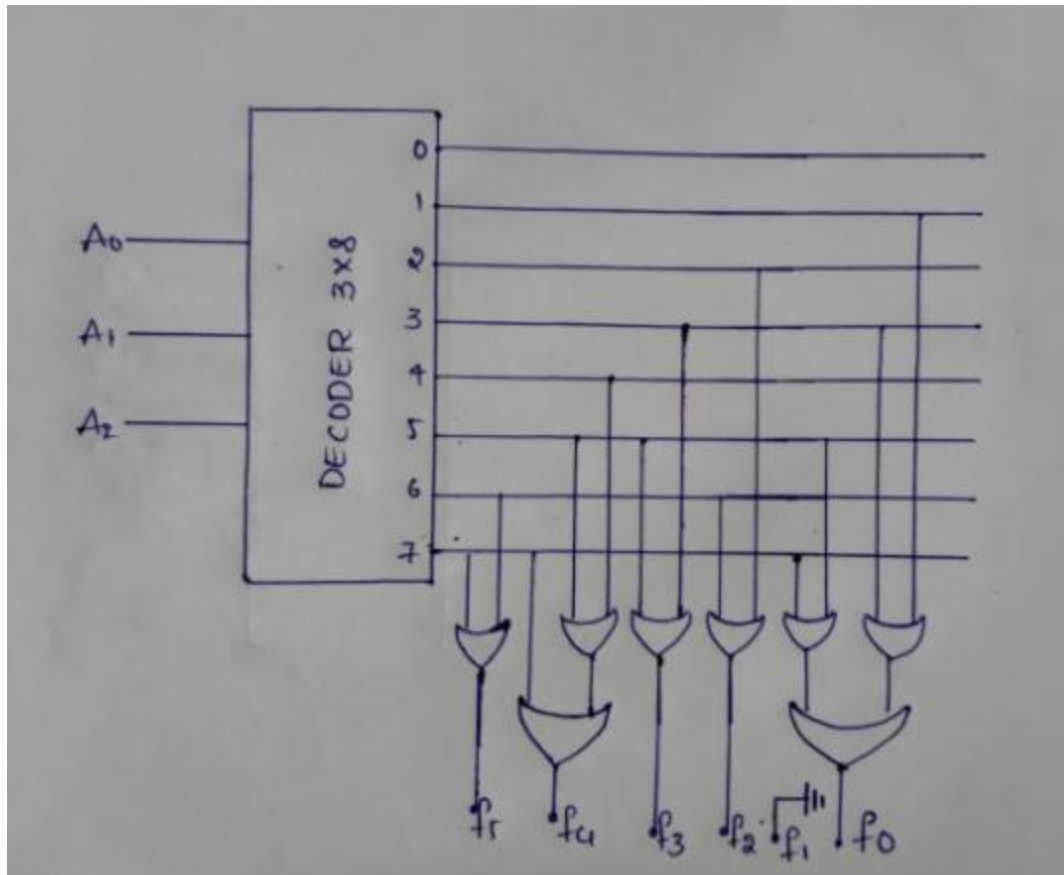


Name of the participant: Bharathi Eepuri

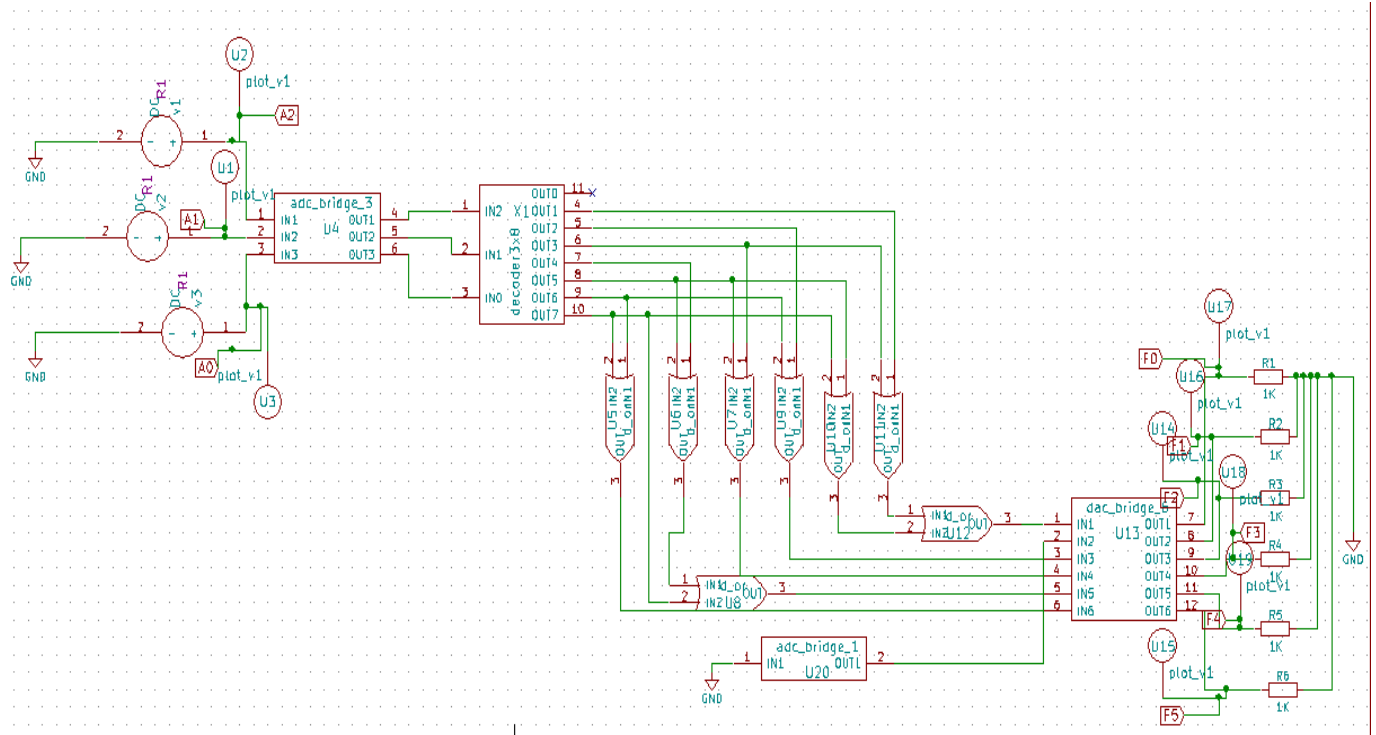
Title of the circuit: Square of 3 bit binary number

Theory: The circuit takes 3 bit binary number as input and gives the square of the number in binary as output. The circuit uses 3x8 decoder.

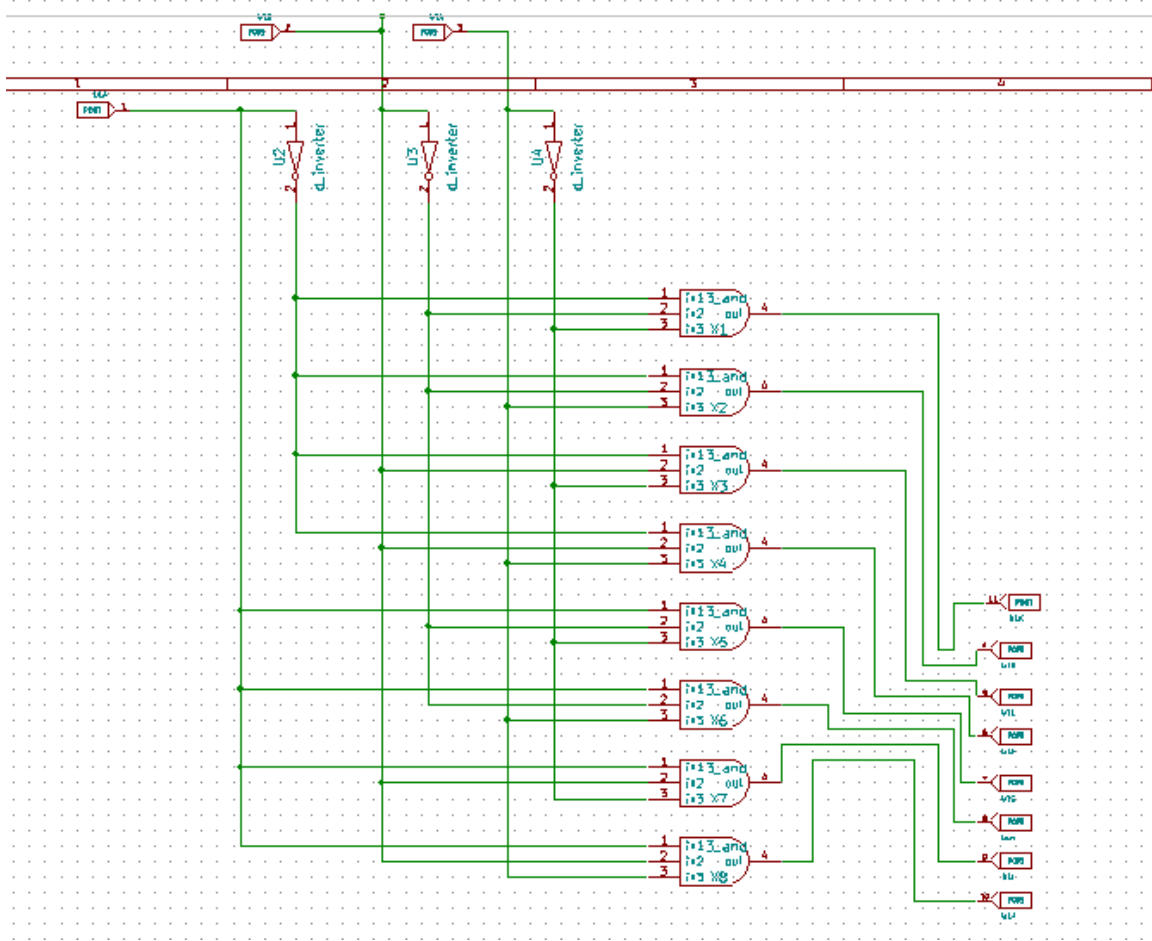
Circuit Diagram:



Schematic:



3x8 deocder subcircuit:



Ngspice kicad:

Analysis Source Details **Ngspice Model** Device Modeling Subcircuits

Add parameters for DC source v3

Enter value(Volts/Amps):

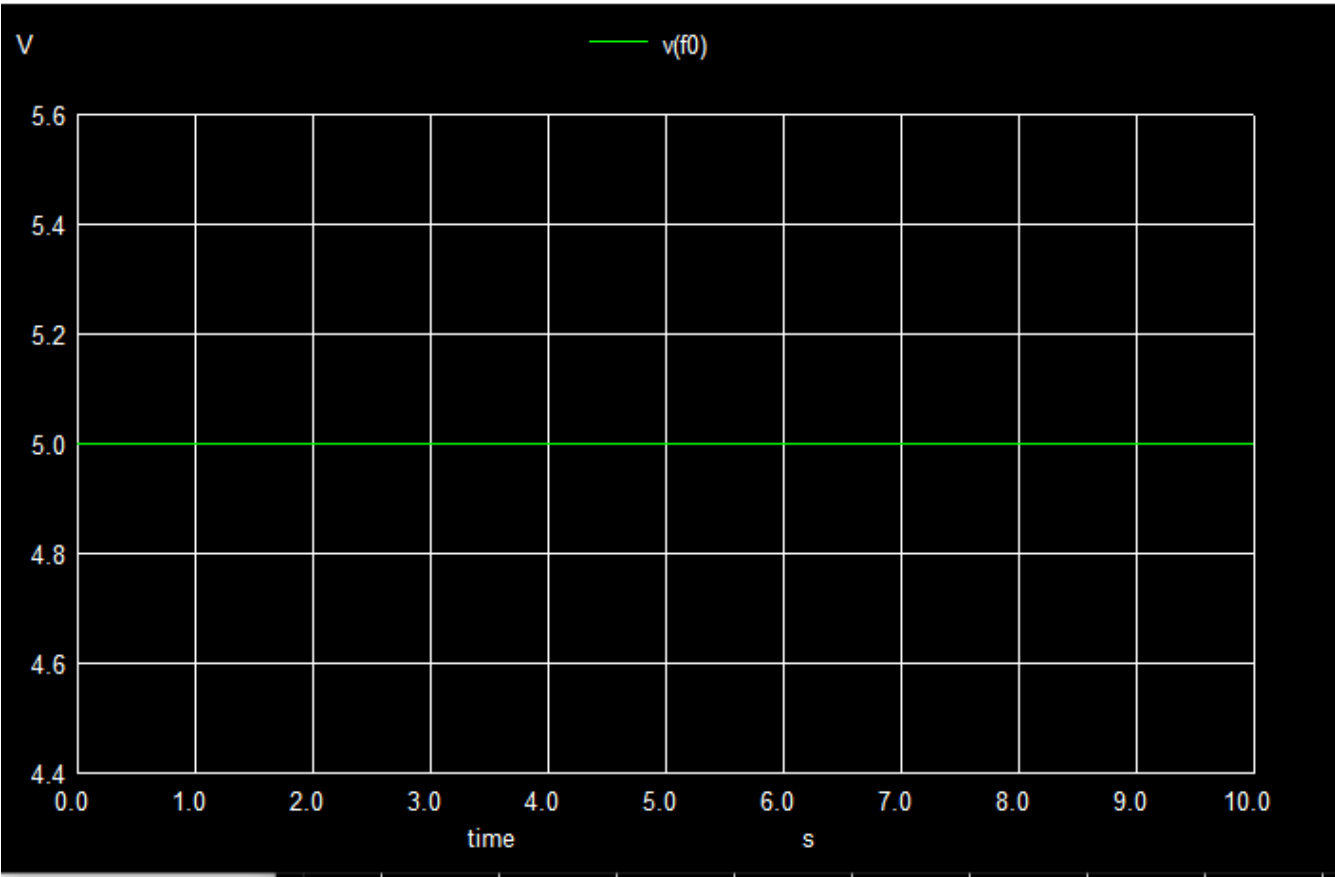
Add parameters for DC source v2

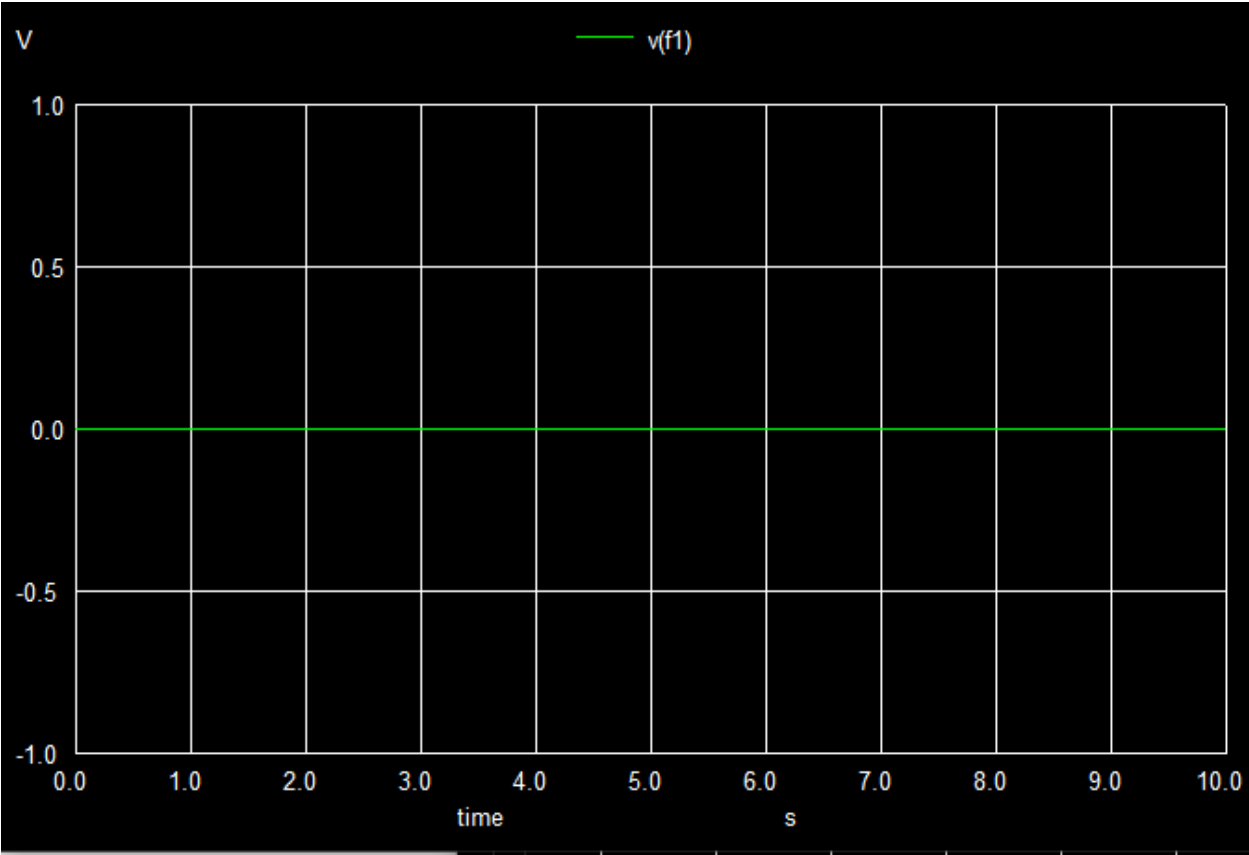
Enter value(Volts/Amps):

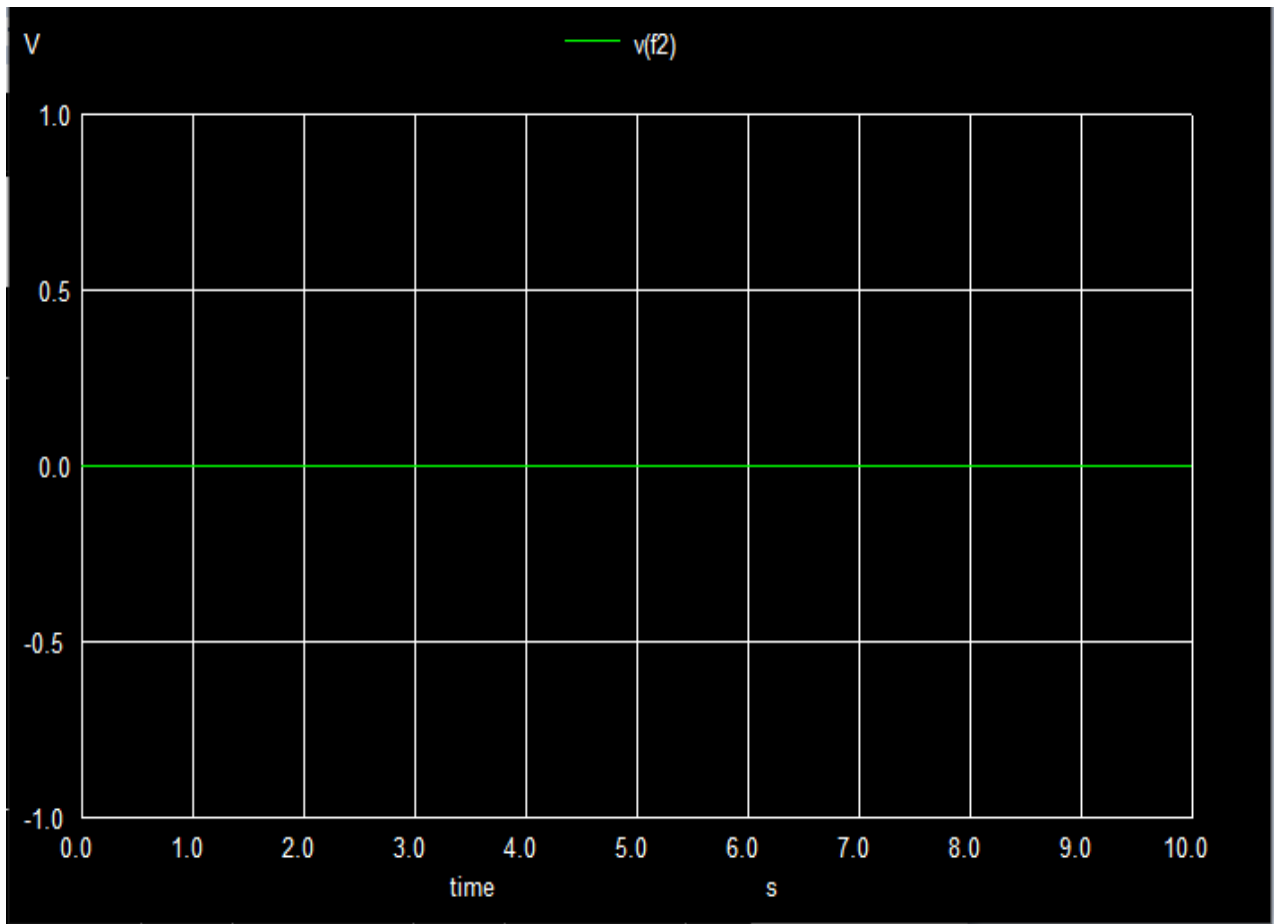
Add parameters for DC source v1

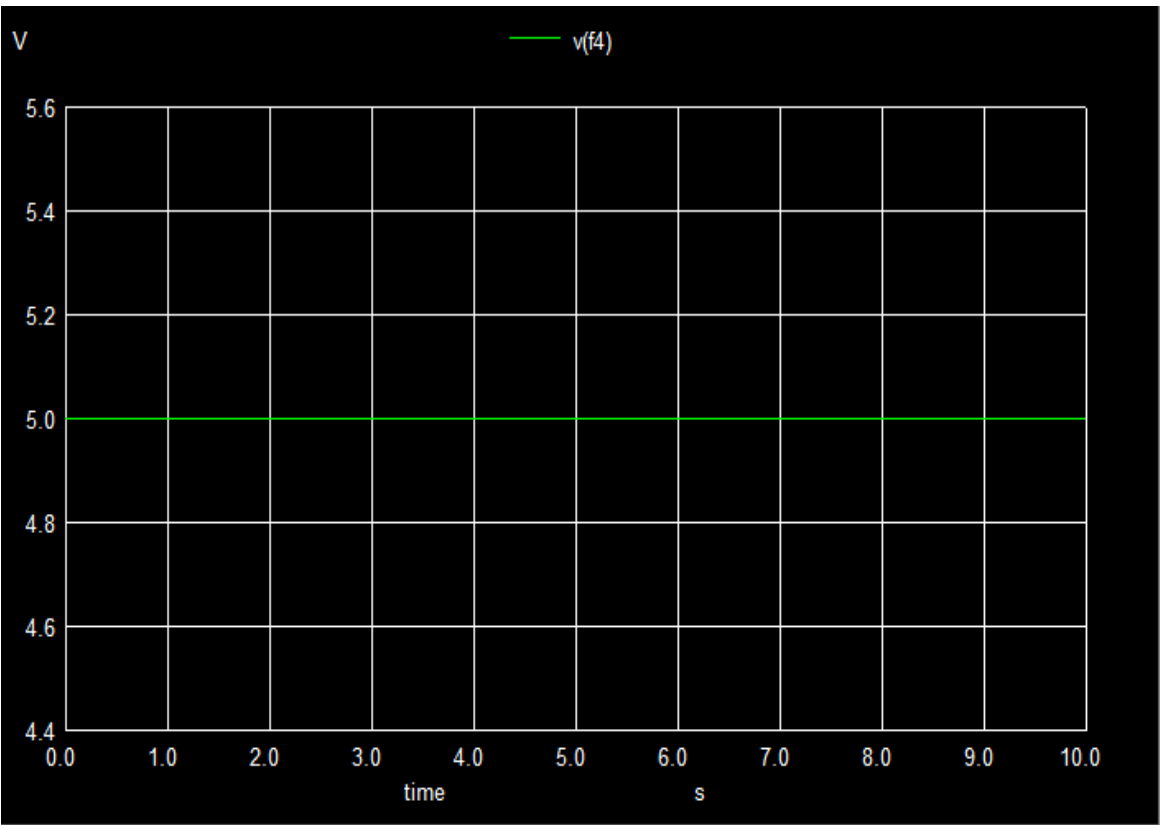
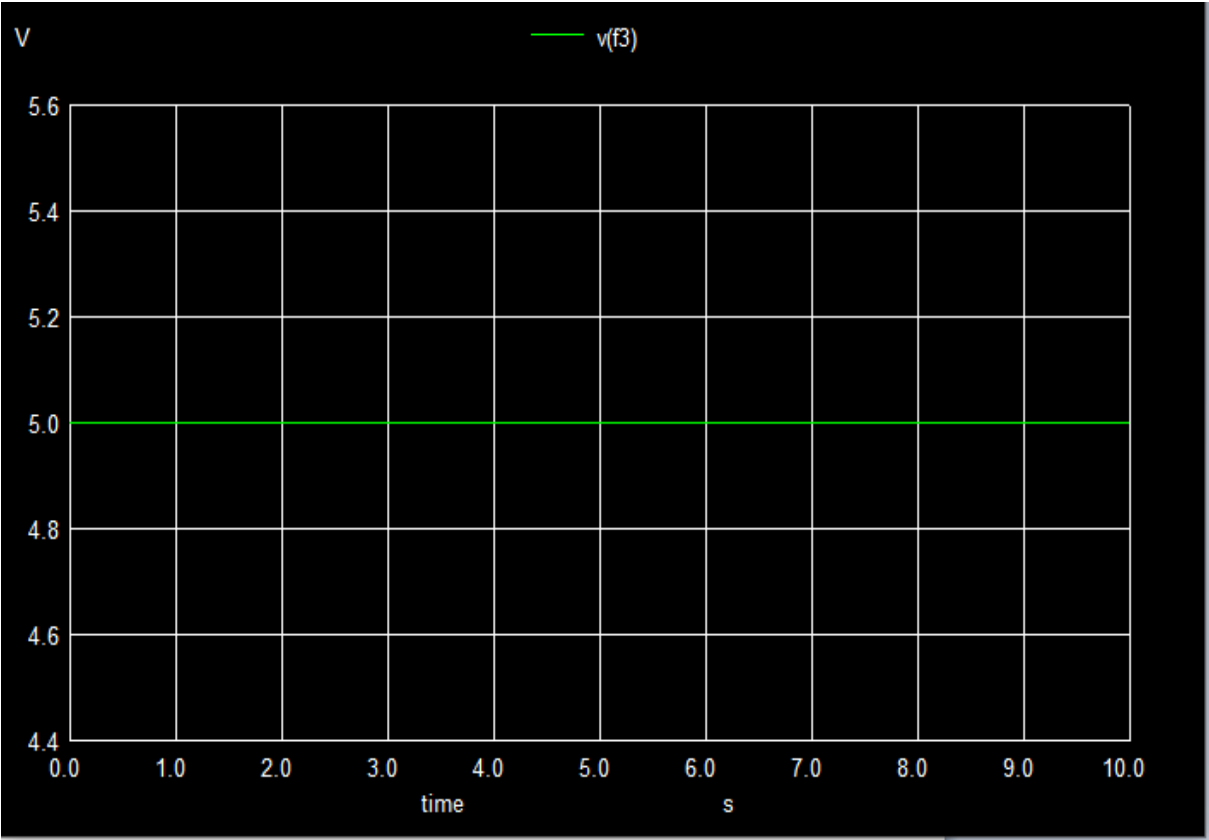
Enter value(Volts/Amps):

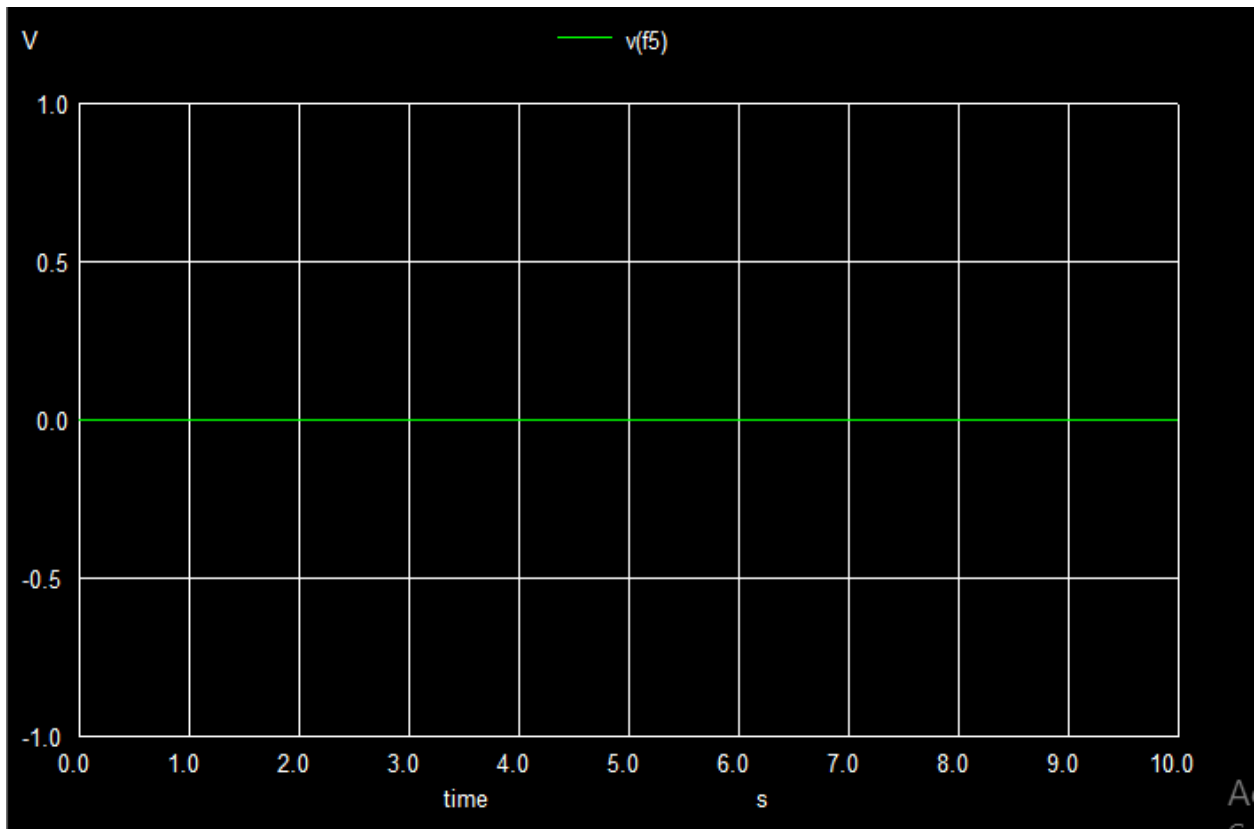
Ngspice Plots:











Reference: Digital design by Moris mono.