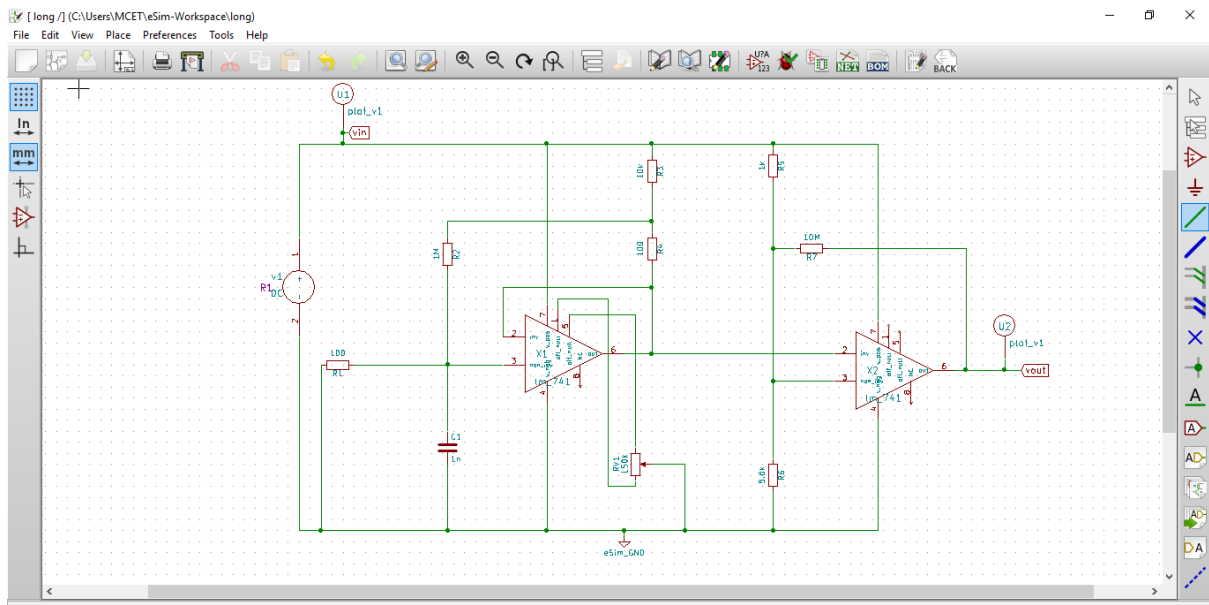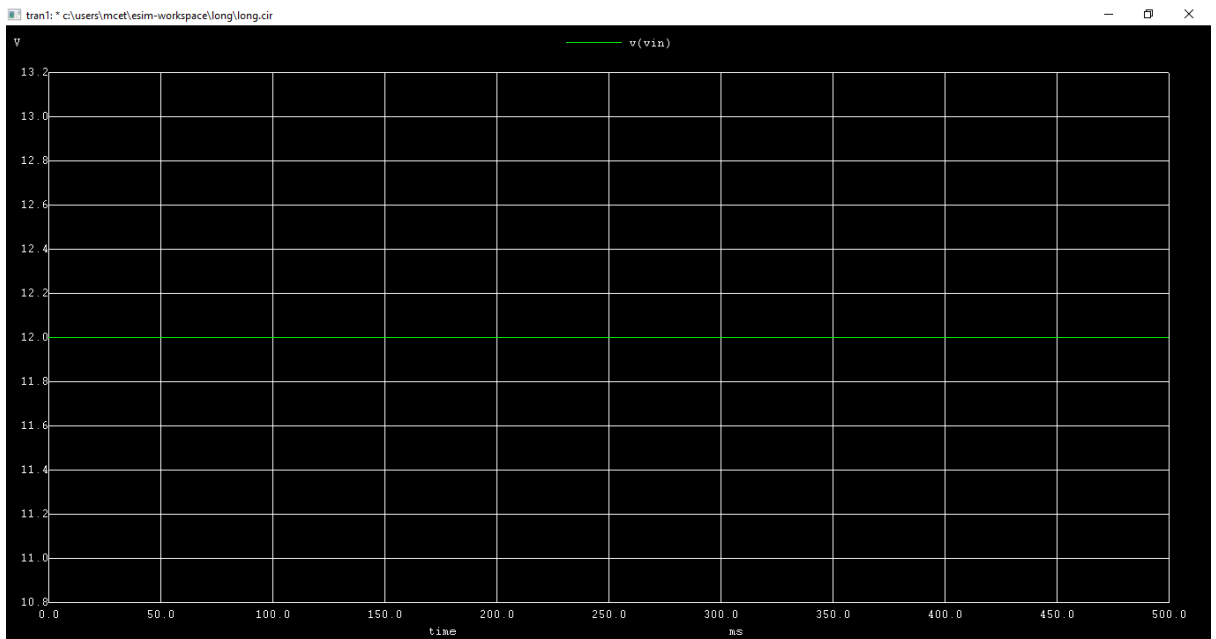# SIMPLE LONG DURATION TIMER CIRCUIT

THEORY:

If we need to build a RC timer circuit, we use too many resistors and capacitors, which is large. So that we are using opamp to build a timer circuit. This circuit allows the RC time constant of the time up to 100 times ever. In principle, reducing the current that uses charge to the capacitor, so will cause the voltage to rise up slowly. While the capacitor c1 discharged out, it causes IC1 as 0volt and the output of IC2 is higher. If the capacitor c1 is charged through resistor R2, then C1 is charged fully and a constant voltage occurs. Where now IC1 becomes higher and IC2 becomes 0volt. As the output voltage will be a constant one.
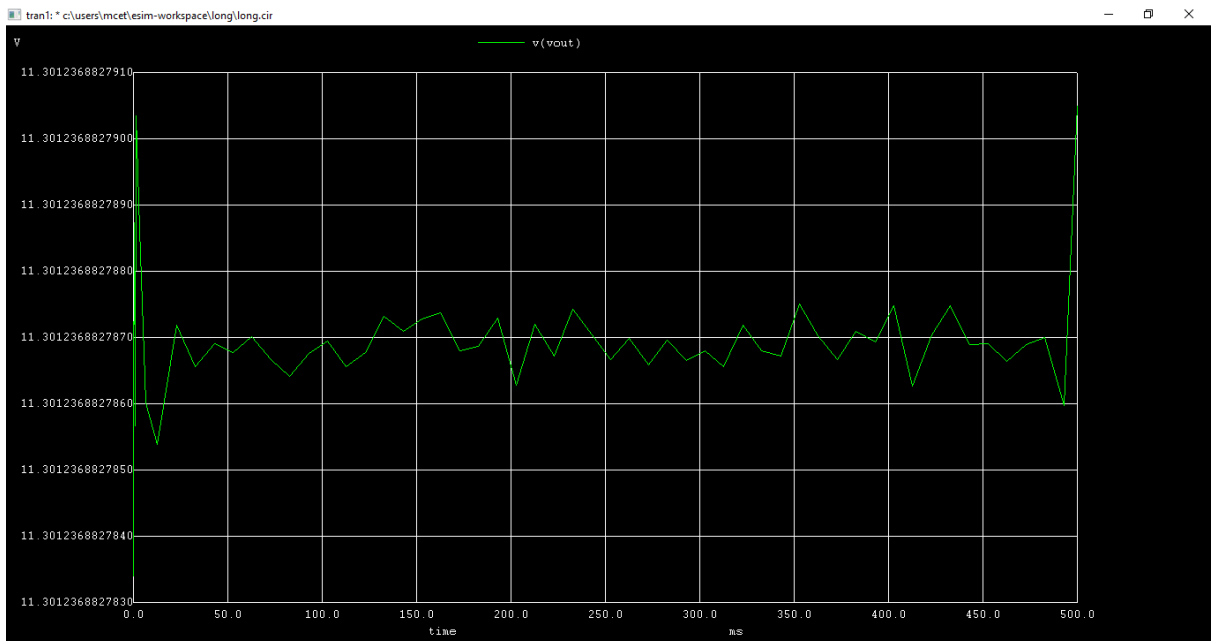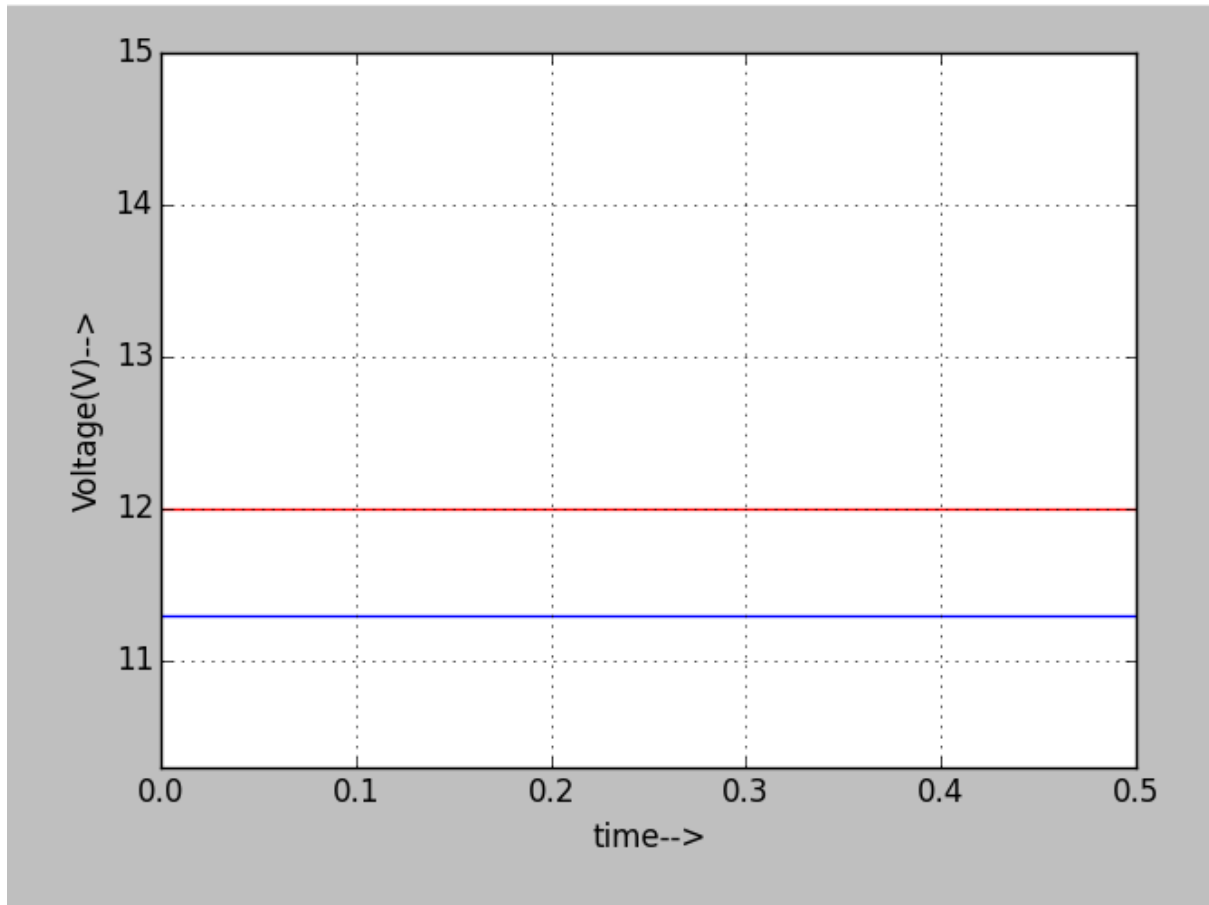
CIRCUIT DIAGRAM:

NGSPICE GRAPH:

❖ INPUT

❖ OUTPUT

PYTHON PLOT:

CONCLUSION:

Thus we have we have studied the response of simple long duration timer circuit and we get appropriate waveforms.

REFERENCE: https://www.eleccircuit.com/simple-long-duration-timer-using-op-amp-ics/