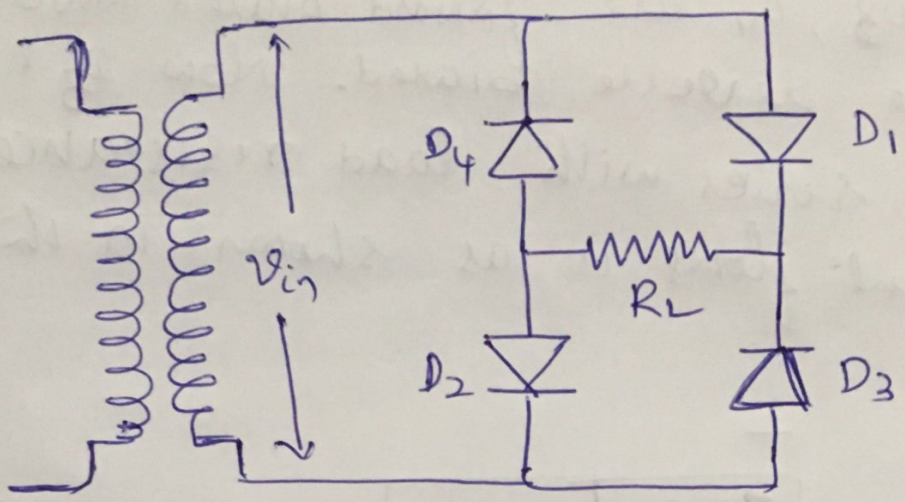
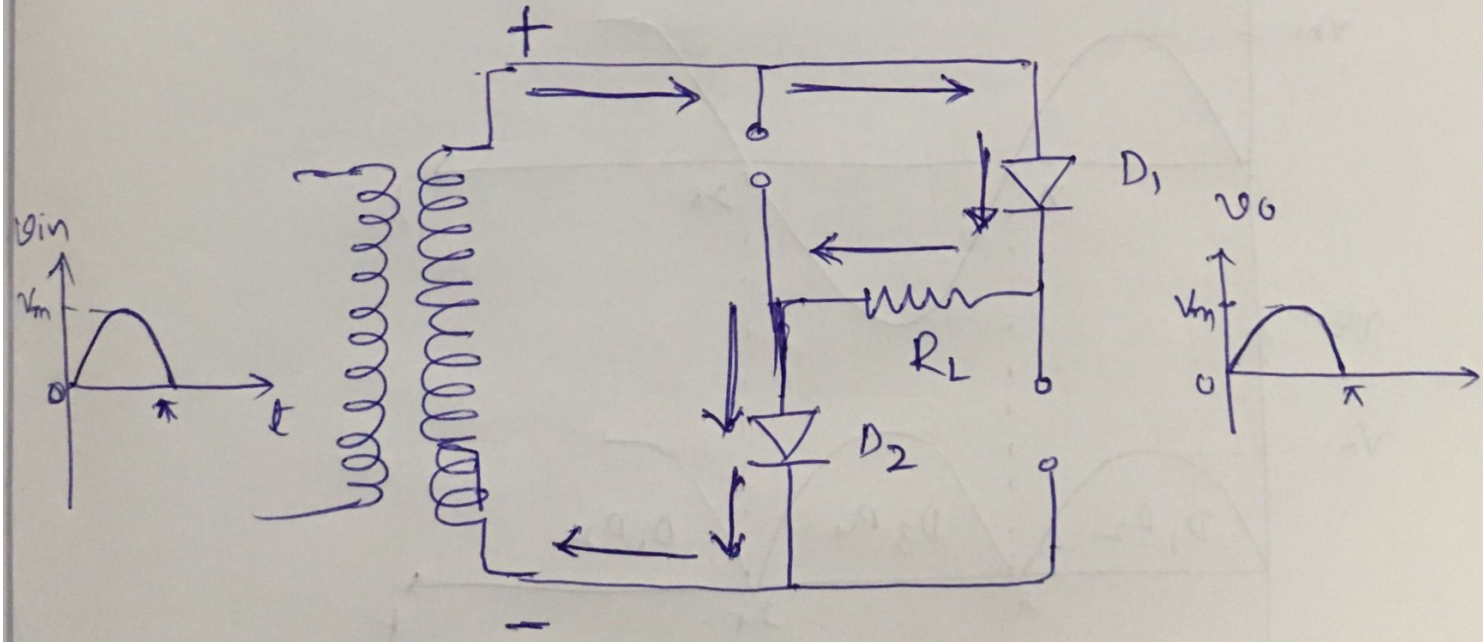
# Bridge Rectifier

The fig shows the circuit diagram of full wave bridge rectifier let the input Voltage to the ~~transformer~~ Rectifier be

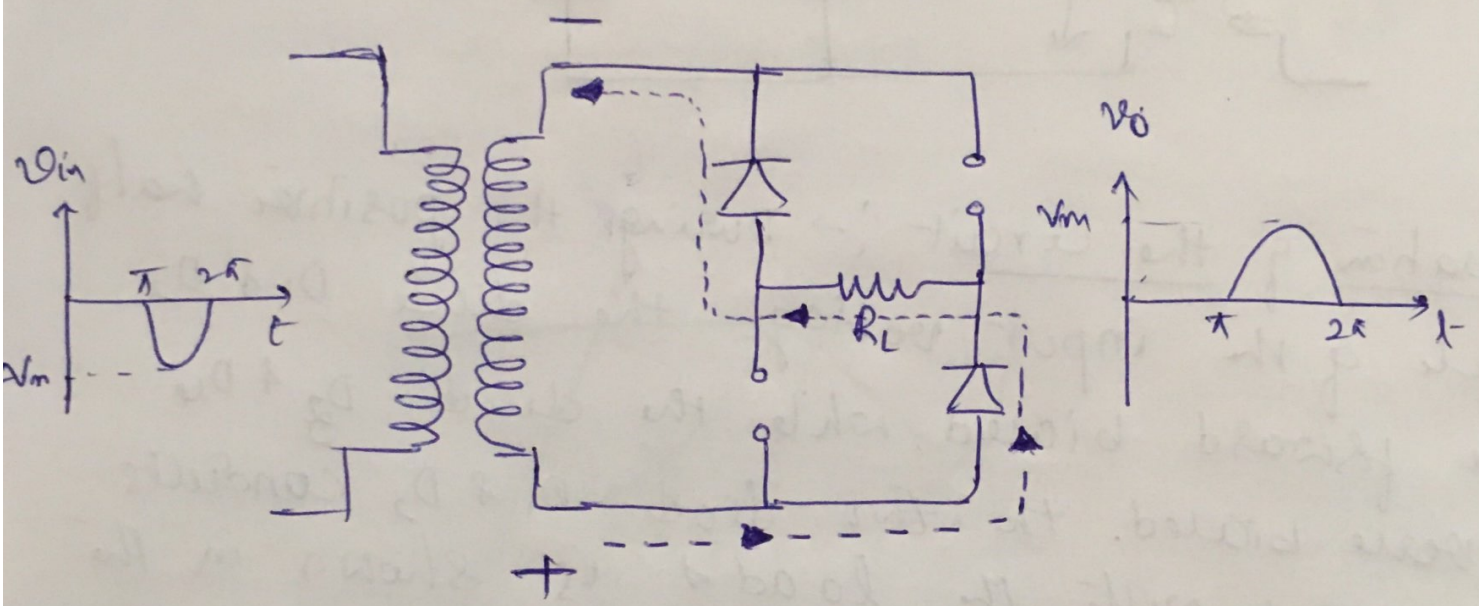
$$v_{in} = V_m \sin(\omega t) \qquad 0 \leq \omega t \leq 2\pi$$




Operation of the circuit :→ During the positive half cycle of the input voltage the diode $D_1$ & $D_2$ are forward biased, while the diode $D_3$ & $D_4$ reverse biased. the two diode $D_1$ & $D_2$ conducts in series with the load & is shown in the figure



During Negative half cycle of ip voltage the Diode $D_3$, $D_4$ are forward biased while Diode $D_1$ & $D_2$ are reverse biased. Now $D_3$ & $D_4$ conducts in series with load resistance $R_L$ & the current flows is as shown in the figure




Waveform