1. All plots/graphs should have suitable title, labels, axis scaling and (legends if any).
2. Use “Publish” command of MATLAB to generate the pdf file inclusive of code and output figures. **Section 1 of the MATLAB code should contain Author’s name and ID number.**
3. Refer to following link for using publish command - https://in.mathworks.com/videos/publishing-matlab-code-from-the-editor-101570.html
4. If you have report generator tool available, then you can make use of the same for report generation in MATLAB.
5. You can make use of live-script as well for the report generation.

**Lab Assignment -3**

This assignment consists of 2 experiments to be performed as follows. Prepare a single MATLAB file (.m script) with sections named as “Experiment-1” and “Experiment-2”

Name the file of lab session 3 as L3\_201#A#PS####G.pdf

**Experiment -1**

Show the single sided amplitude, phase and power spectrum for the following signal -

X = 8 cos(2\*pi\*10\*t + pi/2) + 6\*cos(2\*pi\*40\*t -2\* pi/3) +7\* cos(2\*pi\*100\*t + pi/6)

Figure should have 4 subplots. Use in the form of 2 rows and 2 columns

Subplot 1 – Signal

Subplot 2 – Amplitude spectrum

Subplot 3 – Phase spectrum in degrees

Subplot 4 – Power spectrum

**Experiment -2**

Plot the square wave of 50% duty cycle and 25 Hz frequency. Show the single sided power spectral density for the same.

Plot figure with 2 subplots. Rows -2 column -1

Subplot 1 – Signal

Subplot2 – Power spectral density