Lab experiment: Part-1 RC circuits frequency response

1. Try to finish this part in the first hour.
2. Connect the RC circuit shown in Fig.1. Note: R=1KΩ and C=1μF
3. Observe input and output voltage waveforms for V_{in} = 10Vpp, 50Hz sinusoidal signal, R=1KΩ and C=1μF.

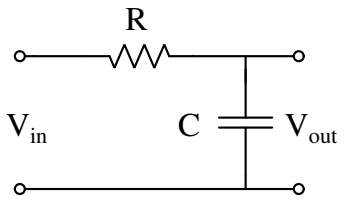

Figure 1: RC circuit

4. Vary the frequency of V_{in} from 50Hz to 50kHz with appropriate steps and measure V_{out} and phase difference between V_{out} and V_{in} keeping the magnitude of V_{in} constant.
5. Plot the frequency response (log magnitude and phase w.r.t. log frequency).
6. Explain your observations in the report.