



UNIVERSITY OF MORATUWA, SRI LANKA
Faculty of Engineering
Department of Electronic and Telecommunication Engineering

EN2160 - Electronic Design Realization

Preliminary Design Report

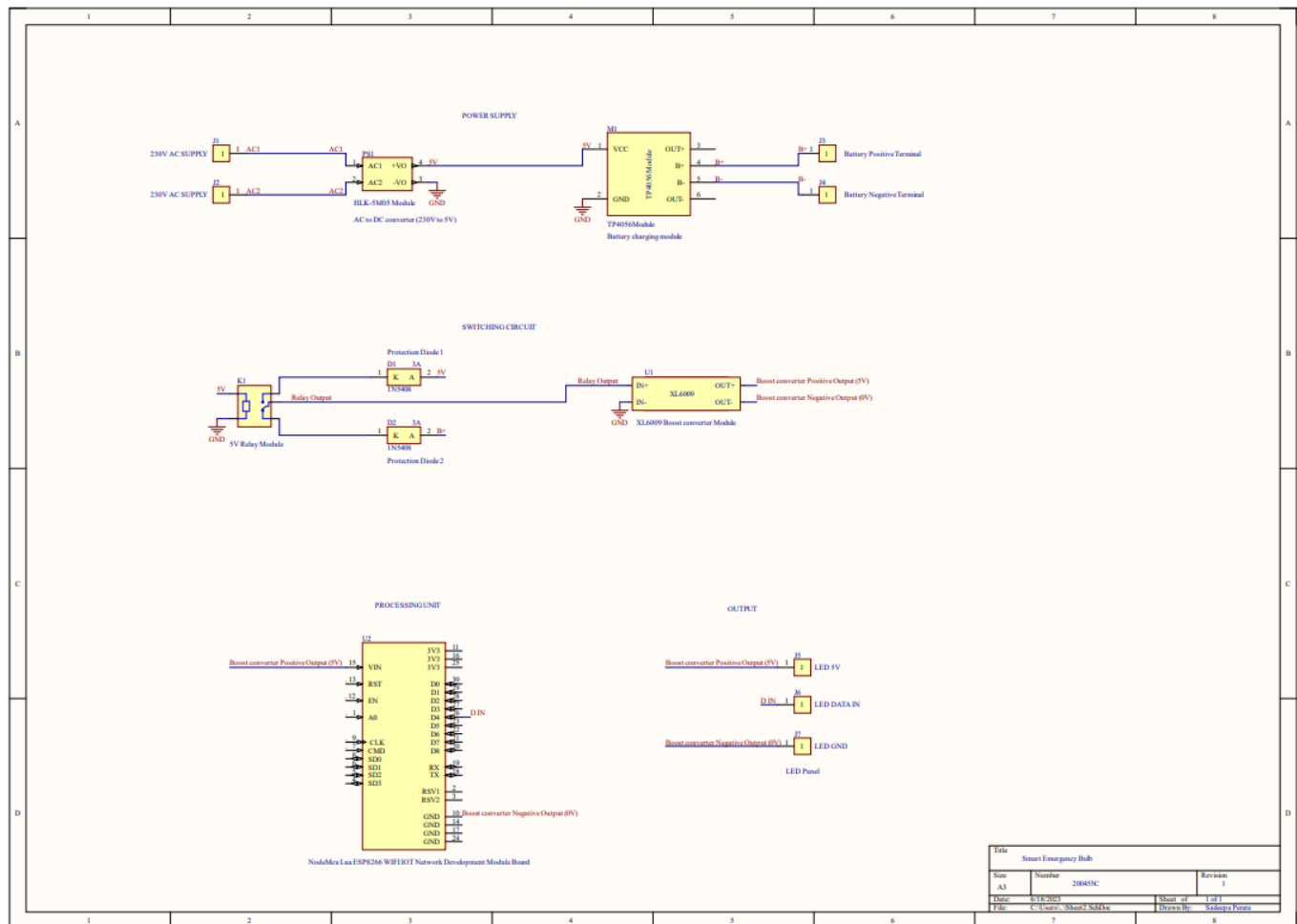
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Introduction

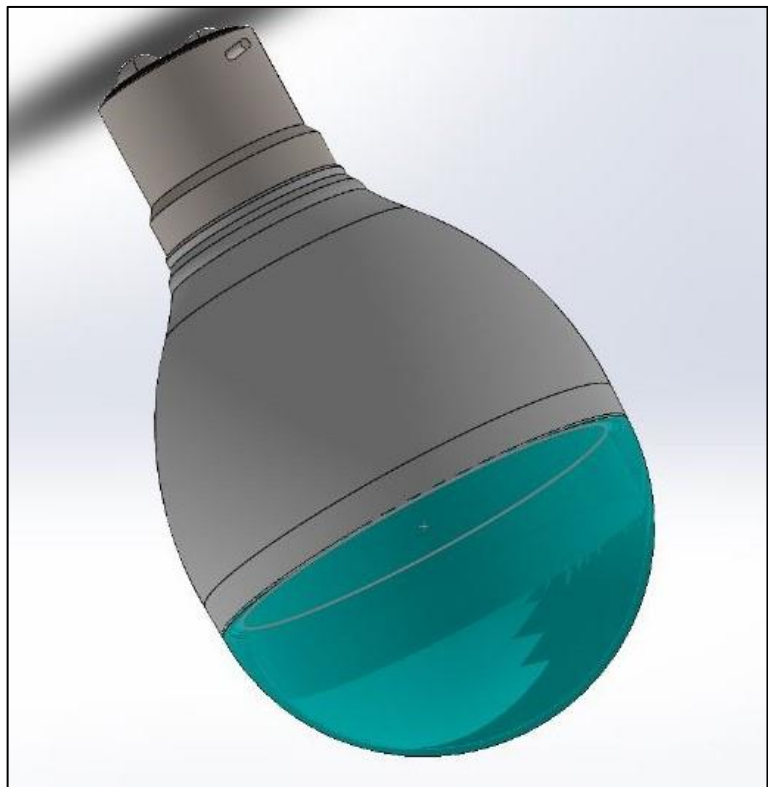
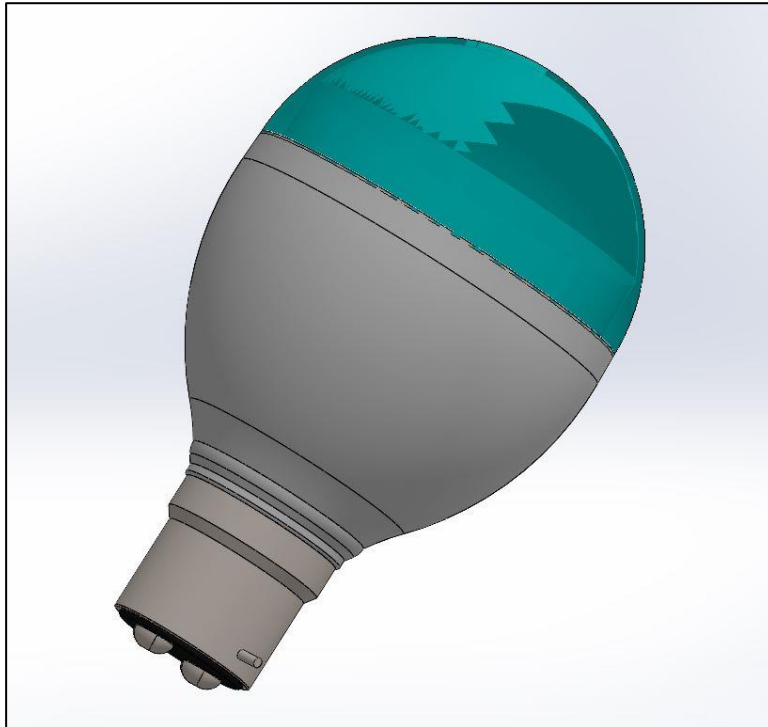
This report includes the implemented (initial) preliminary design and the comparison of it with the design improvements carried out by applying the new knowledge we gained from lectures.

Implemented design.

Schematic Design



Solid works design



Things get by course content.

When making a Schematic with industrial standard, it is important to put inputs to the left side and outputs to right side or top to bottom as a flow. So, in the above design I have followed that rules.

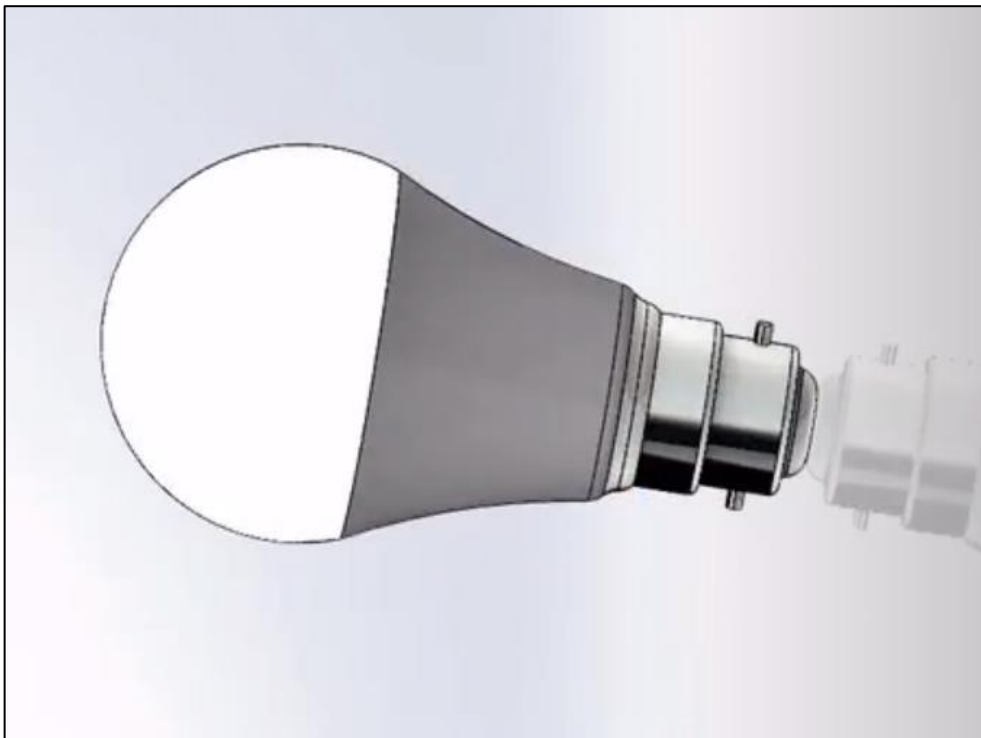
When naming the components, it should be done from top left corner to top right corner in counterclockwise direction. So that rule is also followed as well. Wire connections are properly labeled using net labels and for all the components we have to put the appropriate symbol in the schematic design.

Problems/Improvements identified.

Considering the improvement which is done according to user survey and information which are getting from discussion with group members, I add motion sensor to my bulb.

Using the motion sensor I intended to make the bulb motion sensitive. This is a one of the user requests.

Solid work Design



Problems/Improvements identified.

In new design I try to make it small as possible. According to the users, in my first enclosure design it is hard to hold the bulb from one hand when it set to the bulb holder or when it remove from the bulb holder. But now I made the enclosure take that matter into my considerations and the new bulb easy to hold from one hand and it is easy to handle.

So According to course , there are no sharp edges in here. All edges are rounded. Also No screws are use to fit top part to bottom part. For that I use middle metal part and making the top and bottom layer fitting to that.

By looking at the metal part , you can see It is made for easier for grabbing.