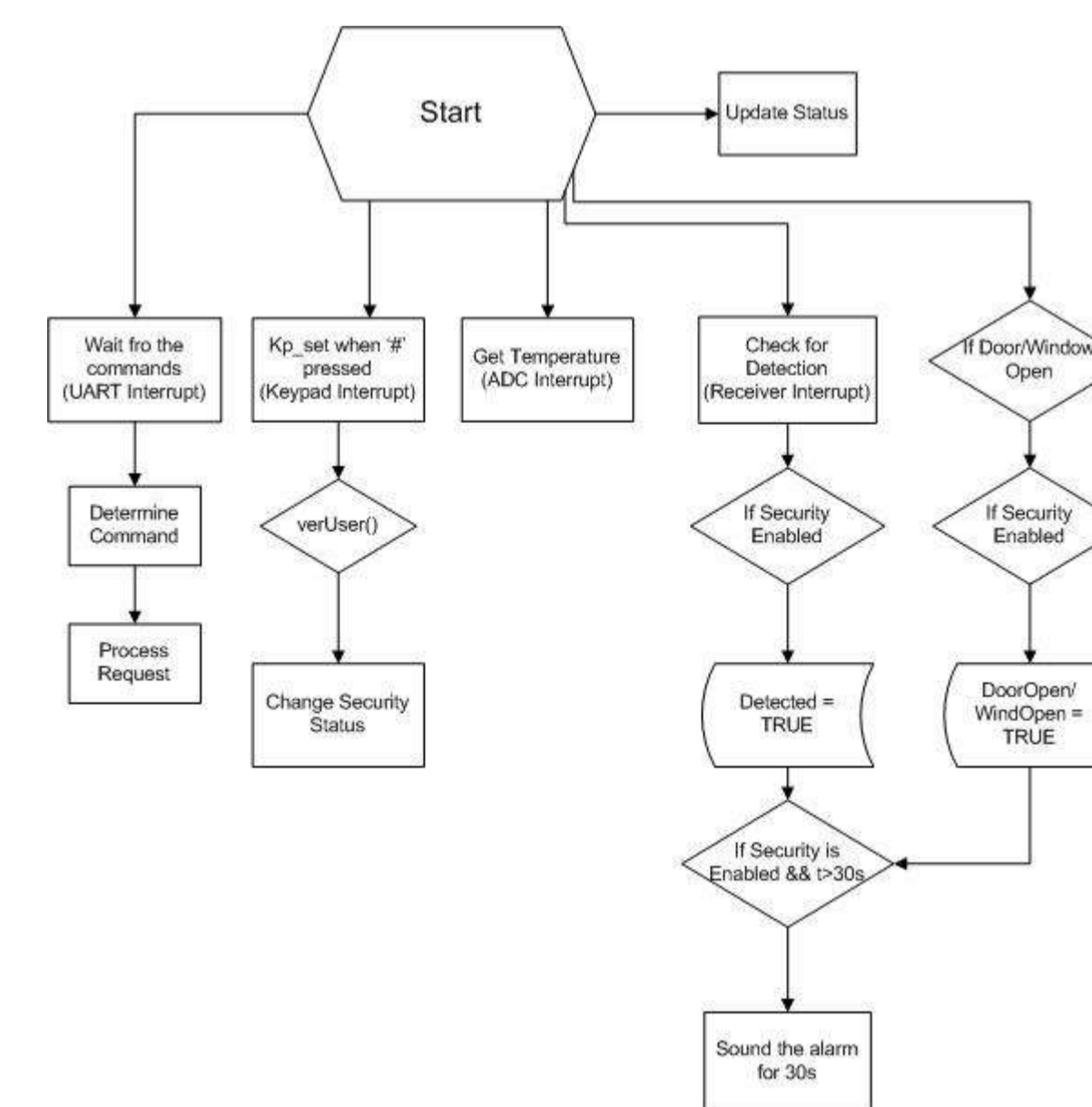


## Design Components

- Web application connects to the Server Computer via the Internet
- The serial communication enables communication between MCU and Server PC.
- Command processing to receive + interpret messages from Server Computer.
- The sensor interface to connect sensors to MCU.
- Model House to install sensors, for demo purposes.



**Security System** – motion sensors + door/window sensors detect intrusion → Sounds off alarm if security not disabled in 30 seconds after intrusion



**MCU Program Flow Chart**

Your Home Status

	Current Status	Change Status	
Temperature:	25	<input type="text"/>	<input type="button" value="Submit"/>
Door:	Closed	<input type="checkbox"/>	
Window:	Closed	<input type="checkbox"/>	
Light1:	Off	<input type="checkbox"/> On	
Light2:	Off	<input type="checkbox"/> On	
Security:	Enabled	<input type="checkbox"/> Disabled	
Smoke:	Off	<input type="checkbox"/>	
Air Conditioner :	On	<input type="checkbox"/> Off	
Security Password:	<input type="text"/>	<input type="button" value="Submit"/>	

[refresh status](#) [view log](#)