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Assignment - 04

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* Aim → Develop a smart light system

* Problem Statement → Develop a smart light system using open source H/W platform and some sensors.

* Theory →

A. Arduino :

① Open source electronics platform based on easy to use H/W and S/W.

② Arduino boards are able to read inputs - lights on sensors, a finger on a button, etc.

B. Components :

① LDR -

i) Light Dependent Resistor

ii) A device whose resistivity is a func^n of the incident EM media.

② Arduino

i) Used to switch on/off the bulb.

③ 4.7 K resistor

④ Bread board

⑤ Connecting Wires

⑥ Bulb / LED

C. Connections :

① Arduino 3rd pin connected to LED/bulb +ve.

② GND connected to LED -ve through 4.7 K

③ Arduino A0 pin is connected to LDR

④ Arduino GND is connected to the other end of LDR through 4.7 K

D. Advantages of Arduino :

① Ready to use

② Effortless functionality

③ large and active community

E. Disadvantages of Arduino :

① Cost

② Structure

* Conclusion → Thus in this assignment, we've learnt about Arduino ; and implemented a smart light system based on it.