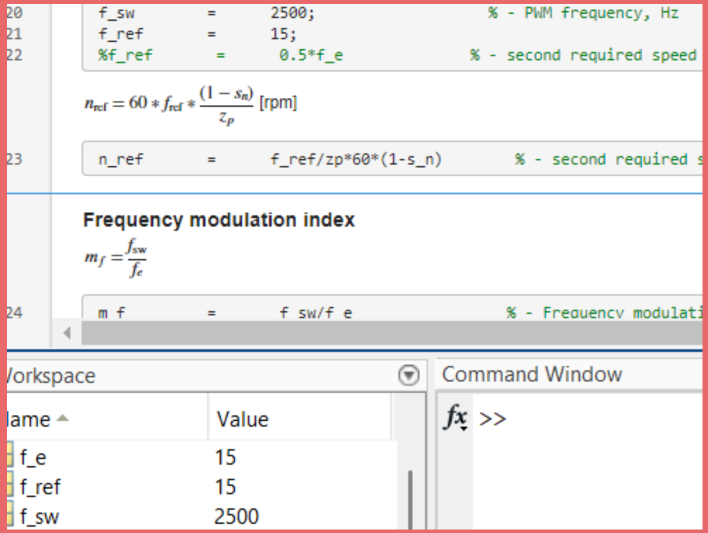
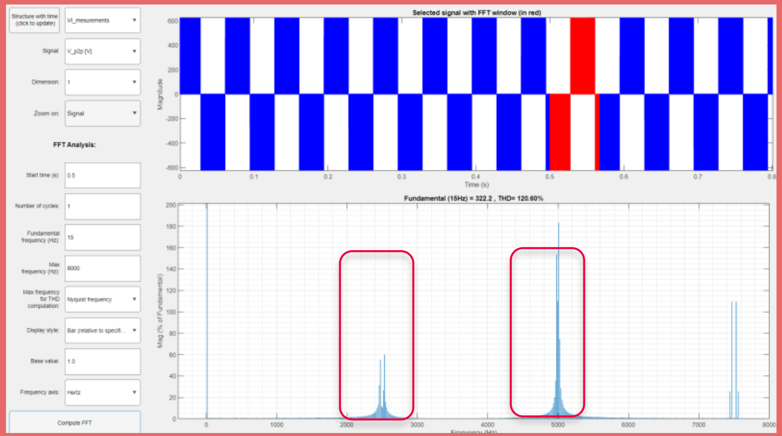
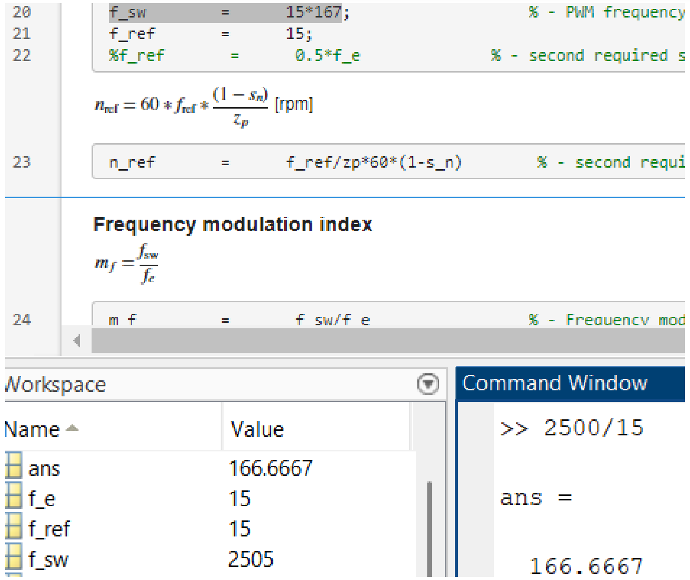


You may face to this problem of inaccurate frequencies in FFT analysis, and the harmonics could not be clearly seen because of some subharmonics noise



Noisy result at f_sw=2500 Hz and f_e=15Hz

$$\frac{f_{sw}}{f_e} = \frac{2500Hz}{15HZ} = 166{,}667$$ – not an integer



To fix that you need to calculate the closest switching frequency which will be integer multiple of your fundamental frequency of rated speed f_e or second reference speed f_ref depending on the Lab 6 task

$$\frac{f_{sw}}{f_e} = \frac{2505Hz}{15Hz} = 167$$

– f_{sw} is an integer multiple of f_e