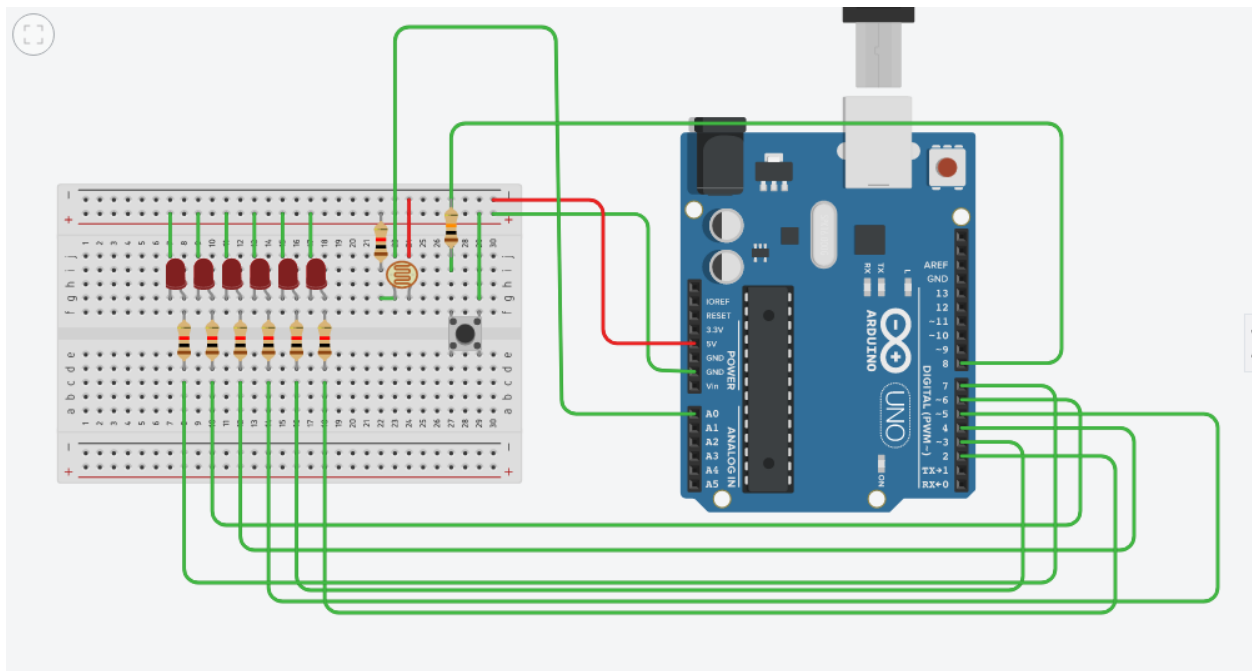# BEEE EVALUATION FILE

EVALUATION Question: Design automatic led Diwali lights (consisting of 6 led's) such that it only works during night and can generate two patterns which can be toggled with switch. a. Pattern 1 – led blinks with a freq. of 500 msec. b. Pattern 2 – led blinks with a freq. of 1 sec

Circuit diagram:

THEORY

CONCEPTS USED:

1. Uses of Arduino.
2. Concept of Serial.begin(9600)

3. Connection of multiple LED'S to ARDUINO board.
4. The use of switch button
5. The use of LDR.
6. Using if and else statements in coding.
7. Using concept of loops.

LEARNING AND OBSERVATIONS:

1. The use of Seria.begin(9600).
2. Resistance of 10k ohm is needed for LDR.
3. The importance of having analog pins in arduino as LDR is connected to analog pin.
4. Learnt about the use of if- else statements.
5. The LED needs to be in forward bias.
6. Code optimization using for loop.

PROBLEMS AND TROUBLESHOOTING:

1. Improper connection to the power pin was made and it was solved after making proper connection.
2. The connection of switch was inappropriate.
3. The circuit was incomplete because a wire connection was missing.

PRECAUTIONS:

1. Reverse bias of LED'S can damage them.
2. Faulty code will lead to the lights not blinking.
3. Make sure the connections are appropriate .
4. The use of brackets and pinMode needs to be correct otherwise the code won't work.

LEARNING OUTCOMES:

1. Loops make the code short and are very useful.
2. Loops are very useful as they optimize the circuit.
3. Improper resistance value can lead to faulty working.
4. I learnt about the practical usage of switch and LDR.
5. Practical use of if-else in coding.
6. Now I have enhanced and improved knowledge of breadboard connections.