LAB REPORT # 01

SPRING 2024

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"On my honor, as student of University of Engineering and Technology, I have neither given nor received unauthorized assistance on this academic work."

Student Signature: 

Submitted to:
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09/05/2024

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Objectives:

To learn about the basics of Proteus Software

To make and simulate some basic circuits

To make circuit in schematic, PCB and 3D layout.

Proteus:

- Proteus is used to simulate, design, and drawing of electronic circuits.
- It was invented by labcenter Electronics.
- By using Proteus you can make two-dimensional circuit designs as well.
- With the use of this engineering software, you can construct and simulate different electrical and electronic circuits on your personal computers or laptops.

Benefits:

There are numerous benefits to simulating circuits on Proteus before making them practically.

- Designing of circuits on the Proteus takes less time than practical construction of the circuit.
- The possibility of error is less in software simulation such as loose connection that takes a lot of time to find out connections problems in a practical circuit.
- Circuit simulations provide the main feature that some components of circuits are not practical then you can construct your circuit on Proteus.
- There is zero possibility of burning and damaging of any electronic component in Proteus.
- Electronic tools that are very expensive can easily get in Proteus such as an oscilloscope.
- Using Proteus you can find different parents of circuits such as current, the voltage value of any component, and resistance at any instant which is very difficult in a practical circuit.

TASK:

The task for today lab is to make circuit in schematic then on PCB layout which is

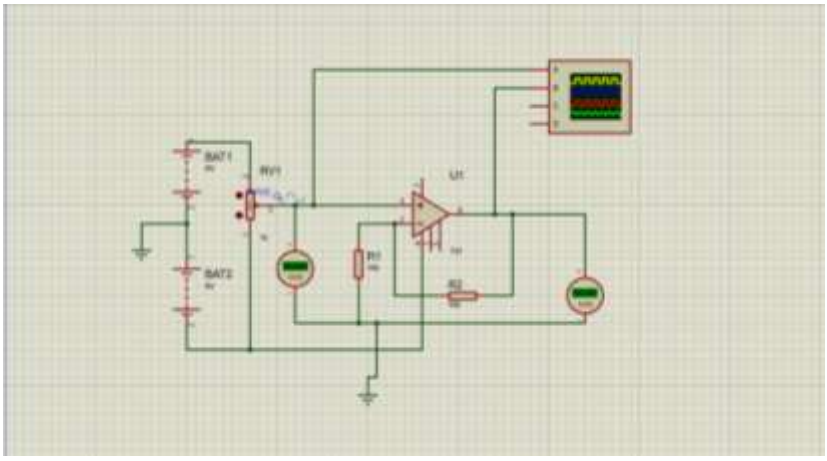

Figure 1(before running oscilloscope)

After running oscilloscope the voltmeter as well as oscilloscope will give reading

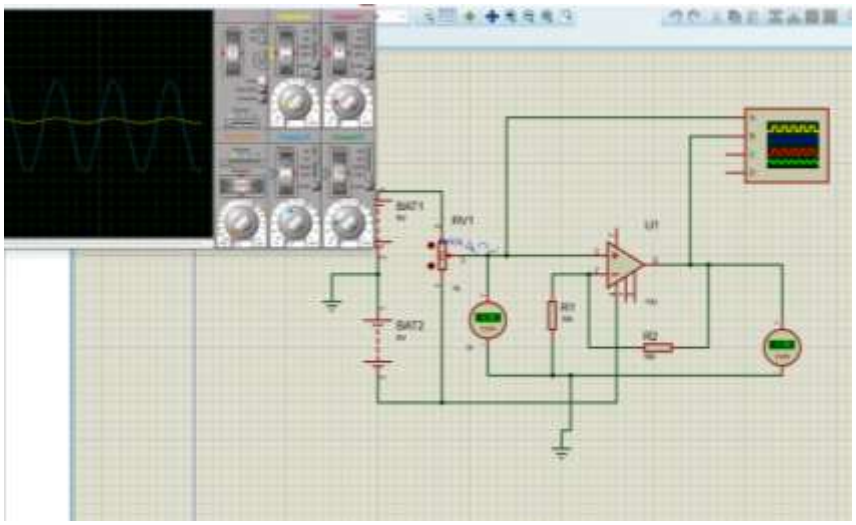

Figure 2(After running oscilloscope)

PCB LAYOUT:

Now in PCB layout the circuit I made is

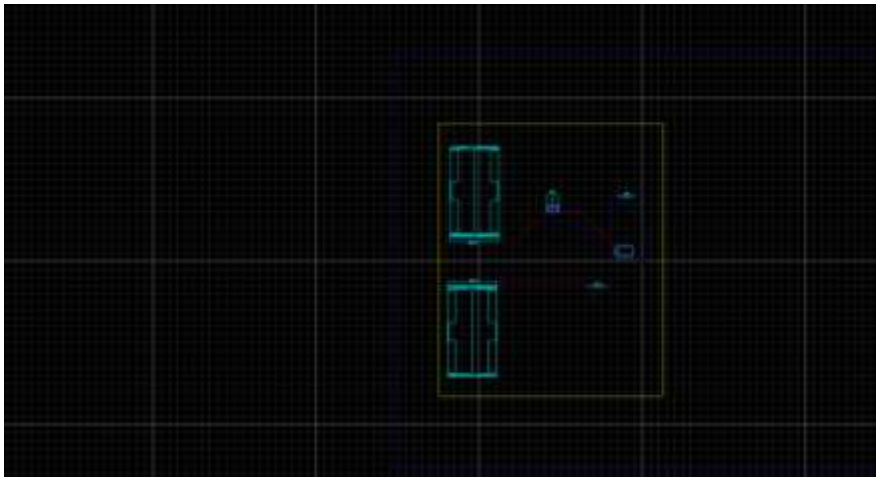

Figure 3(pcb layout)

3D LAYOUT:

Now in 3d view the given circuit look like

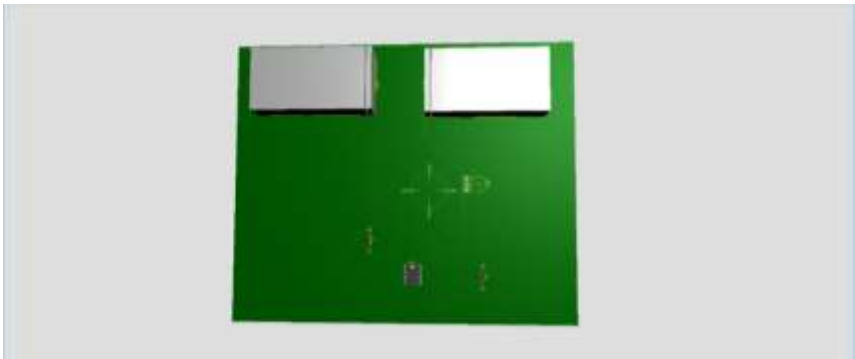

Figure 4(3d layout top view)

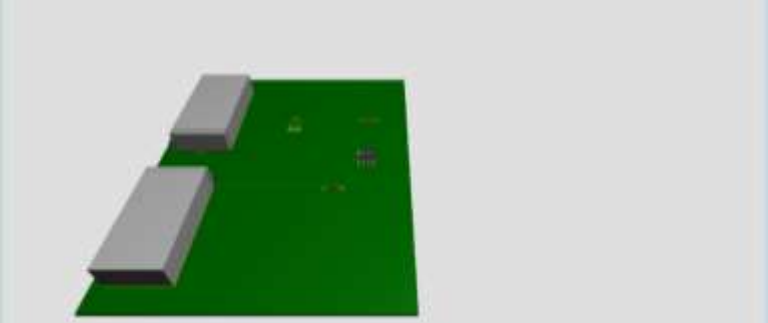

Figure 5