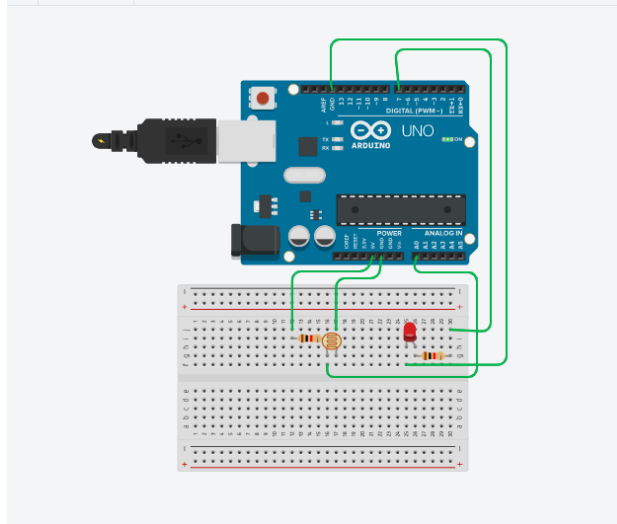


Exp. 7 Design an automatic lamp

Circuit Diagram:



Theory:

Concept Used:

The voltage resolution of an ADC is equal to its overall voltage measurement range divided by the number of intervals:

$$Q = \frac{E_{FSR}}{2^M}$$

where M is the ADC's resolution in bits and E_{FSR} is the full scale voltage range (also called 'span').

Learning & Observations:

- Working of Arduino
- Coding for Arduino using C language
- The resistance of a LDR decreases with increasing incident light intensity.

Problems & Troubleshooting:

- Port selection
- Loose connections
- Error in coding

Precautions:

- Connections should be tight
- Port and board selection should be correct
- Code should be written properly

Learning Outcomes:

Automatic night lamp functioning was verified after uploading the program.