

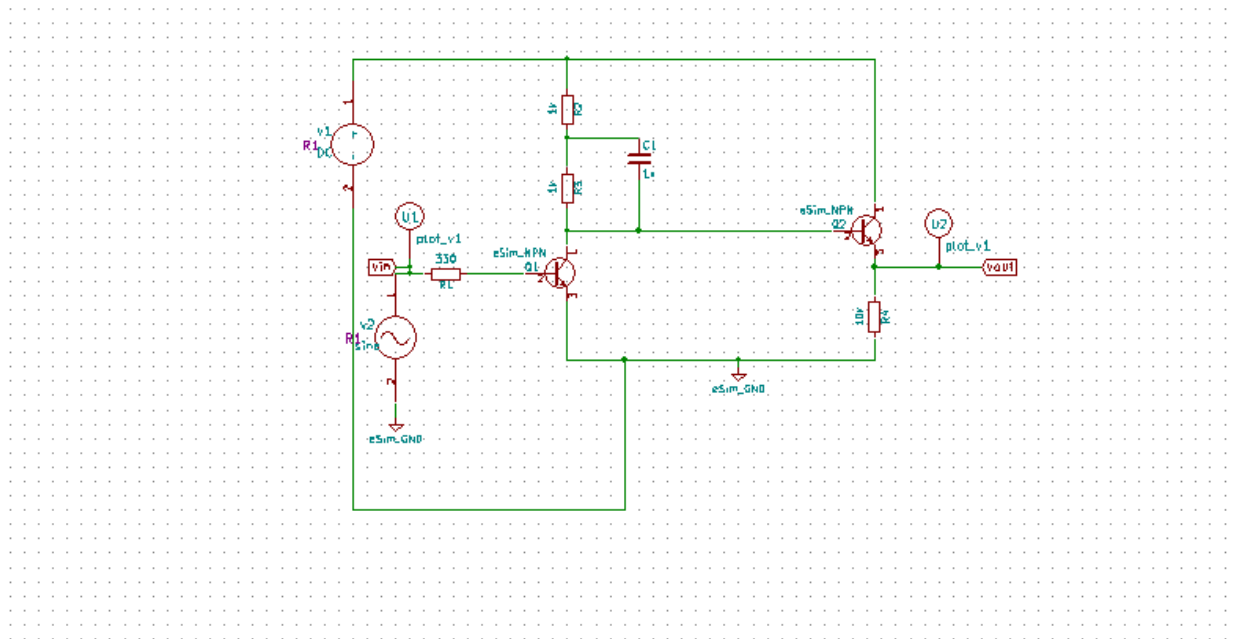
## TITLE OF THE EXPERIMENT:

# BOOT STRAP AMPLIFIER USING BJT

## THEORY:

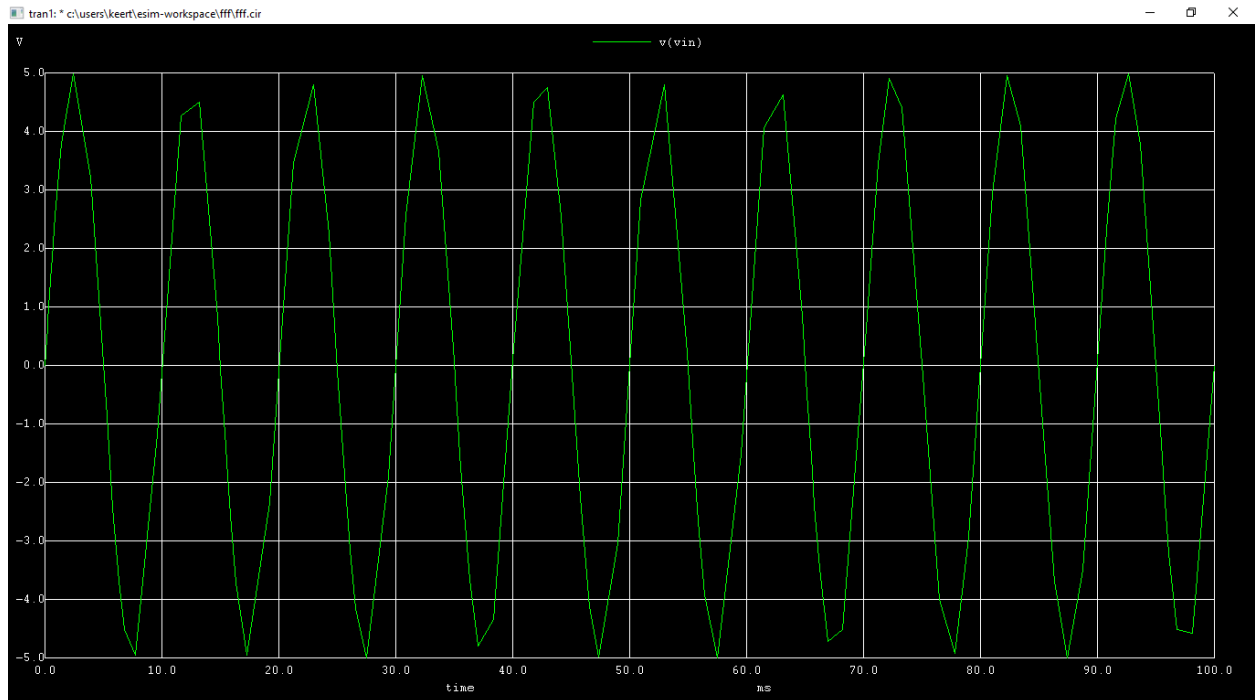
Bootstrap amplifiers are used to increase the input impedance and it also rejects the unwanted noises due to which the loading effects also decreases. This circuit uses positive feedback for improving the effective value of the base resistance. When the base of the transistor Q1 is high and point B is low, the capacitor charges up to the value of voltage across R2. When Q1 goes low and voltage start increasing at the base of Q2, the capacitor discharges slowly. The charge into C1 is drained by the resistor R1 and R2. Rising the voltage at one end of the capacitor will increase the voltage at the other end of the capacitor is called bootstrapping .Important thing is, Bootstrapping technique can only be used if the RC time constant is more in comparison to the single period of the drives signal.

## SCHEMATIC CIRCUIT DIAGRAM:

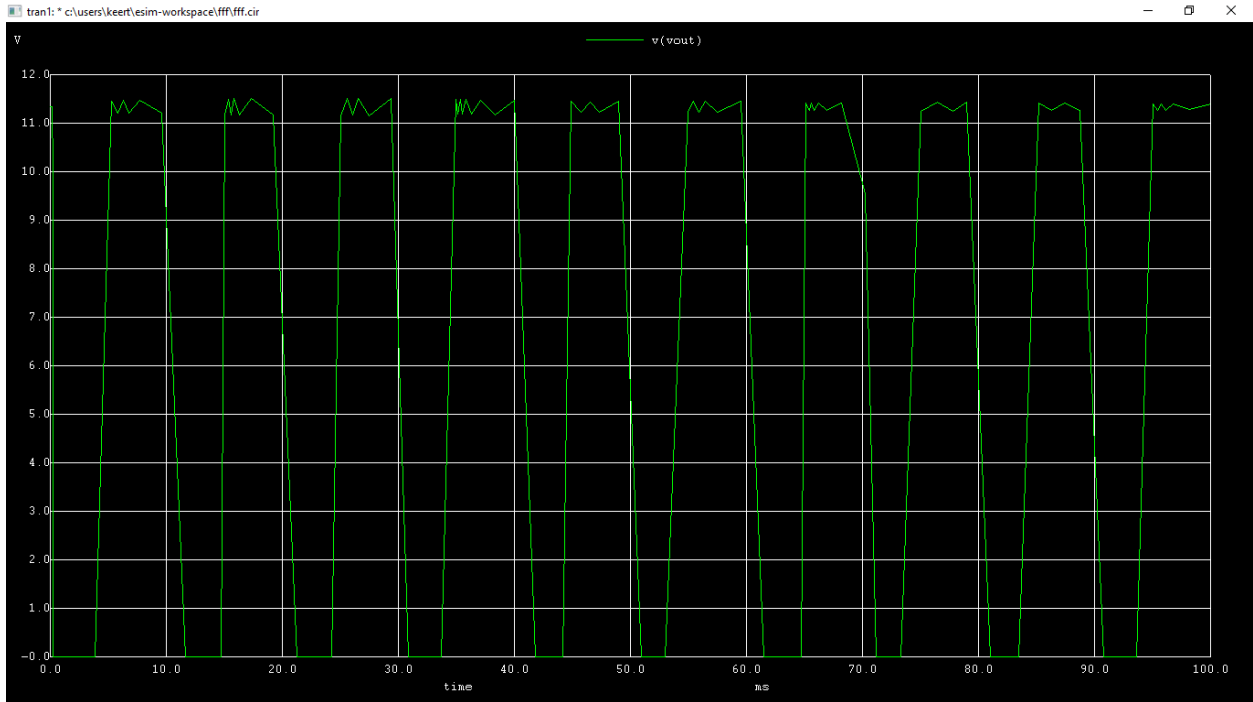


## STIMULATION RESULTS:

## NGSPICE INPUT GRAPH:



## NGSPICE OUTPUT GRAPH:



### PYTHON PLOT:

