

King Fahd University of Petroleum & Minerals
Electrical Engineering Department

Design Project for EE 463 (111)

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Objectives:

The goal of this project is to design, implement and test a Power System Analysis interface based the text book Matlab filters.

Tasks:

Load Flow:

Start with load Flow modules with the options of using both Gauss Seidel and Newton Raphson techniques.

Optimal Power Flow:

Include the loss formula coefficients, the generation cost and generation limits to obtain the optimal dispatch.

Symmetrical Fault Analysis:

Include the generator data and use it with the line data of load flow to build Z_{bus} and then to run Symmetrical fault Analysis based on Z_{bus} and line data.

Transient Stability Analysis:

Use the included generator and the transient stability module to perform the stability analysis.

Data: Consult page 301-305

The generator related data is shown below

Gen	Ra	X_d'	H
1	0	0.09	20
2	0	0.24	12
3	0	0.20	15
4	0	0.25	10
5	0	0.24	12
26	0	0.26	6

Report: The report is due on (14/01/2012). A written and bounded report along with all used program in disk is required

Oral Presentation: Is due (Due 14/01/2011).