```
[zdata] = xlsread('Admittance Matrix.xlsx');
nl = zdata(:,1); %taking 1st column
nr = zdata(:,2); % taking 2nd column
nbus = max(max(nl),max(nr)); % no. of bus finding
R = zdata(:,3);
X = zdata(:,4);
Z = R + 1i * X; %Branch Impedence
nbr = length(nl);
y = ones(nbr,1)./Z; %branch admittance
Y = zeros(nbus,nbus);
% formation of the off diagonal elements
for i = 1:nbr
   if nl(i)>0 && nr(i)>0
   Y(nl(i),nr(i)) = Y(nl(i),nr(i))-y(i);
   Y(nr(i),nl(i)) = Y(nl(i),nr(i));
   end
end
% formation of diagonal elements
for ii = 1:nbus
  for jj = 1:nbr
      if nl(jj) == ii || nr(jj) == ii
          Y(ii,ii) = Y(ii,ii) + y(jj);
      end
  end
end
disp(Y)
```

Admittance Matrix =

```
   0.0000 - 8.5000i   0.0000 + 2.5000i   0.0000 + 5.0000i   0.0000 + 0.0000i
   0.0000 + 2.5000i   0.0000 - 8.7500i   0.0000 + 5.0000i   0.0000 + 0.0000i
   0.0000 + 5.0000i   0.0000 + 5.0000i   0.0000 -22.5000i   0.0000 +12.5000i
   0.0000 + 0.0000i   0.0000 + 0.0000i   0.0000 +12.5000i   0.0000 -12.5000i
```

*Published with MATLAB® R2016a*