REPORT ON DESIGNING PCB OF AN ASTABLE MULTIVIBRATOR

BY

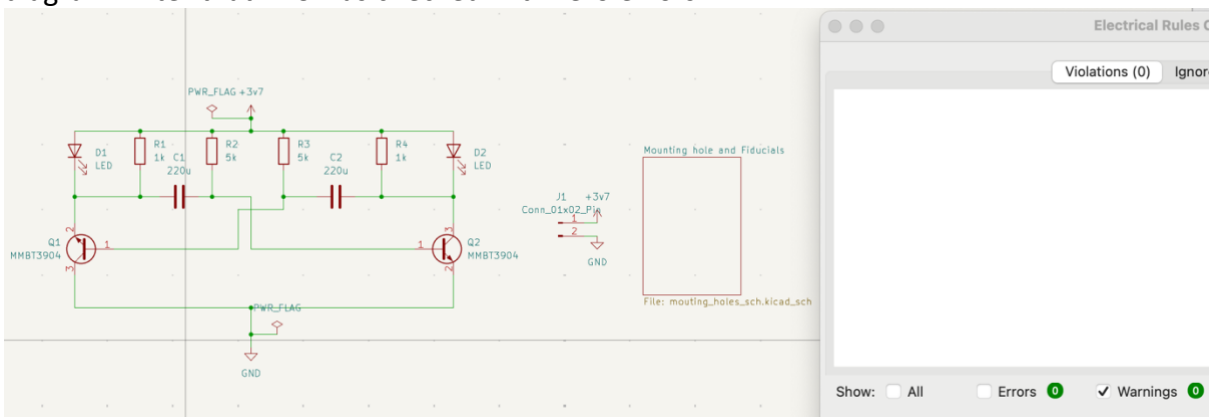
MD MASUM BISWAS

INTRODUCITON

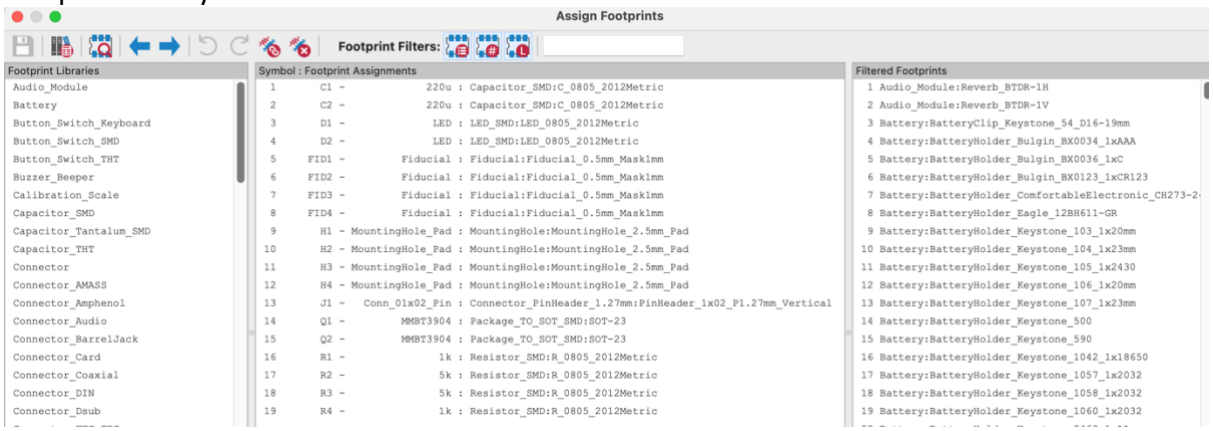
The assigned task was to design an astable multivibrator using KiCAD using SMD components and panelize the PCB, and finally upload it for the peer review. So, the task was done using the latest KiCAD version 9. And all the necessary files have been attached.

Methodology and Result

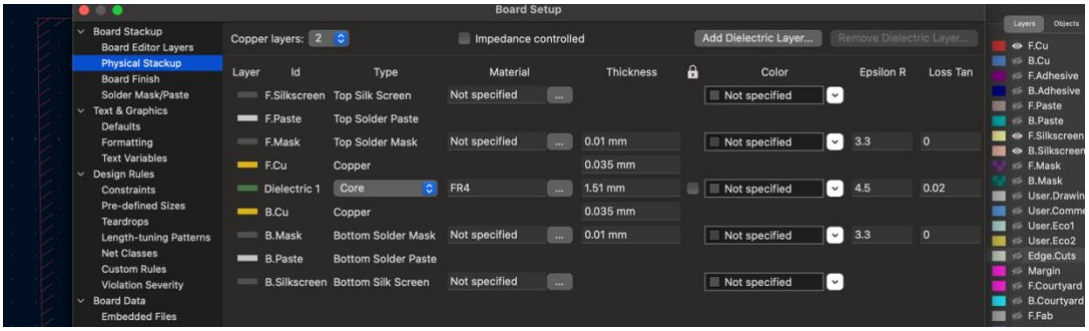
At first, the schematic was drawn using default grid settings according to the supplied circuit diagram. After that ERC was checked with zero errors.



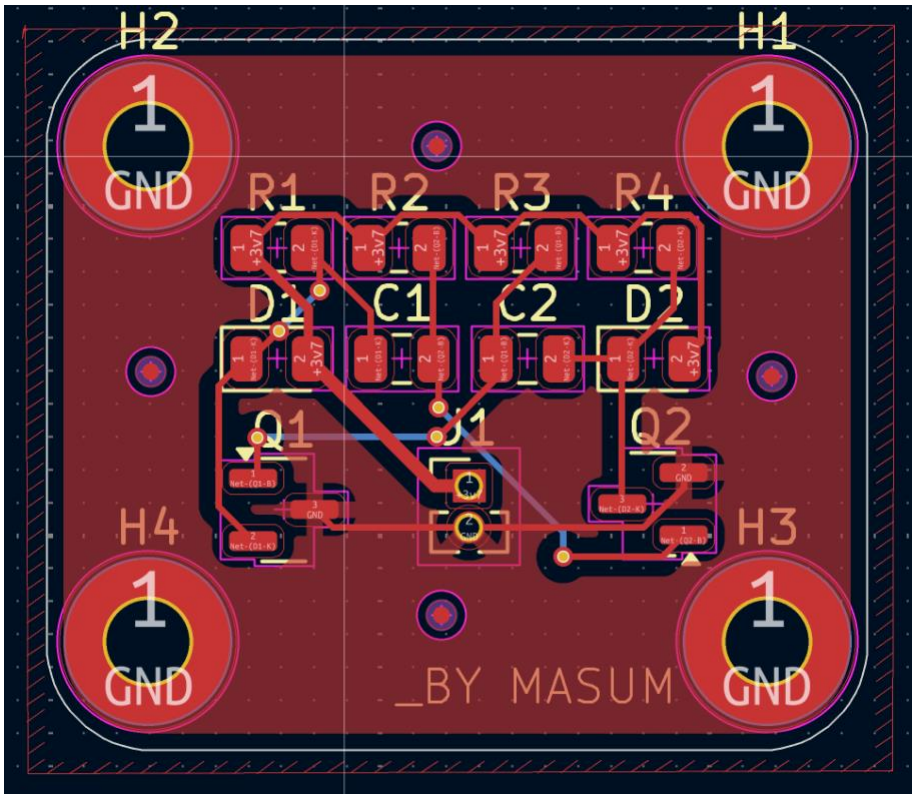
After completing ERC, the footprints were assigned to the schematic using the default KiCAD footprint library.

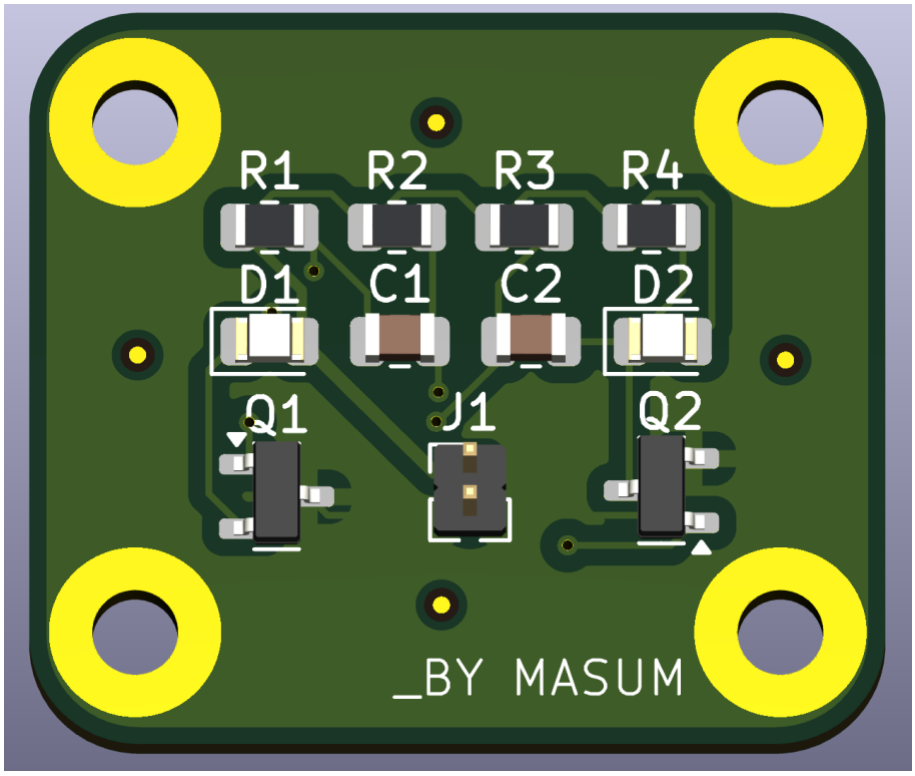


All the chosen components were SMD type, except for the connector pin, and were randomly selected. After the assignment of footprint, it was time for PCB layout design. Ever since that board setup was set to default values, mostly. A double-layer board was selected.

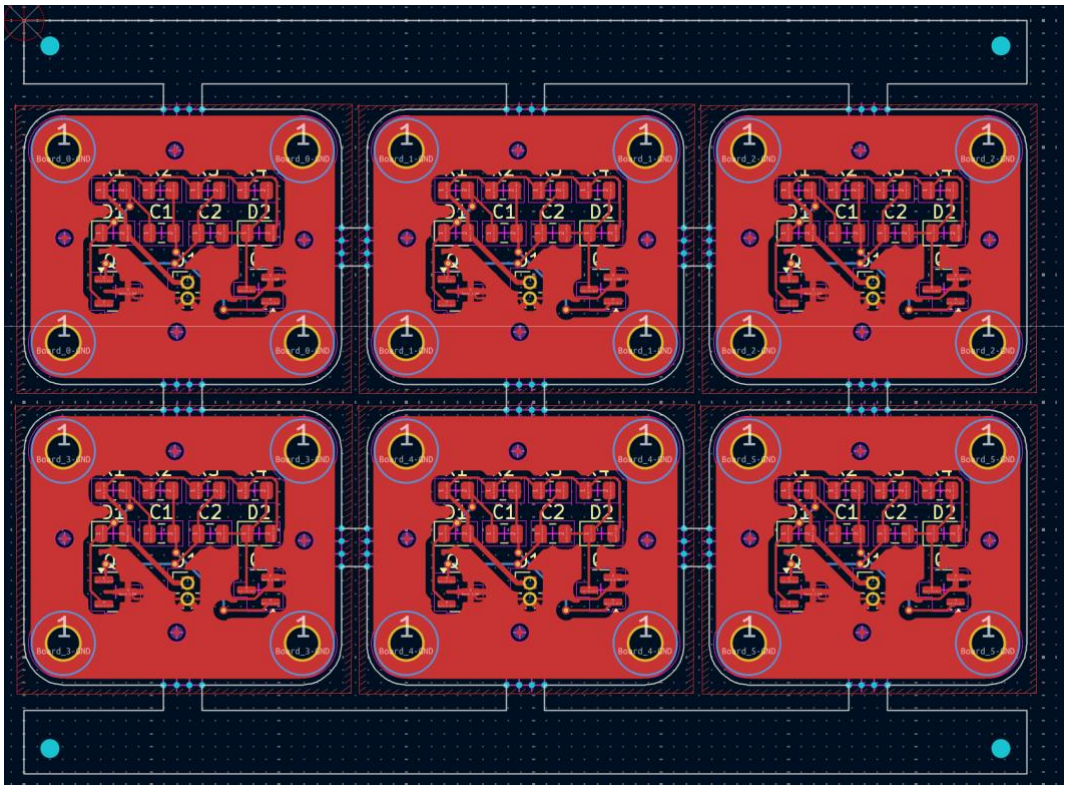


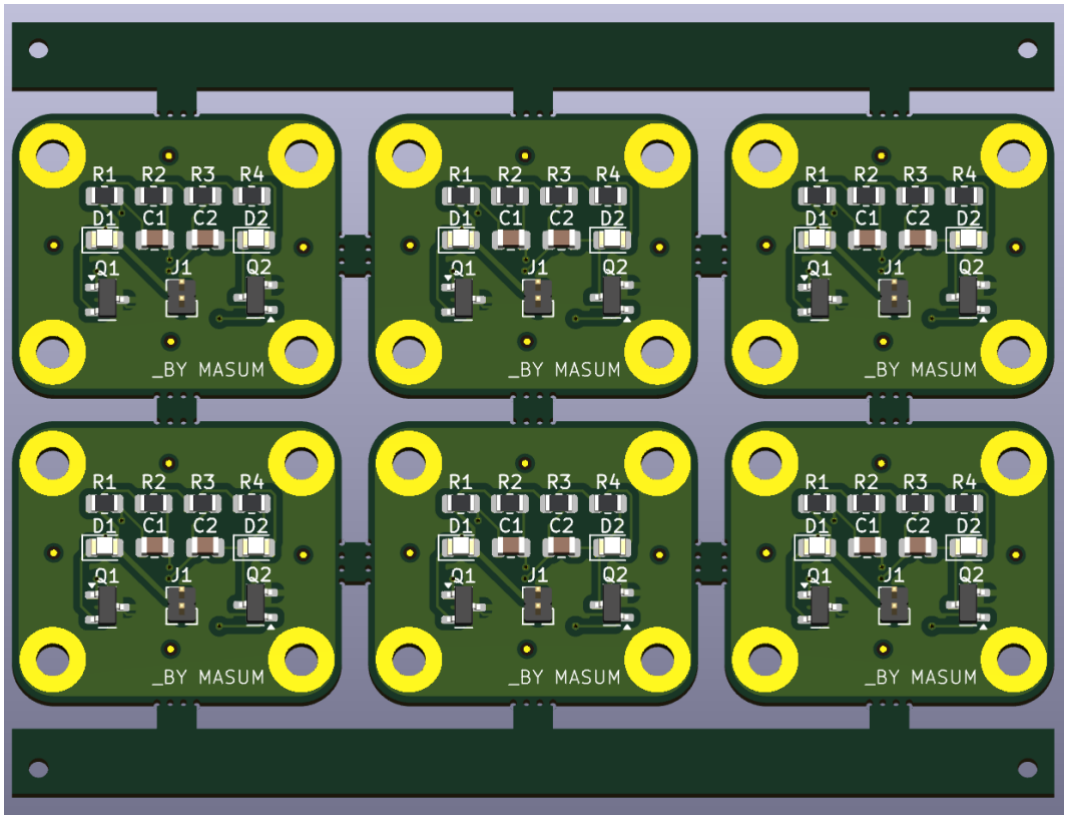
Components were updated to the PCB from the schematic page. Then all of them were placed accordingly. Then the edge cut zone was defined as it was asked to be a rounded corner type. Following that, the tracing was completed. I used three vias for the ease of tracing the copper. And for heat distribution, Copper fill was used with the GND net.





Finally, the PCB was panelized into a 2x3 grid using Mousebite connection. The panelization process was done using the Kikit plugin.





Panelized PCB 3D view.