% bus(1).Num = 1;

% bus(1).Name = 'slack';

% bus(1).Type = 0;

% bus(1).Area = 1;

% bus(1).Vpu = 1.0;

% bus(1).AngD = 0;

% bus(1).Vrated = 100;

% bus(1).Vmax = 1.5;

% bus(1).Vmin = 0.5;

% bus(1).Pgen = 50.0;

% bus(1).Qgen = 10.0;

% bus(1).Pload = 25.0;

% bus(1).Qload = 5.0;

%

% bus(2).Num = 2;

% bus(2).Name = 'load';

% bus(2).Type = 1;

% bus(2).Area = 1;

% bus(2).Vpu = 1.0;

% bus(2).AngD = 0;

% bus(2).Vrated = 100;

% bus(2).Vmax = 1.5;

% bus(2).Vmin = 0.5;

% bus(2).Pgen = 50.0;

% bus(2).Qgen = 10.0;

% bus(2).Pload = 25.0;

% bus(2).Qload = 5.0;

%

% bus(3).Num = 3;

% bus(3).Name = 'gen';

% bus(3).Type = 1;

% bus(3).Area = 1;

% bus(3).Vpu = 1.0;

% bus(3).AngD = 0;

% bus(3).Vrated = 100;

% bus(3).Vmax = 1.5;

% bus(3).Vmin = 0.5;

% bus(3).Pgen = 50.0;

% bus(3).Qgen = 10.0;

% bus(3).Pload = 25.0;

% bus(3).Qload = 5.0;

%

% bus(4).Num = 4;

% bus(4).Name = 'load';

% bus(4).Type = 1;

% bus(4).Area = 1;

% bus(4).Vpu = 1.0;

% bus(4).AngD = 0;

% bus(4).Vrated = 100;

% bus(4).Vmax = 1.5;

% bus(4).Vmin = 0.5;

% bus(4).Pgen = 50.0;

% bus(4).Qgen = 10.0;

% bus(4).Pload = 25.0;

% bus(4).Qload = 5.0;

%

% bus(5).Num = 5;

% bus(5).Name = 'load';

% bus(5).Type = 1;

% bus(5).Area = 1;

% bus(5).Vpu = 1.0;

% bus(5).AngD = 0;

% bus(5).Vrated = 100;

% bus(5).Vmax = 1.5;

% bus(5).Vmin = 0.5;

% bus(5).Pgen = 50.0;

% bus(5).Qgen = 10.0;

% bus(5).Pload = 25.0;

% bus(5).Qload = 5.0;

% bus(1).Num = 1;

% bus(1).Name = 'slack';

% bus(1).Type = 0;

% bus(1).Area = 1;

% bus(1).Vpu = 1.0;

% bus(1).AngD = 0;

% bus(1).Vrated = 100;

% bus(1).Vmax = 1.5;

% bus(1).Vmin = 0.5;

% bus(1).Pgen = 50.0;

% bus(1).Qgen = 10.0;

% bus(1).Pload = 25.0;

% bus(1).Qload = 5.0;

%

% bus(2).Num = 2;

% bus(2).Name = 'load';

% bus(2).Type = 1;

% bus(2).Area = 1;

% bus(2).Vpu = 0.9814;

% bus(2).AngD = -80.2919;

% bus(2).Vrated = 100;

% bus(2).Vmax = 1.5;

% bus(2).Vmin = 0.5;

% bus(2).Pgen = 50.0;

% bus(2).Qgen = 10.0;

% bus(2).Pload = 25.0;

% bus(2).Qload = 5.0;

%

% bus(3).Num = 3;

% bus(3).Name = 'gen';

% bus(3).Type = 1;

% bus(3).Area = 1;

% bus(3).Vpu = 0.9888;

% bus(3).AngD = -39.8408;

% bus(3).Vrated = 100;

% bus(3).Vmax = 1.5;

% bus(3).Vmin = 0.5;

% bus(3).Pgen = 50.0;

% bus(3).Qgen = 10.0;

% bus(3).Pload = 25.0;

% bus(3).Qload = 5.0;

% branch(1).FmBus = 2;

% branch(1).ToBus = 4;

% branch(1).Zpu = 0.009 + 1j\*0.1;

% branch(1).Ypu = 1j\*1.72;

% branch(1).Rating = 100;

%

% branch(2).FmBus = 2;

% branch(2).ToBus = 5;

% branch(2).Zpu = 0.0045 + 1j\*0.05;

% branch(2).Ypu = 1j\*0.88;

% branch(2).Rating = 100;

%

% branch(3).FmBus = 4;

% branch(3).ToBus = 5;

% branch(3).Zpu = 0.00225 + 1j\*0.025;

% branch(3).Ypu = 1j\*0.44;

% branch(3).Rating = 100;

%

% branch(4).FmBus = 1;

% branch(4).ToBus = 5;

% branch(4).Zpu = 0.0015 + 1j\*0.02;

% branch(4).Ypu = 0;

% branch(4).Rating = 100;

%

% branch(5).FmBus = 3;

% branch(5).ToBus = 4;

% branch(5).Zpu = 0.00075 + 1j\*0.01;

% branch(5).Ypu = 0;

% branch(5).Rating = 100;

% branch(1).FmBus = 1;

% branch(1).ToBus = 2;

% branch(1).Zpu = 0.3 + 1j\*0.9;

% branch(1).Ypu = 0;

% branch(1).Rating = 100;

%

% branch(2).FmBus = 1;

% branch(2).ToBus = 3;

% branch(2).Zpu = 0.1 + 1j\*0.2;

% branch(2).Ypu = 0;

% branch(2).Rating = 100;

% branch(1).FmBus = 1;

% branch(1).ToBus = 2;

% branch(1).Zpu = 1 + 1j\*3;

% branch(1).Ypu = 0;

% branch(1).Rating = 100;

%

% branch(2).FmBus = 1;

% branch(2).ToBus = 4;

% branch(2).Zpu = 1 + 1j\*2;

% branch(2).Ypu = 0;

% branch(2).Rating = 100;

%

% branch(3).FmBus = 1;

% branch(3).ToBus = 3;

% branch(3).Zpu = 2 + 1j\*7;

% branch(3).Ypu = 0;

% branch(3).Rating = 100;

%

% branch(4).FmBus = 2;

% branch(4).ToBus = 4;

% branch(4).Zpu = 2 + 1j\*8;

% branch(4).Ypu = 0;

% branch(4).Rating = 100;

%

% branch(5).FmBus = 2;

% branch(5).ToBus = 3;

% branch(5).Zpu = 1 + 1j\*4;

% branch(5).Ypu = 0;

% branch(5).Rating = 100;

%

% branch(6).FmBus = 3;

% branch(6).ToBus = 4;

% branch(6).Zpu = 1 + 1j\*5;

% branch(6).Ypu = 0;

% branch(6).Rating = 100;