```
clc;
clear all;

zdata=[2 4 0 0.1
   3 2 0 0.8
   1 2 0 0.4
   1 3 0 0.2
   1 4 0 0.2
   3 4 0 0.08];
% % read data
lp=zdata(:,1);
lq=zdata(:,2);
r=zdata(:,3);
x=zdata(:,4);
nline=6
n=4
% calculate primitive impedance of line between two nodes
for k=1:nline
    z(k)=complex(r(k),x(k));
    yline(k)=1/z(k);
end

% % initialization of ybus matrix
for i=1:n
    for j=1:n
        Y(i,j)=0
    end
end
% % formation of ybus elements
for k=1:nline
    p=lp(k)
    q=lq(k)
    Y(p,q)=Y(p,q)-yline(k)
    Y(q,p)=Y(p,q)
    Y(p,p)=Y(p,p)+yline(k)
    Y(q,q)=Y(q,q)+yline(k)
end
```