East West University

Course Information

Course Title: Electrical Circuits

Course code: CSE251

Section: 6
Course Instructor: **Touhid Ahmed**

Senior Lecturer,

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Student's Information

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Department: Computer Science & Engineering

Semester: Fall 2020

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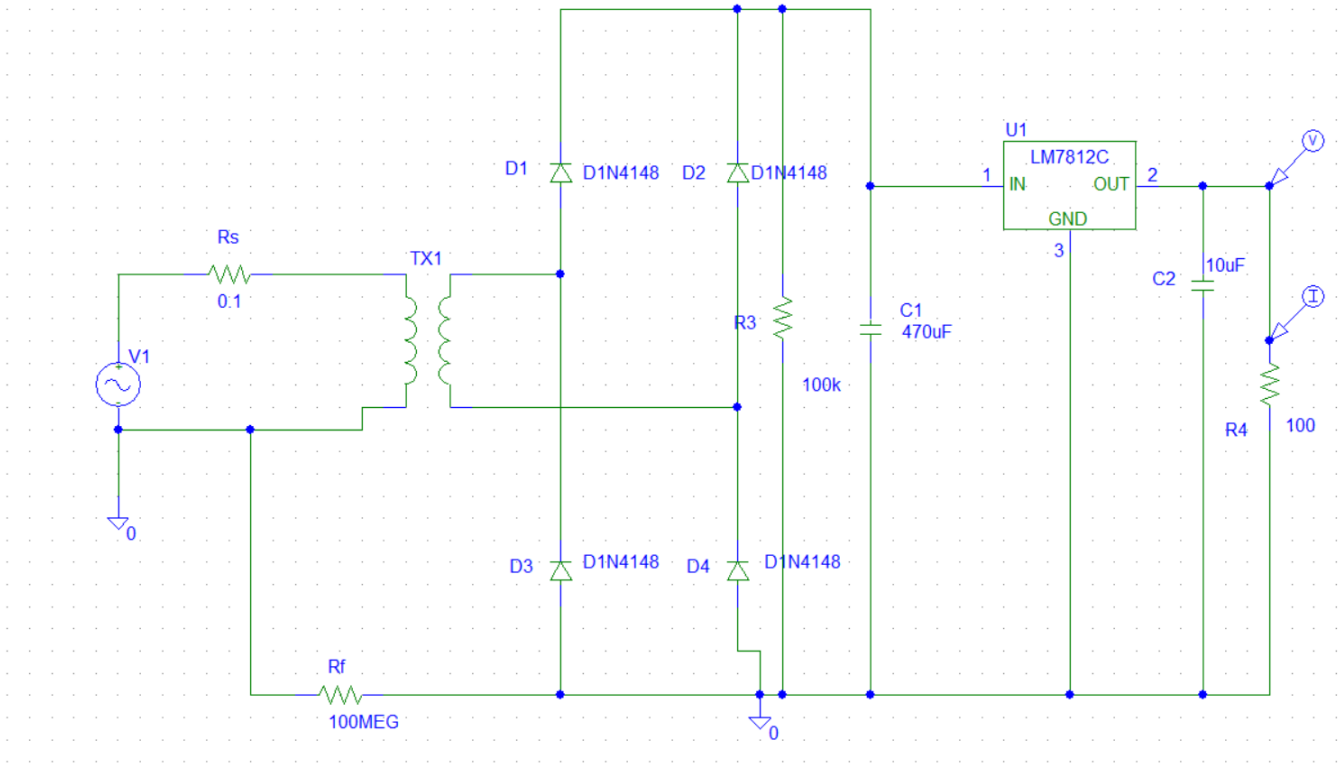
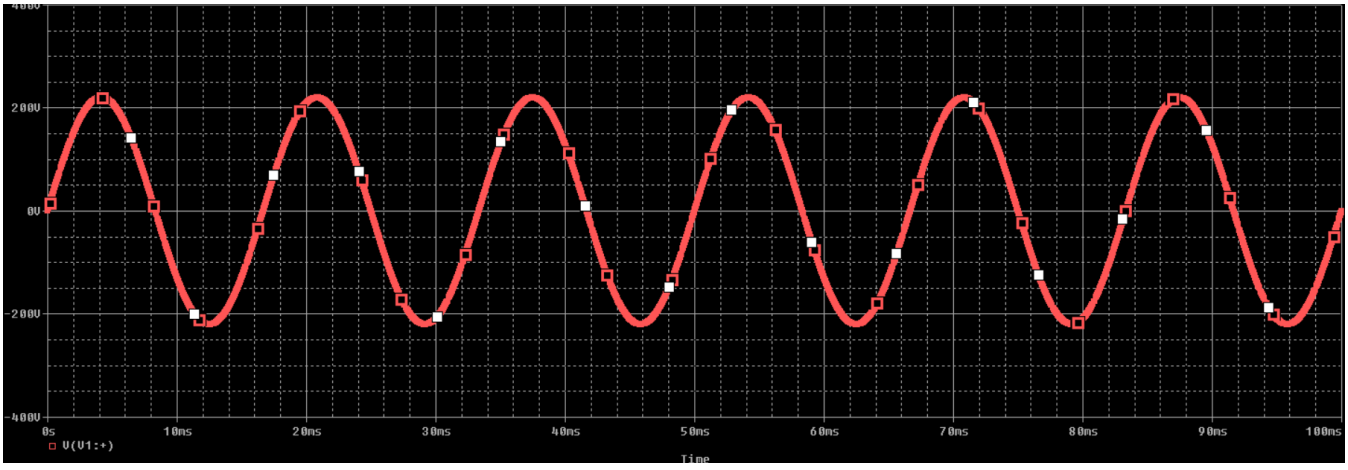
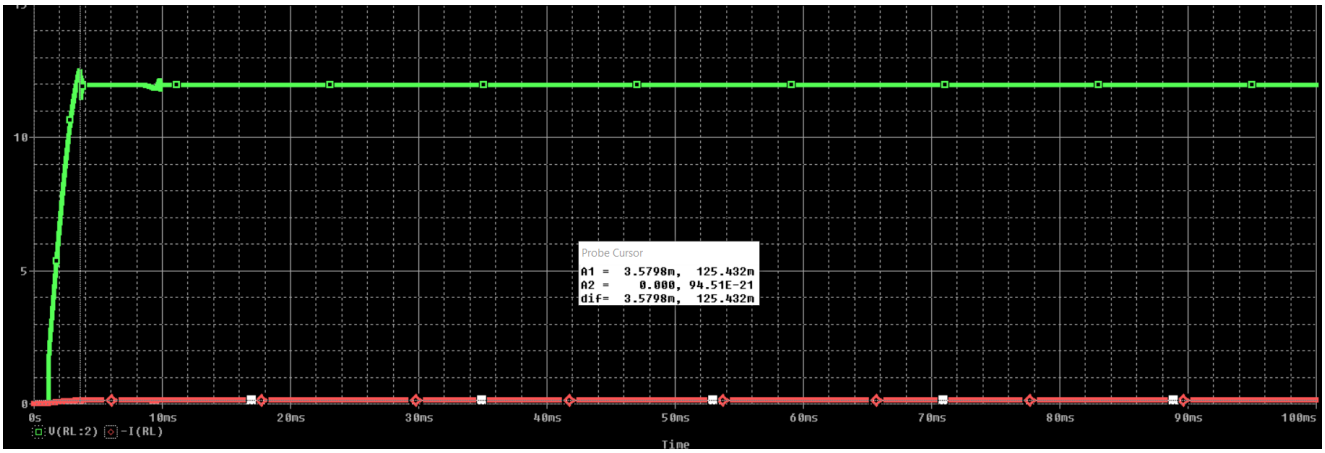
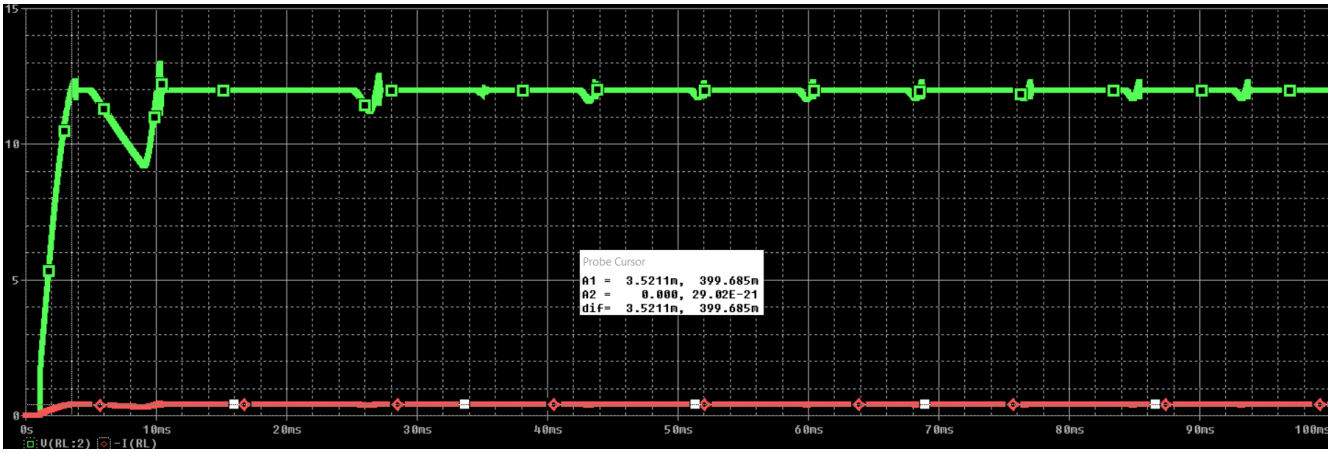
Mini project

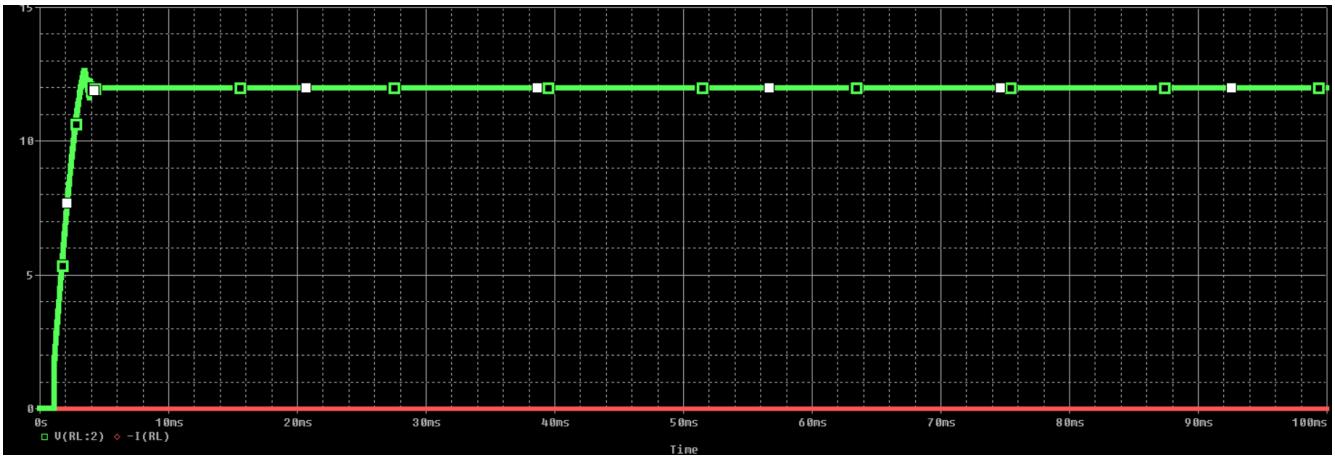
Circuit Figure:






Probe Cursor
A1 = 3.5798m, 125.432m
A2 = 0.000, 94.51E-21
dif= 3.5798m, 125.432m
10
5
0
0s
10ms
20ms
30ms
40ms
50ms
60ms
70ms
80ms
90ms
100ms
V(RL:2)
-I(RL)
Time


Probe Cursor
A1 = 3.5211m, 399.685m
A2 = 0.000, 29.02E-21
dif= 3.5211m, 399.685m
15
10
5
0
0s
10ms
20ms
30ms
40ms
50ms
60ms
70ms
80ms
90ms
100ms
V(RL:2)
-I(RL)


15
10
5
0
0s
10ms
20ms
30ms
40ms
50ms
60ms
70ms
80ms
90ms
100ms
V(RL:2)
-I(RL)
Time

Comment on the effect of changing RL on the performance:

In this simulation if we change RL value higher value to small value, we got better result then previous.

Purpose of diodes:

The four diodes which used in circuit to convert the output voltage across the transformer. The diodes are an essential part of the AC to DC conversion circuit by which we can make a bridge converter.

Purpose of transformer:

In the particular experiment a step-down transformer is being used to a high voltage such as 220V to a very low voltage. The ratio of coil might be very high like 16:9:1. So the voltage out forms the transformer became very low.

Purpose of R1 and C1:

As we want a DC voltage output as a linear step line so here the capacitor C1 used. And to get a good line the capacitor must be relaxed. But in software simulation it is not possible to relax a capacitor so that here we are using a resistor R1 to neutralize the capacitor.