

SMART LIGHTING SYSTEM FOR ROSE

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"I declare that this report entitled "*SMART LIGHTING SYSTEM FOR ROSE*" is the result of my own group research except as cited in the references. The report has not been accepted for any degree and is not concurrently submitted in candidature of any other degree."

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In the name of Allah Most Gracious and Most Merciful.

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In the blessing of God, we really hope our project will be done successfully according to our pelan.

Thank You.

ABSTRACT

Rose flowers need extended sunlight for optimal growth. Rose need light at night to do photosynthesis for extend the length of rose stem. If neon light not replace with sunlight at night, the rose flower will bloom at night and stop the photosynthesis. Sometimes, neon light will be off because of power failure. For the last, neon light will turn off at night such as 12 a.m. to make sure the rose flower will bloom perfectly with suitable stem. So, this project replace sunlight with neon light at night because the properties of neon light same with the sunlight. The automatic switch circuit will turn on the neon light if there are no sunlight. The Light Detector Resistor (LDR) are used as a sensor to detect the presence of sunlight. During daylight, LDR will turn off the neon light because it sensing the presence of sunlight. LM358 and LM258 op-amp have two input and one output which input is inverting at pin#2 and non-inverting at pin#3. Without sunlight, voltage at pin#3 is higher than voltage at pin#2 and the neon light will turn on. When voltage pin#3 is low than voltage at pin#2, the neon light will turn off. NE555 timer acts as a free running oscillator. It will generate the frequency when high pulse is applied at RESET pin. The frequency of NE555 timer varied by varying resistor values R3, R2 or by varying the capacitor value C1. Next, few features added in this project which are automatic light and alarm system. By the way, in this project we change the neon light with normal bulb because it difficult to find neon light from electronic shop. Normal bulb also can do photosynthesis but it not same with neon light or sunlight.

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