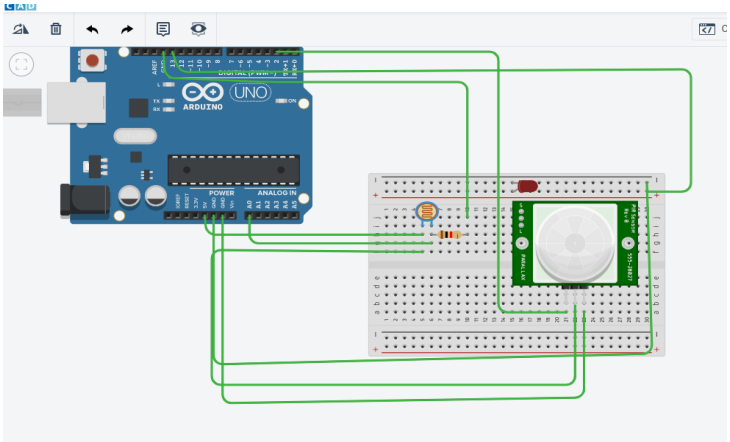
AUTOMATIC LIGHT SYSTEM THAT TURNS ON OPENING ALMIRAH AND TURNS OFF WHEN LIGHT IS ENOUGH IN ROOM



THEORY

Concept used The light system consists of a PIR sensor which detects a person <radiating IR> standing in front of almirah and sends the signal to led to turn on and led remains on till the light is not in much amount present in room. When light in room increases ,the photoresistor detects light and its resistance vary accordingly and led turns off after time period of 100 ms.

Learning and observation

While performing this ,I learned and observed that how pir sensor is used to read input of a obstacle and how it is used to control different operations of different devices based on variations recorded during detecting bodies emitting IR.A passive infrared sensor is the sensor that obtains operational power from external source emitting IR.

Photoresistor or light dependent resistance is a device whose resistance varies according to the amount of light falling on it .It basically uses serial communication by receiving analog signals which get converted to digital signals using Analog to Digital converter of arduino.

Problems and troubleshooting

The basic problem that is suffered during system designing is the purpose to which how light will automatically turn on after opening almirah but it is solved by the fact when a person will stand in front of it,the pir sensor will detect his IR radiations and will accordingly send the signal to light to turn on.

Precautions

One must take care of the fact that all the terminals should of pir sensor should be connected to right pins of arduino board.

One must keep in mind the basic knowledge of using potential divider ciruit.

Learning Outcome

By this experiment I have learned the basic concepts of using pir sensor to control leds and how to use different sensors with respective mode of communications to perform certain operations