ECE 842 Fast Decoupled Power Flow Problem-2

A five power system network is described below:

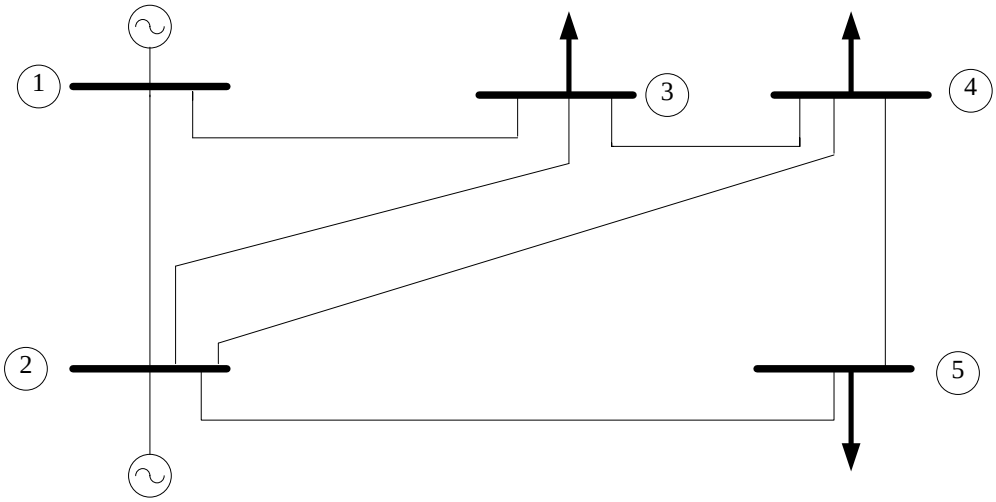

Table II (MVA Base =100 MVA)

Write Matlab Simulation testbed to compute bus voltages, active and reactive line flows. Assume tolerance on delta P and delta Q to be less than 0.00001 pu. Use FDLF method.

Write a report and analyze your results.

BUS NO.	*TYPE*	VOLTAGE	INJECTIONS AT T = 0
1	**SWING**	**1.06**	**-**
2	**GEN**	**-**	**0.20 + j 0.20**
3	**LOAD**	**-**	**- 0.45 - j 0.45**
4	**LOAD**	**-**	**- 0.40 – j 0.05**
5	**LOAD**	**-**	**- 0.6 – j 0.10**

BRANCH	BRANCH IMPEDANCE	SHUNT ADMITTANCE (B/2)
1-2	0.02 + j 0.06	0.0 + j 0.030
1-3	0.08 + j 0.24	0.0 + j 0.025
2-3	0.06 + j 0.18	0.0 + j 0.020
2-4	0.06 + j 0.18	0.0 + j 0.025
2-5	0.04 + j 0.12	0.0 + j 0.015
3-4	0.01 + j 0.03	0.0 + j 0.010
4-5	0.08 + j 0.24	0.0 + j 0.025