**ELEMENTS OF POWER SYSTEMS**

**EXPERIMENT 2**

**Code:**

clc

clear all

%to calculate the percentage saving in feeder copper if the line voltage

%in a 2-wire dc system is raised from 200V to 400V for the same power

%transmitted over the same distance and having the same power loss.

%200V ----> 400V

V1=input('Enter voltage 1: ');

V2=input('Enter voltage 2: ');

% P1=P2;

% P1=V1I1;

% P2=V2I2;

x=V2/V1; %1/x = I2/I1

%W1=W2;

%2\*((I1)^2)\*R1=2\*((I2)^2)\*R2;

C=(1/x)^2; % this is R1/R2=(I2/I1)^2

%since R is inversely proportinal to area when resistivity and length are

%constant

% A2/A1=C

%Considering length as constant , volume ratio is same as area ratio

% v2/v1= C

%Saving=(1-(V2/V1))\*100

Saving=(1-C)\*100

**Output:**

