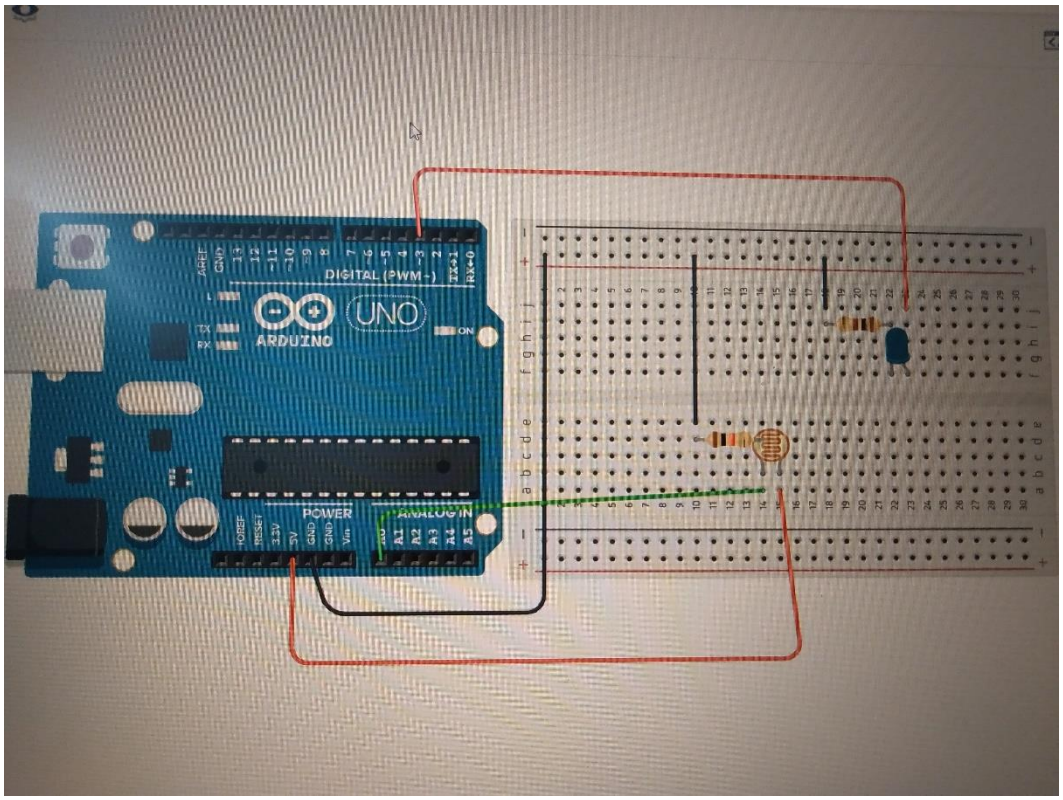
Experiment :-LDR interface – automatic night lamp

Circuit Diagram:-



Theory:-

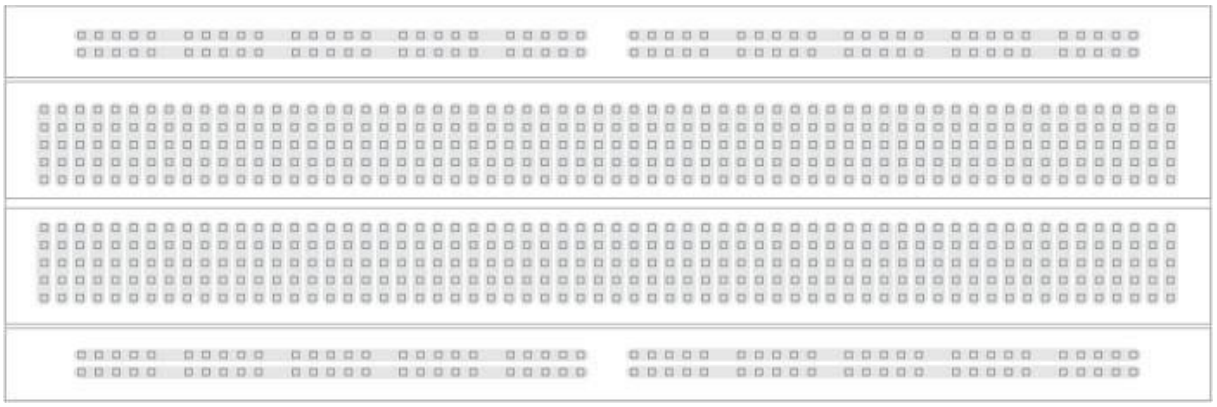
Concept used:-

The concepts used by me for doing this task can be listed as:-

- *The arduino board can supply a power of 5v as*

digital output signals through the 14 pins (namely 0-13) present in it as digital input or output pins.

- *The GND pin of the arduino board acts as ground.*
- *In the bread board present in the above circuit diagram the two rows present at the top and bottom each, are connected with each other in series and the columns present in between are connected in a set of 5 each. The connection pattern is shown below:*



Learning and Observation:-

Leanings:

- *I have learned about how to make a series circuit using an arduino board and a*

breadboard.

- *I have learned about how an arduino works and I also learned how current flows and how it works.*
- *I learned the working of the ldr and how the resistence varies as light intensity varies.*

Observations:-

- *When we covered the ldr the its resistance increased and when there was more brightness then the resistance decreased.*

Problems and Troubleshooting:-

The problems faced by me while doing this task are :-

- *The code was not working properly at first so I have to change it many time.*
- *I had trouble figuring out how much resistance should be considered*

Precautions:-

The precautions that we need to keep in mind while doing this experiment are:-

- *The connections at different points should not be loose and the pins should be inserted properly.*
- *We should take care that the circuit is closed .*
- *The path between the sensor shold be cleared so that it can give appropriate reading.*

- *While writing the code extra care should be taken while writing the syntax keeping in mind about different small and a capital words in them.*

Learning Outcomes:-

- *I have learned how to make circuits using an arduino board and a bread board and some other hardwares.*
- *Through this experiment I have gained the skill of making a circuit using different hard wares*

and controlling the functions done by that circuit with the help of codes.