

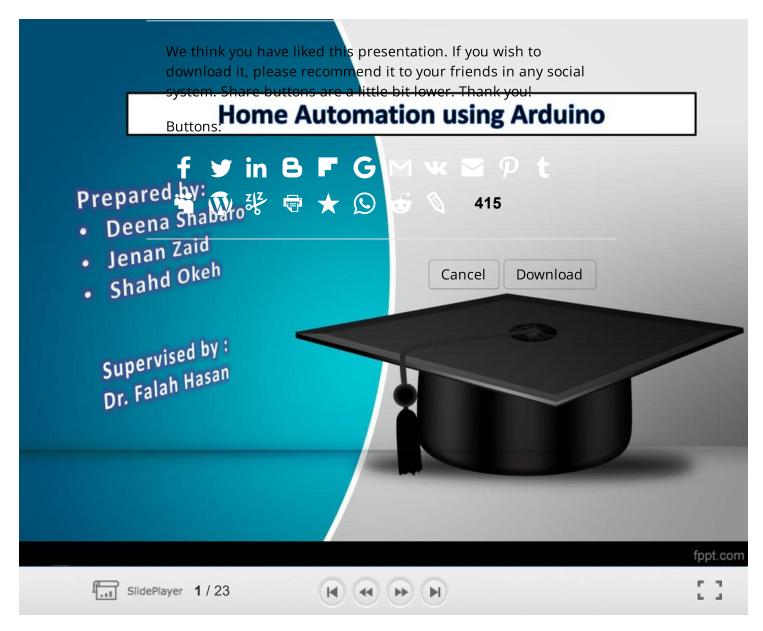
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Presentation on theme: "Home Automation using Arduino"— Presentation transcript:

Home Automation Using Arteurno tation

Prepared by: Deena Shabaro

Jenan Zaid Shahd Okeh

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Supervised by : Dr. Falah Hasan

Home Automation Definition

The home automation ... control of home devices from a central co**Att-5**l point , its include

control of lighting , security locks of gates doors and other system .

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<u>4</u> Advantages of home automation :

Home automation keeps your home secure by being able to look your front door from your smart phone or tablet and do not be worry because you misplaced your keys inside home.

Home automation keeps your family comfortable.

With home automation you can turn your air conditioning on before you head home so when you arrive the house is nice and cool.

5 Advantages of home automation :

Home automation saves your money.

With home automation you never have to worry about appliances or lights being lefts on when out of use or when no one is home yeild to saving money and energy at the same time.

Home automation gives you control over your home from any location . So control over your property and belongings even when you are on vacation far from home.

6 Advantages of home automation :

Home automation means you have less to worry about.

The greatest benefits of home automation system are added of sense of security and peace of mind .

7 Disadvantages of home automation :

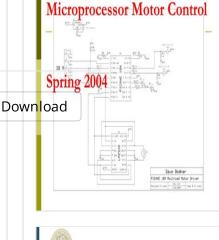
Equipment and installation costs.

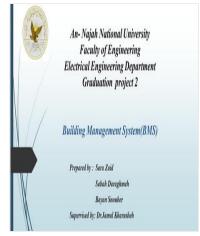
System crashes due to any damage in the inter connection.

Huaman errors.

Reliability.









8 What is Arduino?

Arduino is an open source protopping matter based on easy to use hardware and software .

Arduino boards are able to read inputs (light on sensor, or twitter message) and turn it in to output (lactivating motor turn LED wish to publishing something on line of liked this presentation. If you wish to publishing something on line of liked this presentation. If you wish to publishing something on line of liked this presentation. If you wish to publishing something on line of liked this presentation. If you wish to publishing something of liked this presentation. If you wish to publishing something of liked this presentation. If you wish to publishing something of liked this presentation. If you wish to publishing something of liked this presentation. If you wish to publishing something of liked this presentation. If you wish to publishing something of liked this presentation. If you wish to publishing something of liked this presentation. If you wish to publishing something of liked this presentation. If you wish to publishing something of liked this presentation. If you wish to publishing something of liked this presentation. If you wish to publishing something of liked this presentation. If you wish to publishing something of liked this presentation. If you wish to publishing something of liked this presentation. If you wish to publishing something something of liked this presentation. If you wish to publishing something of liked this presentation. If you wish to publishing something of liked this presentation. If you wish to publish the presentation is a second to like this presentation. If you wish to publish the liked this presentation is a second to like this presentation. If you wish to publish the presentation is a second to like this presentation. If you wish to publish the liked this presentation is a second to like this presentation. If you wish to publish the presentation is a second to like this presentation is a second to like this presentation.



9 Advantages of using arduino

Ready to use.

Effortless function.

Large community.

415

Security and Fire Alarm Systems

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LEARNING OUTCOME 7B

Describe design overview and location considerations for home security and fire alarm systems.

Outcome addresses learning outcomes 1-4 for these specific technologies.

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10 Disadvantages of using arduino

Structure.

Costs.

11 The environmental sensors and devices

LM 35.

LDR.

PIR sensor.

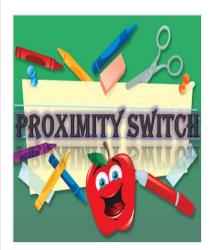
Smock detector.

Relay.

Reed switch door.

Small Fan.

Motion detector Black Streets As Regurable



LM35 Calibrated directly in o Celsius (Centigrade)

Linear mV/oC scale factor
0.5oC accuracy guaranteeable (at +25oC)
Rated for full -55o to +150oC range
Suitable for remote applications
Low cost due to wafer-level trimming
Operates from 4 to 30 volts
Less than 60 µA current drain

- **13** Relation between the temeprature and LM35 sensor
- Relation between the temprature and LM35 sensor
- <u>15</u> LDR

A photoresistor (or light-dependent resistor, LDR, or photocell) is a light-controlled variable resistor. The resistance of a photoresistor decreases with increasing incident light intensity; in other words, it exhibits photoconductivity. A photoresistor can be applied in lightsensitive detector circuits, and light- and dark-activated switching circuits.

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system. Share buttons are a little bit lower. Thank you! ✓ Easily configuration

16 sensor

Buttons:

PIR 17

PIR sensors allow you to selde incition almost always used to indicate the property of the sensors allow you to seld the sensor you to seld the sensor you have all the sensors allow you to sell the sensor you have all the sensor you have all the sensors all the sensors allow you to sell the sensor you have all the sensor y whether a human has moved in or out of the sensors range. They are small, inexpensive, low-power, easy to use and don't wear out. For that reason they are commonly found in appliances and gadgets used in homes or businesses. They are often referred to as PIR, "Passive Infrared", "Pyroelectric", or "IR motion" sensors. Cancel

Smock detector 18

This flammable gas and smoke sensor detects the concentrations of combustible gas in the air and outputs its reading as an analog voltage. The sensor can measure concentrations of flammable gas of 300 to 10,000 ppm. The sensor can operate at temperatures from -20 to 50°C and consumes less than 150 mA at 5 V.

Relay 19

We used HLS VDC relay, This relay is used to close the reset switch on a node and to keep the node's power and ground isolated from the other nodes and the Arduino.

20 Reed switch door

Is an electrical switch operated by an applied magnetic field, consists of a pair of contacts on ferrous metal reeds in a hermetically sealed glass envelope. The contacts may be normally open, closing when a magnetic field is present, or normally closed and opening when a magnetic field is applied. The switch may be actuated by a coil, making a reed relay, or by bringing a magnet near to the switch. Once the magnet is pulled away from the switch, the reed switch will go back to its original position.

Results and Discussion

When the LDR sensor analog value is less than a constant value equal to 20, and the PIR sensor notice a motion around the home, then the relay and the bulb outdoor will be ON.

Project Goals And Objectives

- √Create a "smart", customizable, all in one system
- ✓ Little to no learning curve
- √ Focus on friendly user control
- √Can integrate easily with existing home
- √ Easily configuration
- √Low cost

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MHW2 review

- Peer assess how the circuit would work and the explanation.
- Design a potential divider circuit which will be able to control a temperature switch.
- Explain in detail how it works

Monitoring, measurement and control technology

normani factor flactracia Project Line States - Bril But bear leige a spilar for her sea high what Address that Address his day 1 NOTE AND DESCRIPTIONS. -100

If there is a fire in the home, the smock detector will be detect the smock, and the LEDs will be ON and OFF for 20 times as a warning.

<u>22</u>

Conclusion

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We have designed a system that contains of many sensors using Arduino such as weighink you have liked this presentation. If you wish to photoresistor sensor download it, please recommend it to your friends in any social This control reinterpreted many features to the home make it the ideal you! home that most companies aspics to design, which is more secure and energy efficient to be the home of future.

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Cath de Ray Oscilloscope (CRO)

Motion Detectors (Passive Intrared)

Chris Bent

• Structure of CRO Photo

· Vertical deflection of the spot

• Horizontal deflection of the spot Diag

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CRO 1

Electronics

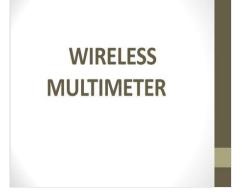
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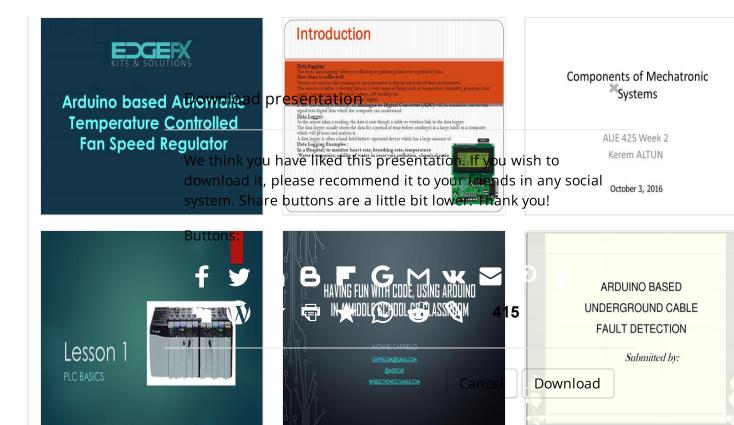
SECURITY SYSTEM USING PIR











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