**Light Sensor Alarm Clock Project**

* **Major components**

1. **Microcontroller “ATmega328”**

* Ability to display the time on the LCD
* Ability to set the alarm using a push buttons
* Ability to control the LDR or light sensor
* Ability to control the speaker + sound
* Ability to be controlled by push button or a 4x3 keypad

**Possible features will be used:**

Interrupt function

Count time function

The internal time (real time)

1. **LCD**

* Display the time
* Display the wake up time

1. **Light Sensor**

* Control the lights using the sensor

1. **Push button or a Keypad**

* Interfacing keypad with ATmega328 4x3 matrix

**Assignments**

* Learn how to interface the Keypad with ATmega328.
* Learn how to interface LCD with ATmega328 + try to write something on the display.
* Learn how to interface the speaker + how to download music or sound to it.
* Learn how to interface the LDR sensor with the ATmega328 + try to control it using LED.
* **ADC0808 is an 8 bit analog to digital converter**