



Projects' proposals

By:

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Name	Solar tracker
Group	5 students
Description	This project aims to design and implement a functional prototype of basic solar tracker system. System uses solar cells to charge rechargeable batteries which in turn used as a power bank to operate other device, like mobile phone, gardens light, street light. System monitor sun light and keep solar cells always facing sun light. System monitors charging and disconnect battery in case of fully charged, and also monitoring discharging level giving necessarily alarm to operators.
Deliverable	Solar cell tracker
Knowledge base	Arduino programming Basic electronic circuit concepts
tools	Arduino DC/Servo motors controller shield battery Charger Inverter LCD

Name	Programmable power supply
Group	5 students
Description	This project aims to design and implement float charging power supply. System accept user setting of operating voltage, then keep monitoring voltage level. System automatically adapt and adjust its operating parameters in order to keep output voltage stable and close as much as possible to user settings.
Deliverable	Programmable power supply
Knowledge base	Arduino programming Basic electronic circuit design and implementation
tools	Arduino Floating power supply Controlling and monitoring unit

Name	WiFi Robot
Group	5 students
Description	<p>This project aims to design and implement a functional prototype of navigation Robot that uses WiFi technology to communicate with user remotely. User is sending and receiving alerts to robot through application server which is a part of WiFi network.</p> <p>System uses WiFi IP camera to broadcast video stream from robot to end user.</p> <p>Project consists of two main parts</p> <ol style="list-style-type: none"> 1. Three wheels robot, controlled using Arduino Microcontroller. 2. WiFi camera, that uses WiFi technology to broadcast video stream from robot to end user interface.
Deliverable	<p>Robot</p> <p>WiFi Camera</p> <p>mobile application</p>
Knowledge base	<p>Arduino programming</p> <p>Android programming</p> <p>Basic electronic circuit design and implementation</p>
tools	<p>Arduino</p> <p>DC/Servo motors controller shield</p> <p>3/4 wheels robot</p> <p>WiFi Shield</p> <p>WiFi Camera</p>

Name	Simple Building management System (IOT)
Group	5 students
Description	This project aims to design and implement a functional prototype of basic standalone WiFi building management module like WiFi light bulb, WiFi fan, WiFi air conditioner,... etc. System based on IOT concept, that each module gat its own IP address through WiFi infrastructure network.
Deliverable	WiFi appliance Module Mobile application
Knowledge base	Arduino programming Andriod programming Basic electronic circuit design and implementation
tools	Arduino WiFi Shield Relays shield



Thanks,..
See you next week (ISA),...