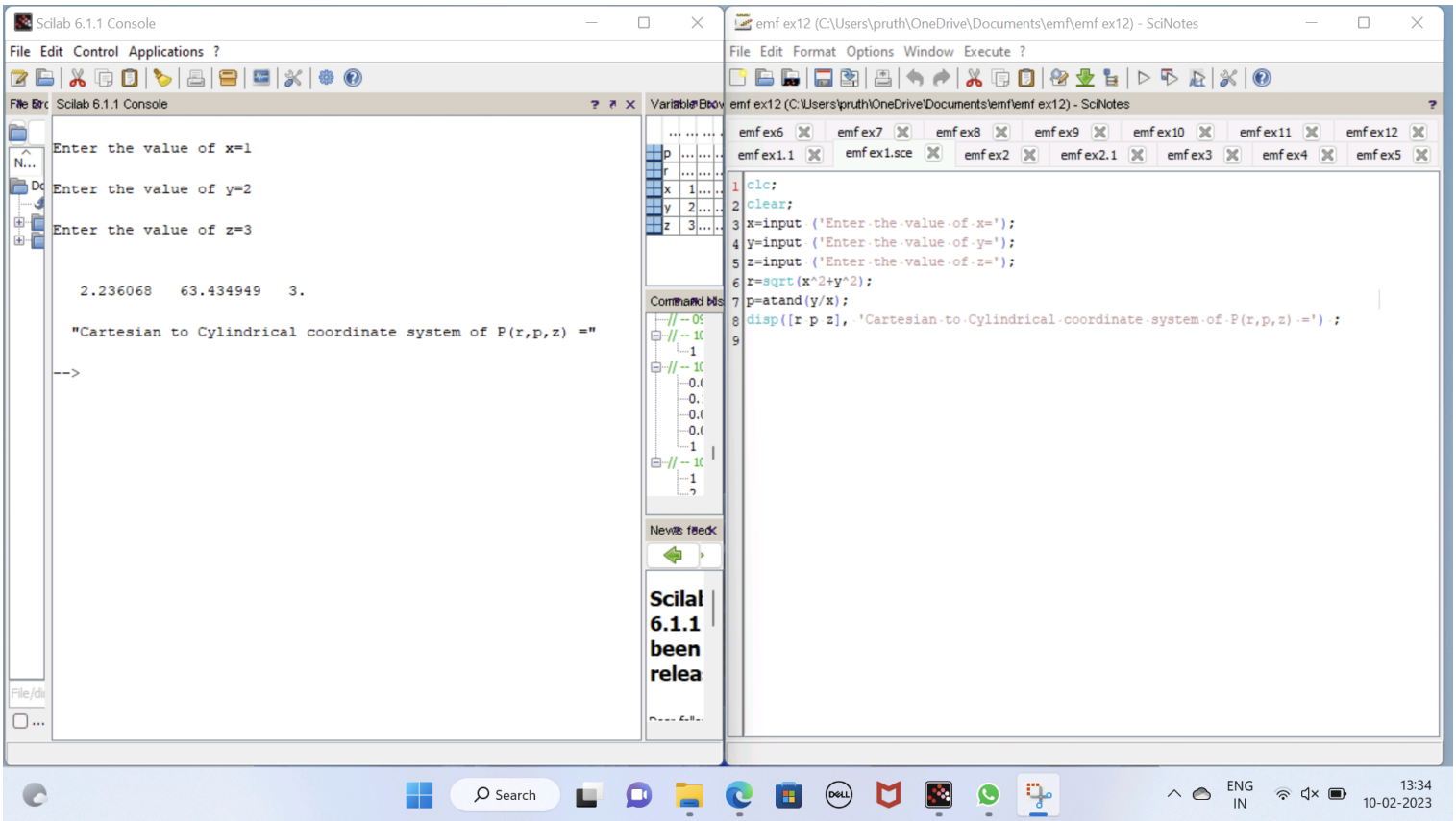
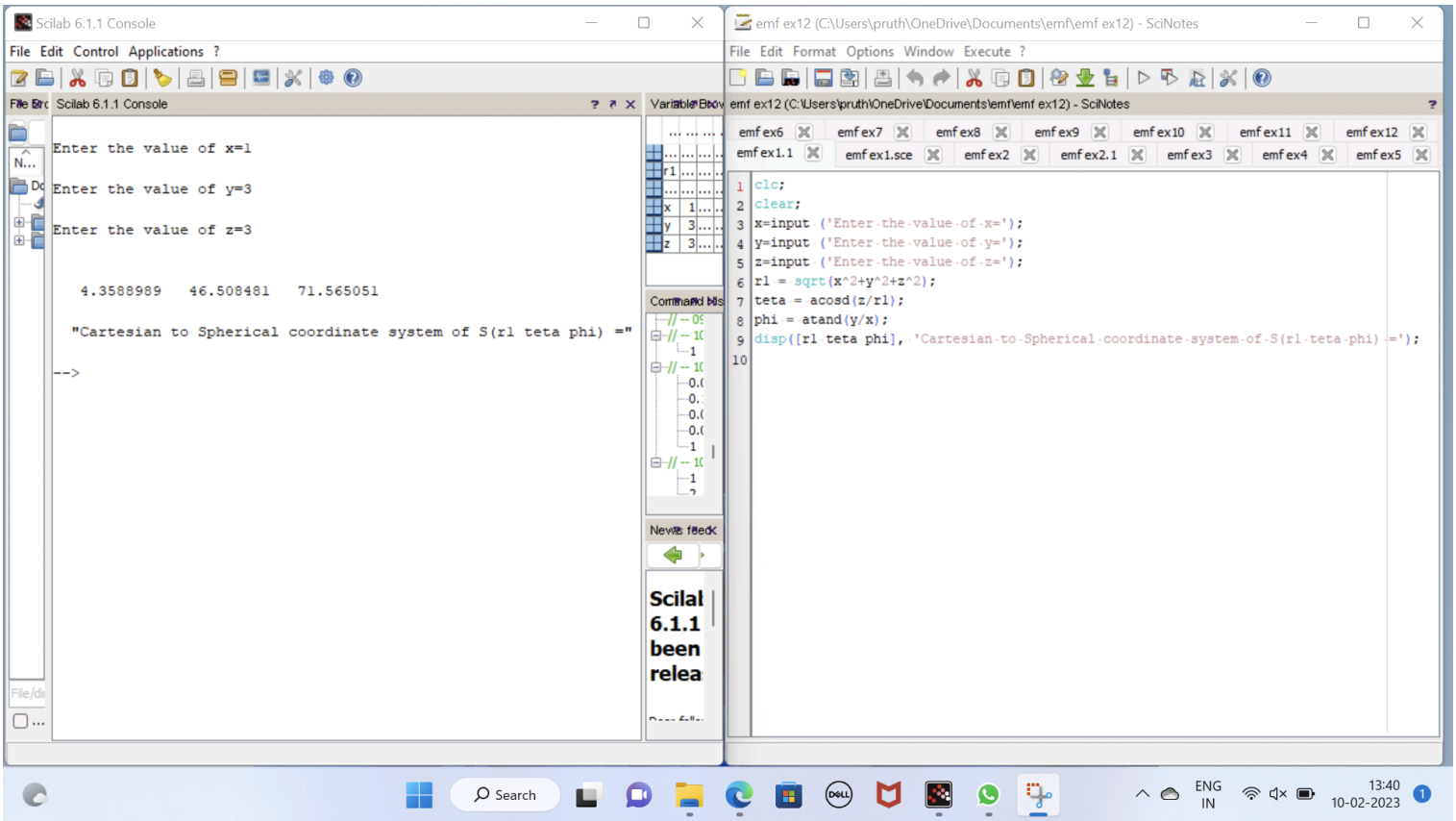
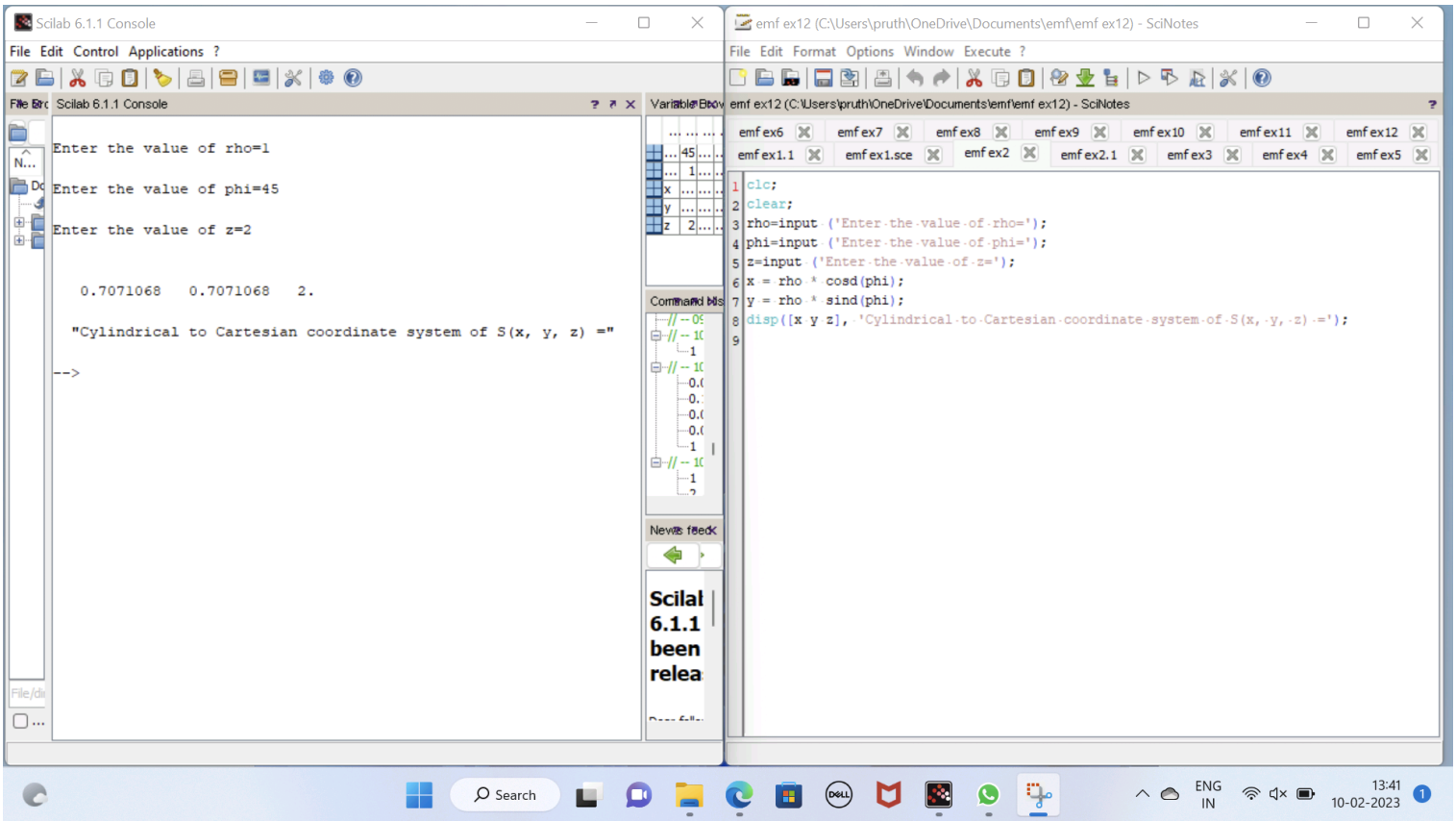

Scilab 6.1.1 Console
File Edit Control Applications ?
Enter the value of x=1
Enter the value of y=2
Enter the value of z=3
2.236068 63.434949 3.
"Cartesian to Cylindrical coordinate system of P(r,p,z) ="
-->
emf ex12 (C:\Users\pruth\OneDrive\Documents\emf\emf ex12) - SciNotes
File Edit Format Options Window Execute ?
emf ex6
emf ex7
emf ex8
emf ex9
emf ex10
emf ex11
emf ex12
emf ex1.1
emf ex1.sce
emf ex2
emf ex2.1
emf ex3
emf ex4
emf ex5
clc;
clear;
x=input ('Enter the value of x=');
y=input ('Enter the value of y=');
z=input ('Enter the value of z=');
r=sqrt(x^2+y^2);
p=atand(y/x);
disp([r p z], 'Cartesian to Cylindrical coordinate system of P(r,p,z) =') ;
Search
ENG
IN
13:34
10-02-2023


Scilab 6.1.1 Console
File Edit Control Applications ?
Enter the value of x=1
Enter the value of y=3
Enter the value of z=3
4.3588989 46.508481 71.565051
"Cartesian to Spherical coordinate system of S(rl teta phi) ="
-->
emf ex12 (C:\Users\pruth\OneDrive\Documents\emf\emf ex12) - SciNotes
File Edit Format Options Window Execute ?
emf ex6
emf ex7
emf ex8
emf ex9
emf ex10
emf ex11
emf ex12
emf ex1.1
emf ex1.sce
emf ex2
emf ex2.1
emf ex3
emf ex4
emf ex5
clc;
clear;
x=input ('Enter the value of x=');
y=input ('Enter the value of y=');
z=input ('Enter the value of z=');
rl = sqrt(x^2+y^2+z^2);
teta = acosd(z/rl);
phi = atand(y/x);
disp([rl teta phi], 'Cartesian to Spherical coordinate system of S(rl teta phi) =');


Scilab 6.1.1 Console
File Edit Control Applications ?
Enter the value of rho=1
Enter the value of phi=45
Enter the value of z=2
0.7071068 0.7071068 2.
"Cylindrical to Cartesian coordinate system of S(x, y, z) ="
-->
emf ex12 (C:\Users\pruth\OneDrive\Documents\emf\emf ex12) - SciNotes
File Edit Format Options Window Execute ?
emf ex6
emf ex7
emf ex8
emf ex9
emf ex10
emf ex11
emf ex12
emf ex1.1
emf ex1.sce
emf ex2
emf ex2.1
emf ex3
emf ex4
emf ex5
clc;
clear;
rho=input ('Enter the value of rho=');
phi=input ('Enter the value of phi=');
z=input ('Enter the value of z=');
x = rho * cosd(phi);
y = rho * sind(phi);
disp([x y z], 'Cylindrical to Cartesian coordinate system of S(x, y, z) =');
Scilal
6.1.1
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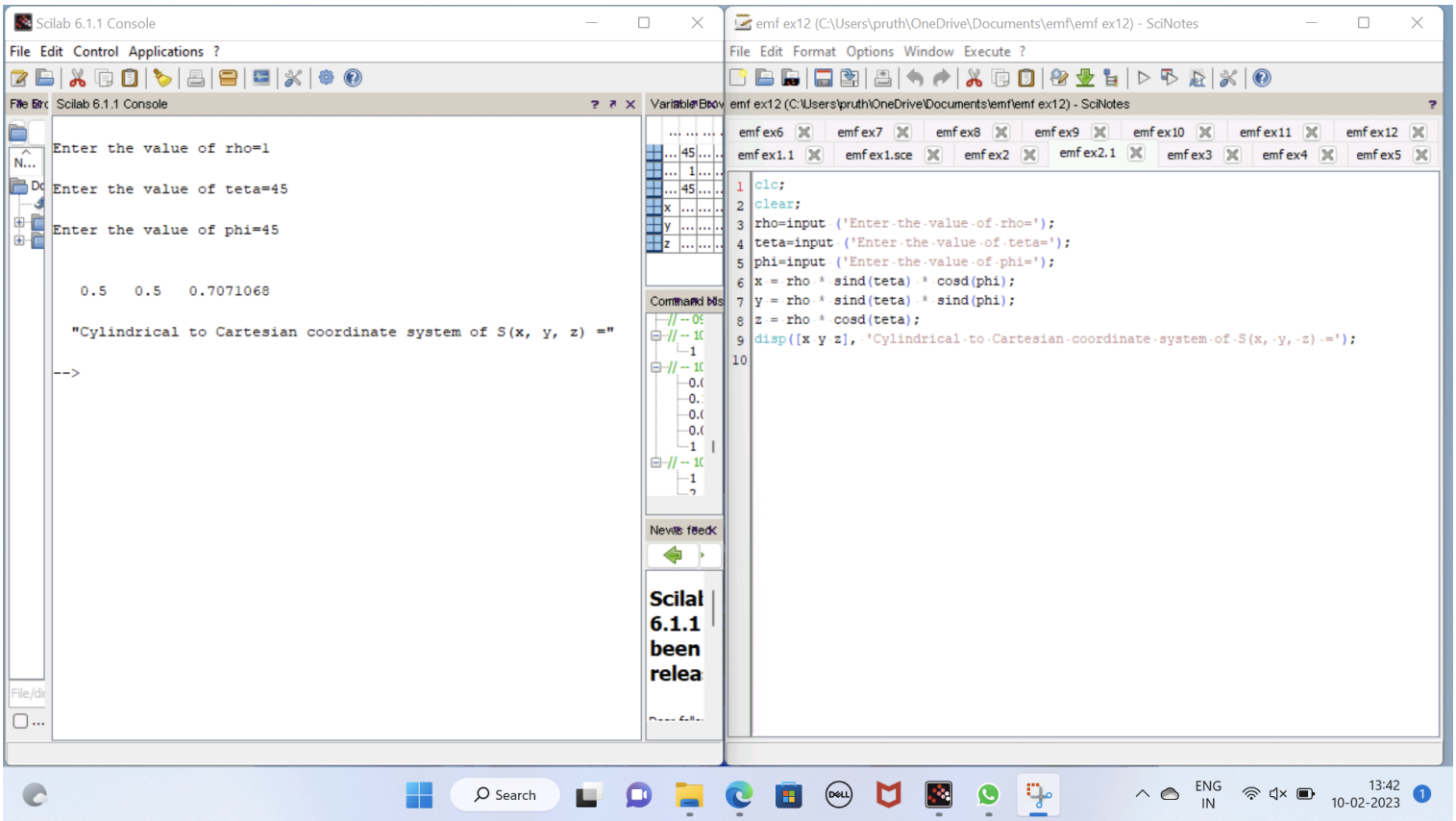
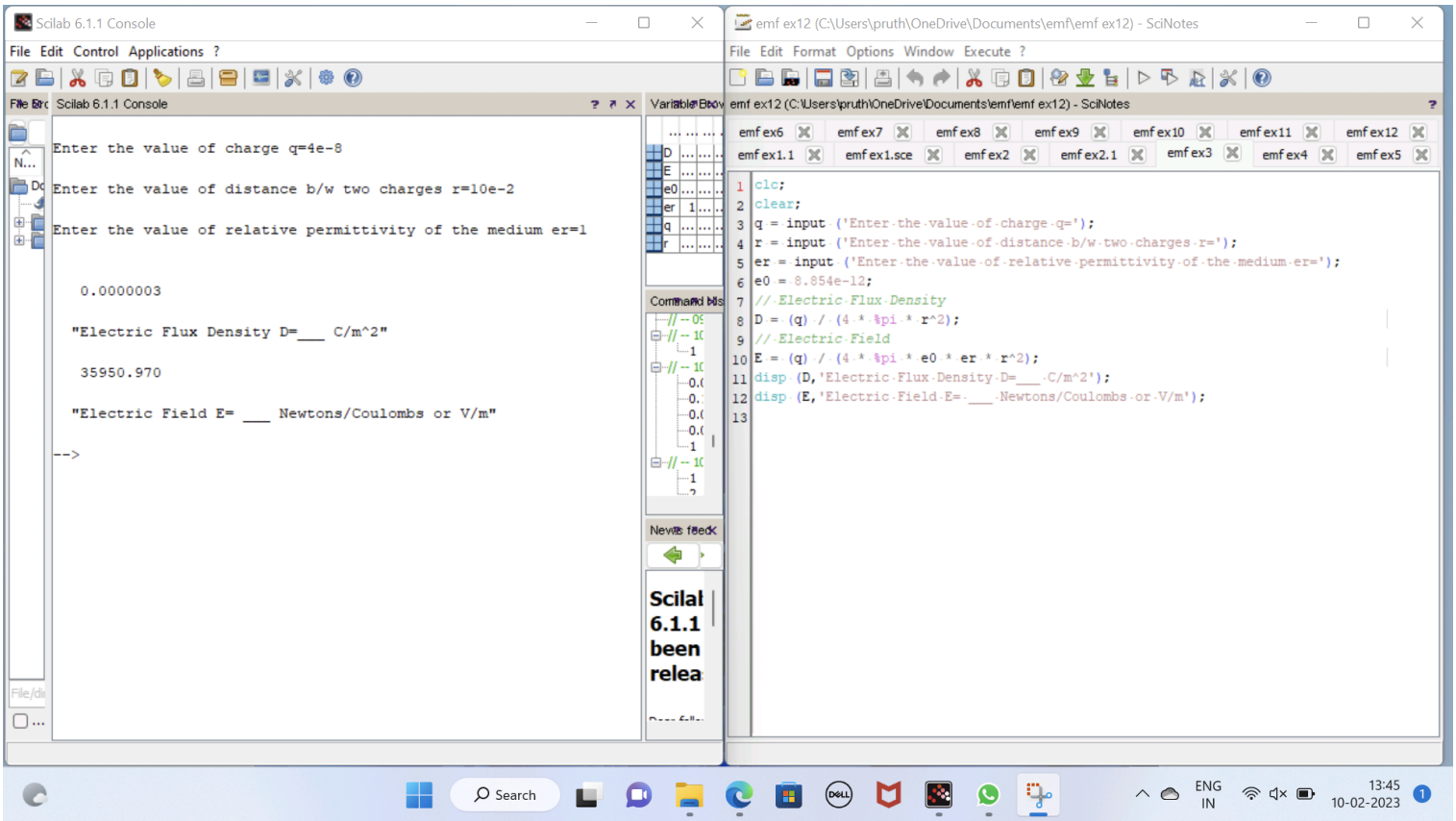
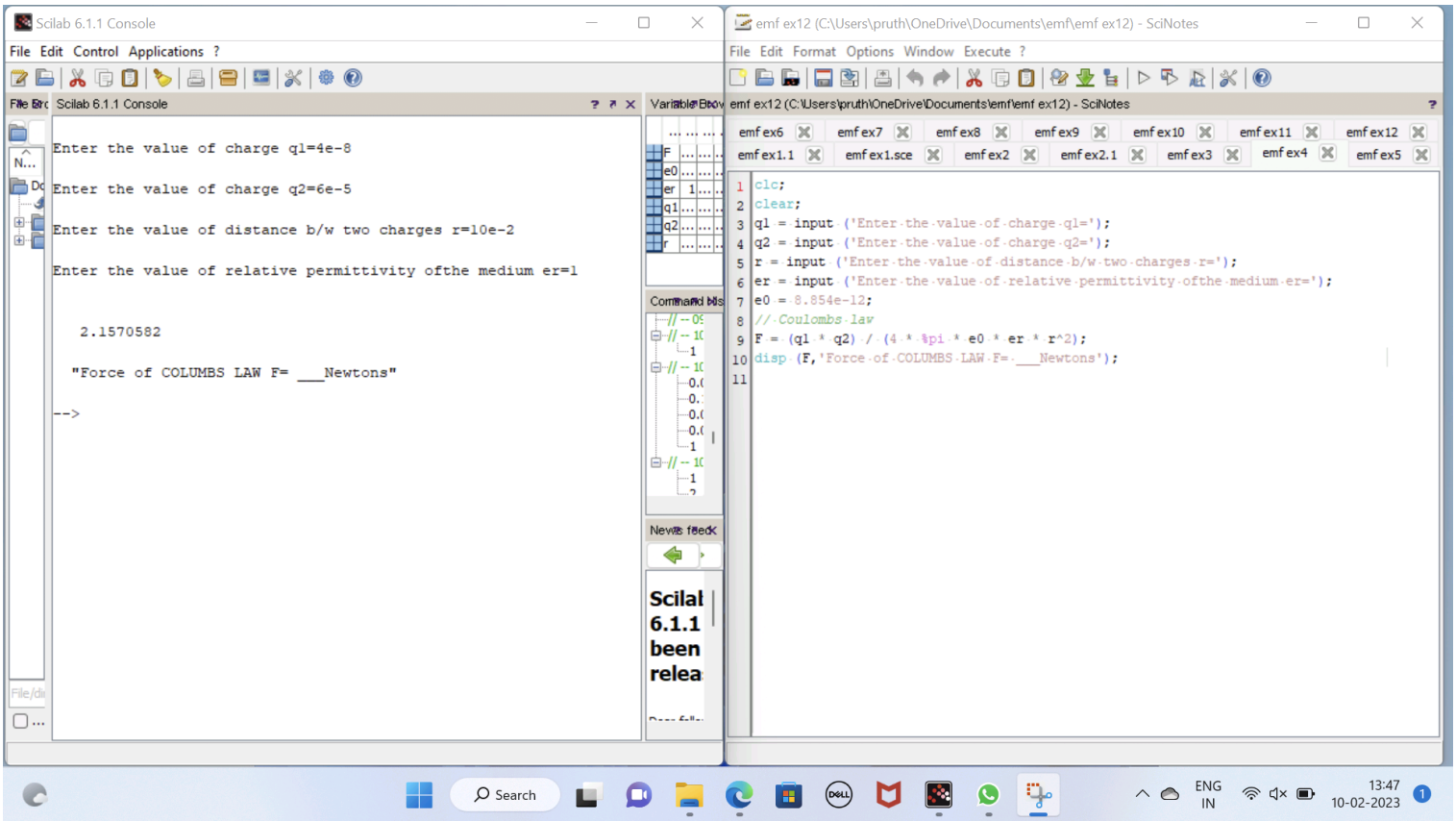
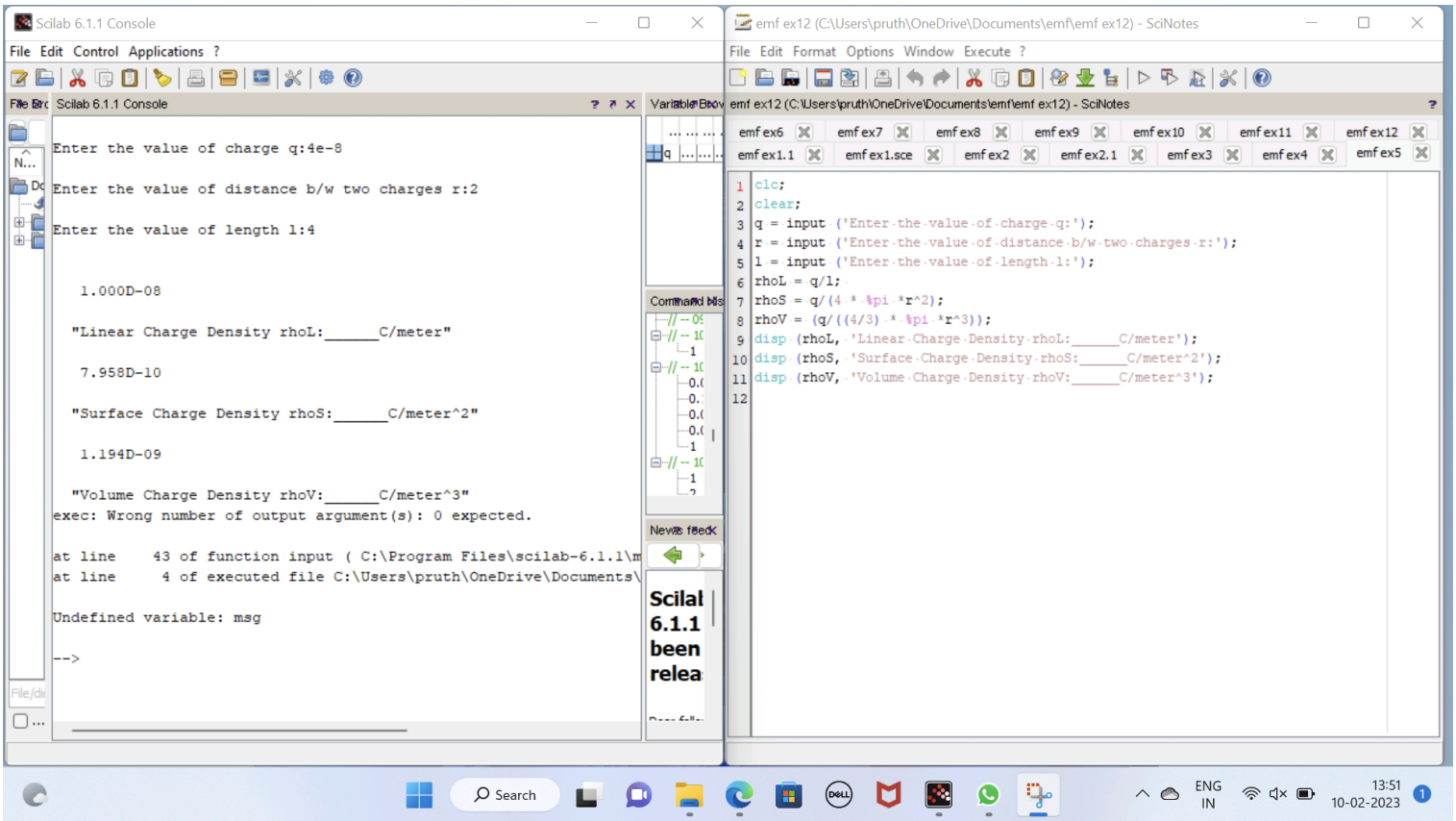
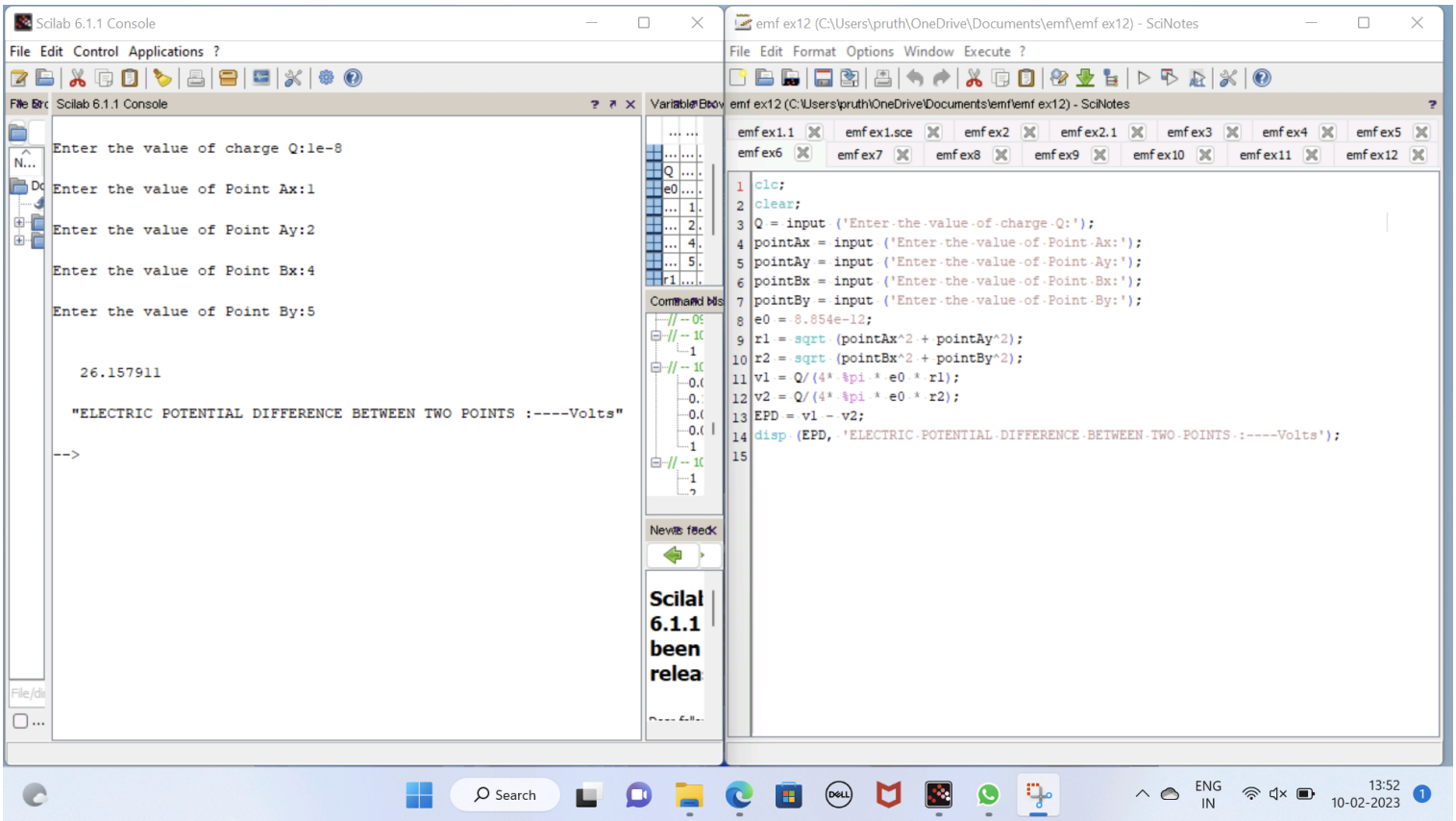
Search
ENG
IN
13:41
10-02-2023

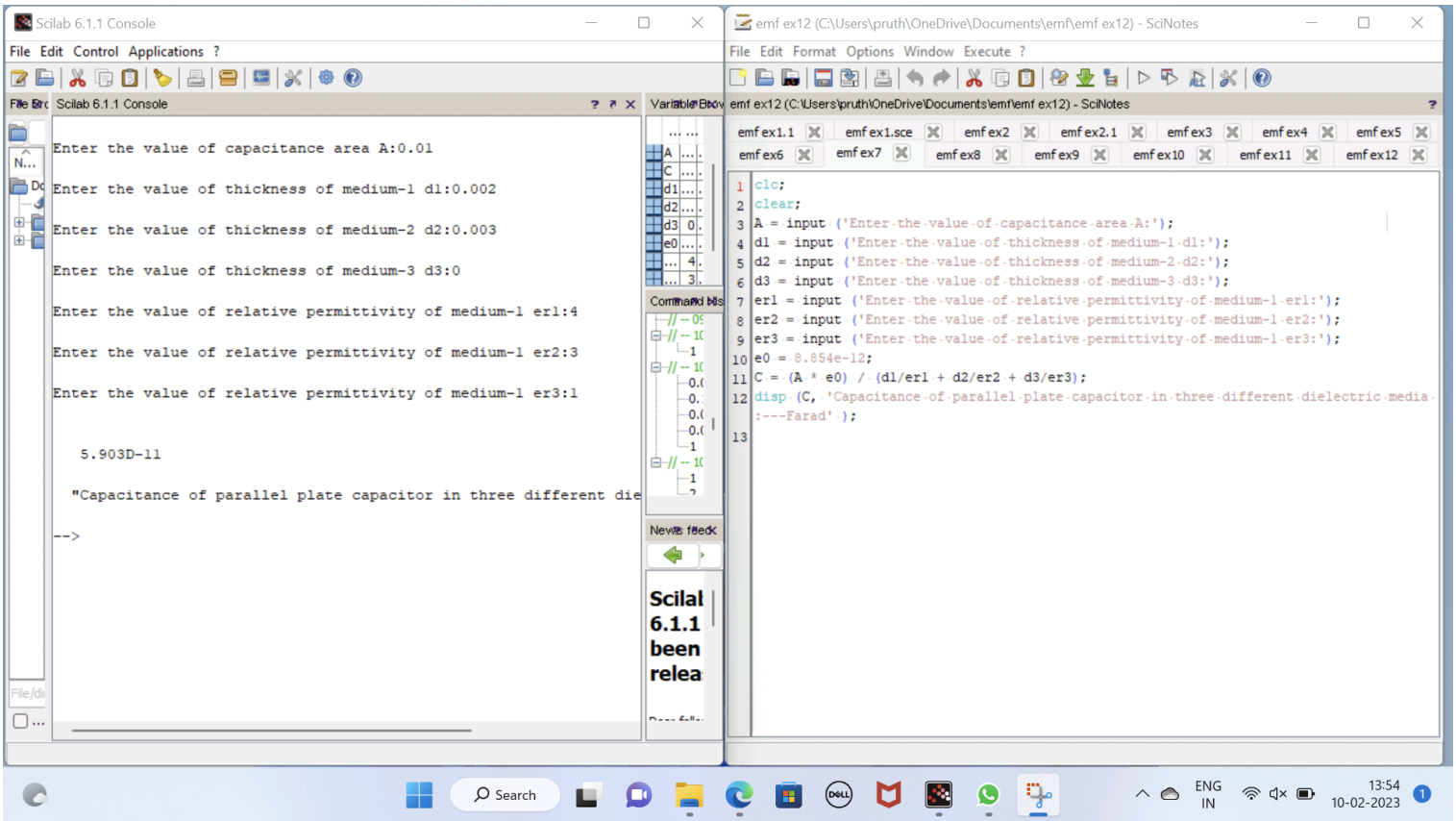

Scilab 6.1.1 Console
File Edit Control Applications ?
Enter the value of rho=1
Enter the value of teta=45
Enter the value of phi=45
0.5 0.5 0.7071068
"Cylindrical to Cartesian coordinate system of S(x, y, z) ="
-->
emf ex12 (C:\Users\pruth\OneDrive\Documents\emf\emf ex12) - SciNotes
File Edit Format Options Window Execute ?
emf ex6
emf ex7
emf ex8
emf ex9
emf ex10
emf ex11
emf ex12
emf ex1.1
emf ex1.sce
emf ex2
emf ex2.1
emf ex3
emf ex4
emf ex5
clc;
clear;
rho=input ('Enter the value of rho=');
teta=input ('Enter the value of teta=');
phi=input ('Enter the value of phi=');
x = rho * sind(teta) * cosd(phi);
y = rho * sind(teta) * sind(phi);
z = rho * cosd(teta);
disp([x y z], 'Cylindrical to Cartesian coordinate system of S(x, y, z) =');
Search
ENG
IN
13:42
10-02-2023

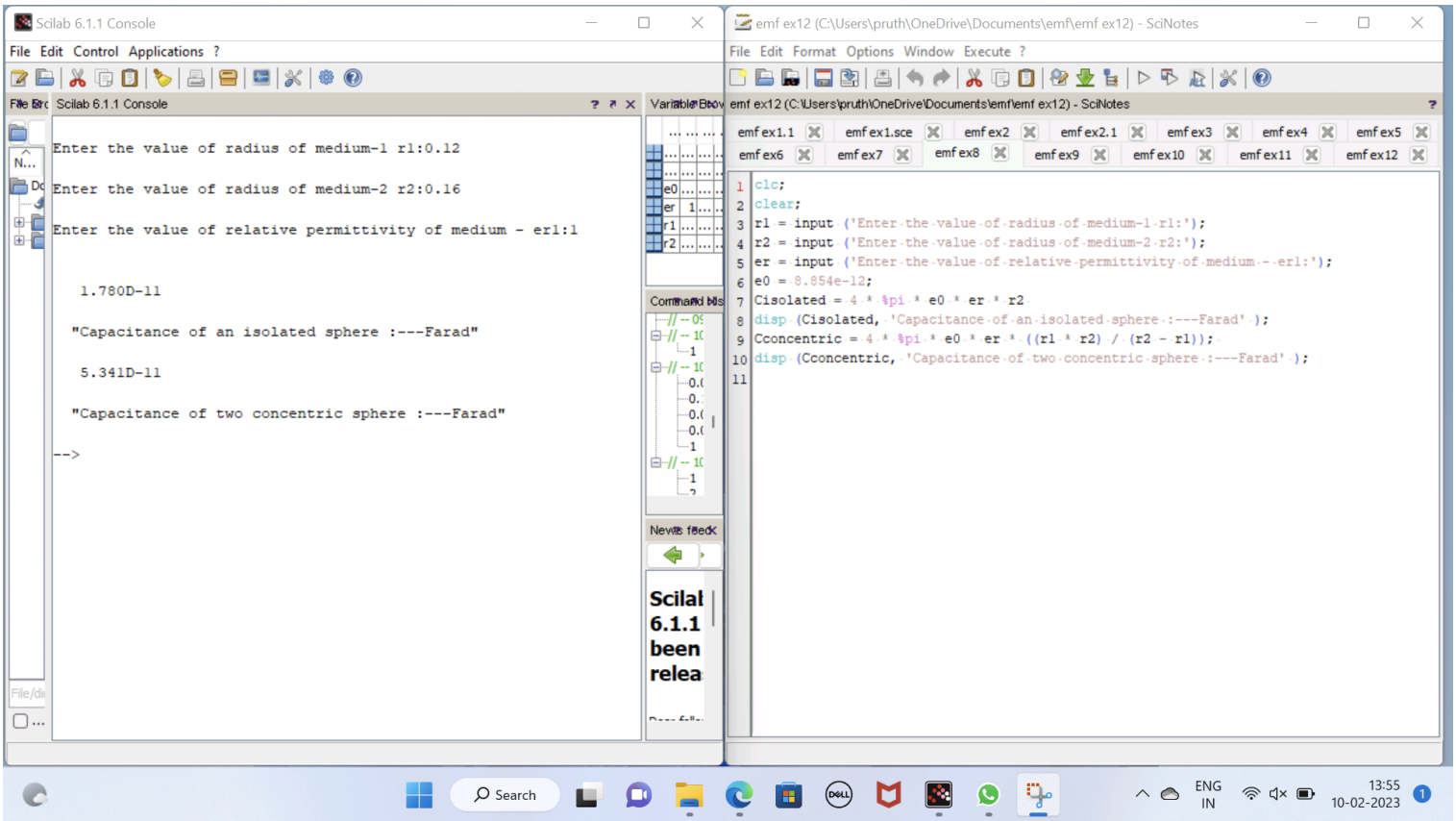

Scilab 6.1.1 Console
File Edit Control Applications ?
Enter the value of charge q=4e-8
Enter the value of distance b/w two charges r=10e-2
Enter the value of relative permittivity of the medium er=1
0.0000003
"Electric Flux Density D=___ C/m^2"
35950.970
"Electric Field E= ___ Newtons/Coulombs or V/m"
-->
emf ex12 (C:\Users\pruth\OneDrive\Documents\emf\emf ex12) - SciNotes
File Edit Format Options Window Execute ?
emf ex6
emf ex7
emf ex8
emf ex9
emf ex10
emf ex11
emf ex12
emf ex1.1
emf ex1.sce
emf ex2
emf ex2.1
emf ex3
emf ex4
emf ex5
clc;
clear;
q = input ('Enter the value of charge q=');
r = input ('Enter the value of distance b/w two charges r=');
er = input ('Enter the value of relative permittivity of the medium er=');
e0 = 8.854e-12;
//Electric Flux Density
D = (q) / (4 * %pi * r^2);
//Electric Field
E = (q) / (4 * %pi * e0 * er * r^2);
disp (D,'Electric Flux Density D=___ C/m^2');
disp (E,'Electric Field E=___ Newtons/Coulombs or V/m');
Search
ENG
IN
13:45
10-02-2023

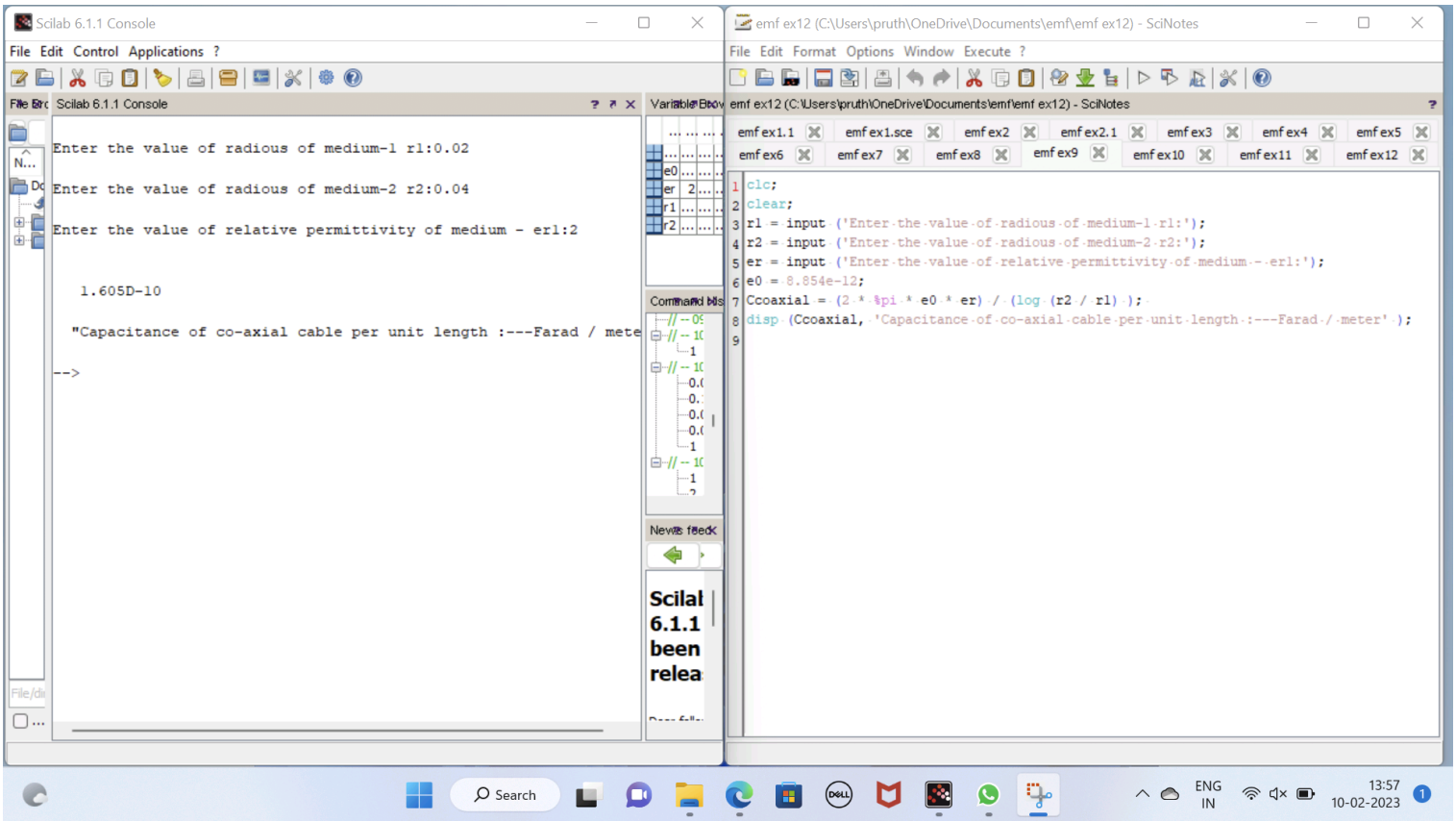

Scilab 6.1.1 Console
File Edit Control Applications ?
Enter the value of charge q1=4e-8
Enter the value of charge q2=6e-5
Enter the value of distance b/w two charges r=10e-2
Enter the value of relative permittivity ofthe medium er=1
2.1570582
"Force of COLUMBS LAW F= ___Newtons"
-->
emf ex12 (C:\Users\pruth\OneDrive\Documents\emf\emf ex12) - SciNotes
File Edit Format Options Window Execute ?
emf ex6
emf ex7
emf ex8
emf ex9
emf ex10
emf ex11
emf ex12
emf ex1.1
emf ex1.sce
emf ex2
emf ex2.1
emf ex3
emf ex4
emf ex5
clc;
clear;
q1 = input ('Enter the value of charge q1=');
q2 = input ('Enter the value of charge q2=');
r = input ('Enter the value of distance b/w two charges r=');
er = input ('Enter the value of relative permittivity ofthe medium er=');
e0 = 8.854e-12;
// Coulombs law
F = (q1 * q2) / (4 * %pi * e0 * er * r^2);
disp (F,'Force of COLUMBS LAW F= ___Newtons');
Search
ENG
IN
13:47
10-02-2023

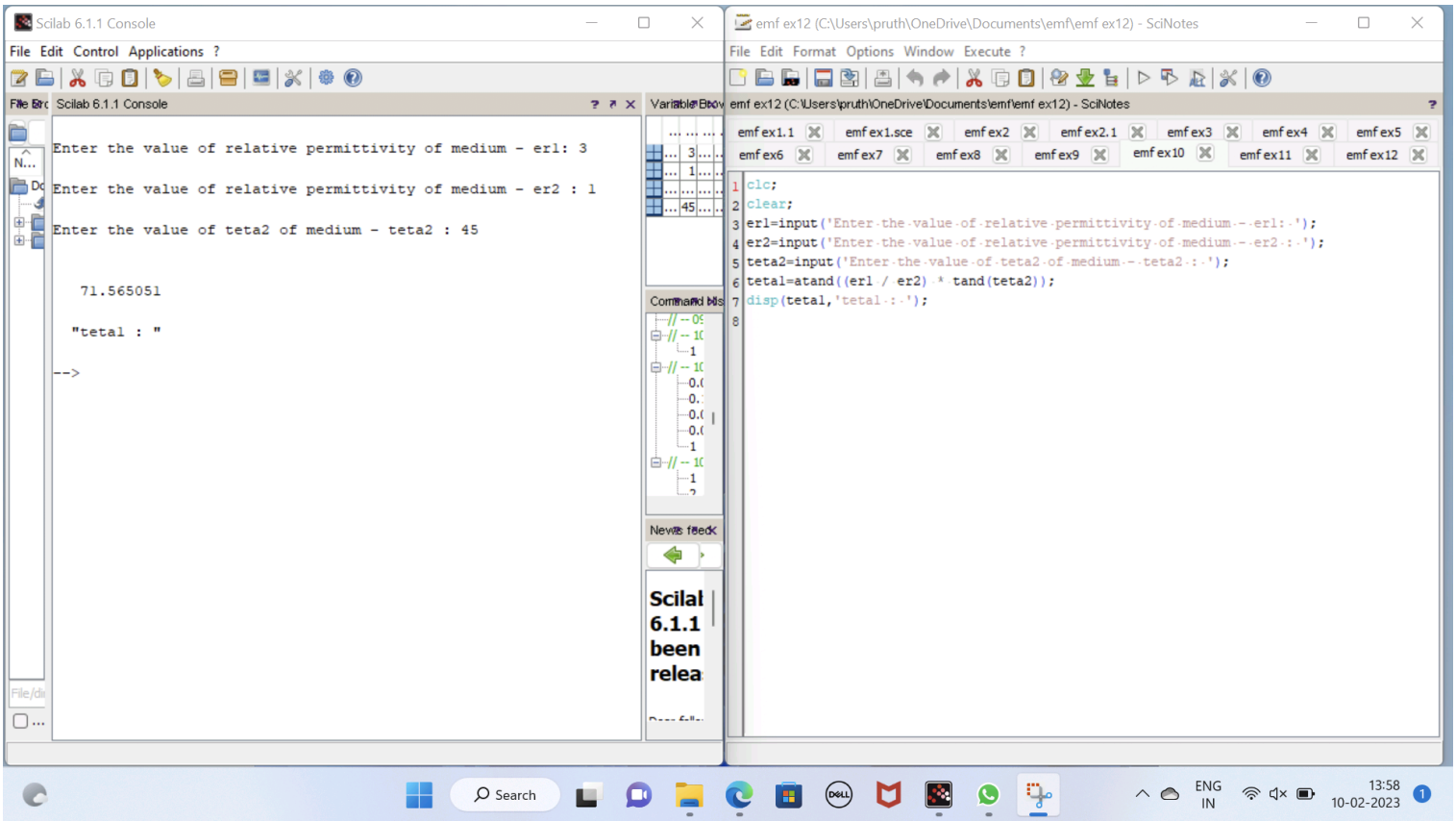

Scilab 6.1.1 Console
File Edit Control Applications ?
Enter the value of charge q:4e-8
Enter the value of distance b/w two charges r:2
Enter the value of length l:4
1.000D-08
"Linear Charge Density rhoL:_____C/meter"
7.958D-10
"Surface Charge Density rhoS:_____C/meter^2"
1.194D-09
"Volume Charge Density rhoV:_____C/meter^3"
exec: Wrong number of output argument(s): 0 expected.
at line 43 of function input (C:\Program Files\scilab-6.1.1\m
at line 4 of executed file C:\Users\pruth\OneDrive\Documents\
Undefined variable: msg
-->
emf ex12 (C:\Users\pruth\OneDrive\Documents\emf\emf ex12) - SciNotes
File Edit Format Options Window Execute ?
emf ex6
emf ex7
emf ex8
emf ex9
emf ex10
emf ex11
emf ex12
emf ex1.1
emf ex1.sce
emf ex2
emf ex2.1
emf ex3
emf ex4
emf ex5
clc;
clear;
q = input ('Enter the value of charge q:');
r = input ('Enter the value of distance b/w two charges r:');
l = input ('Enter the value of length l:');
rhoL = q/l;
rhoS = q/(4 * %pi *r^2);
rhoV = (q/((4/3) * %pi *r^3));
disp (rhoL, 'Linear Charge Density rhoL:_____C/meter');
disp (rhoS, 'Surface Charge Density rhoS:_____C/meter^2');
disp (rhoV, 'Volume Charge Density rhoV:_____C/meter^3');
Scilab 6.1.1 been relea
Search
ENG IN
13:51
10-02-2023

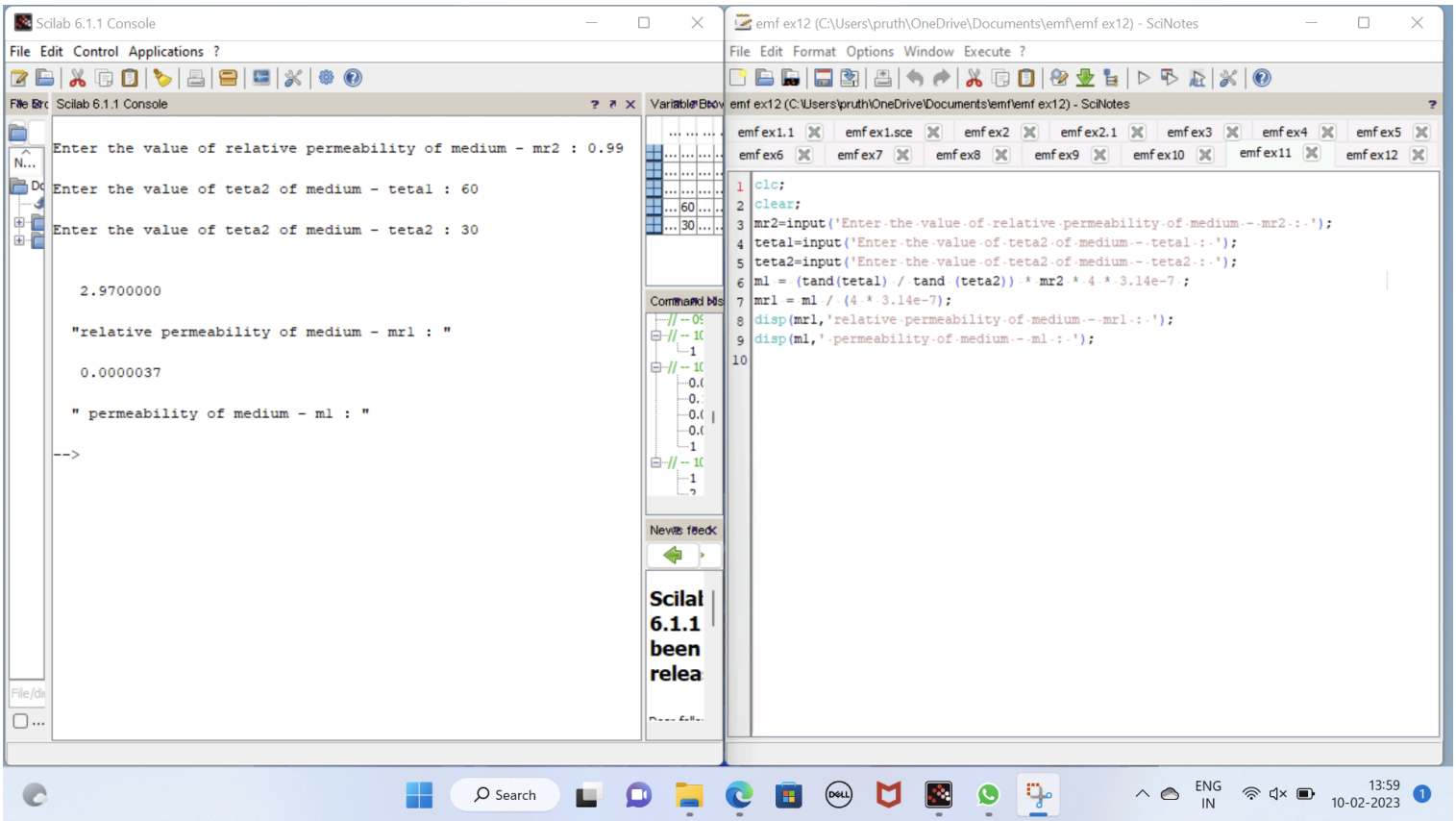

Scilab 6.1.1 Console
File Edit Control Applications ?
Enter the value of charge Q:1e-8
Enter the value of Point Ax:1
Enter the value of Point Ay:2
Enter the value of Point Bx:4
Enter the value of Point By:5
26.157911
"ELECTRIC POTENTIAL DIFFERENCE BETWEEN TWO POINTS :----Volts"
-->
emf ex12 (C:\Users\pruth\OneDrive\Documents\emf\emf ex12) - SciNotes
File Edit Format Options Window Execute ?
emf ex1.1
emf ex1.sce
emf ex2
emf ex2.1
emf ex3
emf ex4
emf ex5
emf ex6
emf ex7
emf ex8
emf ex9
emf ex10
emf ex11
emf ex12
clc;
clear;
Q = input ('Enter the value of charge Q:');
pointAx = input ('Enter the value of Point Ax:');
pointAy = input ('Enter the value of Point Ay:');
pointBx = input ('Enter the value of Point Bx:');
pointBy = input ('Enter the value of Point By:');
e0 = 8.854e-12;
r1 = sqrt (pointAx^2 + pointAy^2);
r2 = sqrt (pointBx^2 + pointBy^2);
v1 = Q/(4* %pi * e0 * r1);
v2 = Q/(4* %pi * e0 * r2);
EPD = v1 - v2;
disp (EPD, 'ELECTRIC POTENTIAL DIFFERENCE BETWEEN TWO POINTS :----Volts');
Search
ENG
IN
13:52
10-02-2023

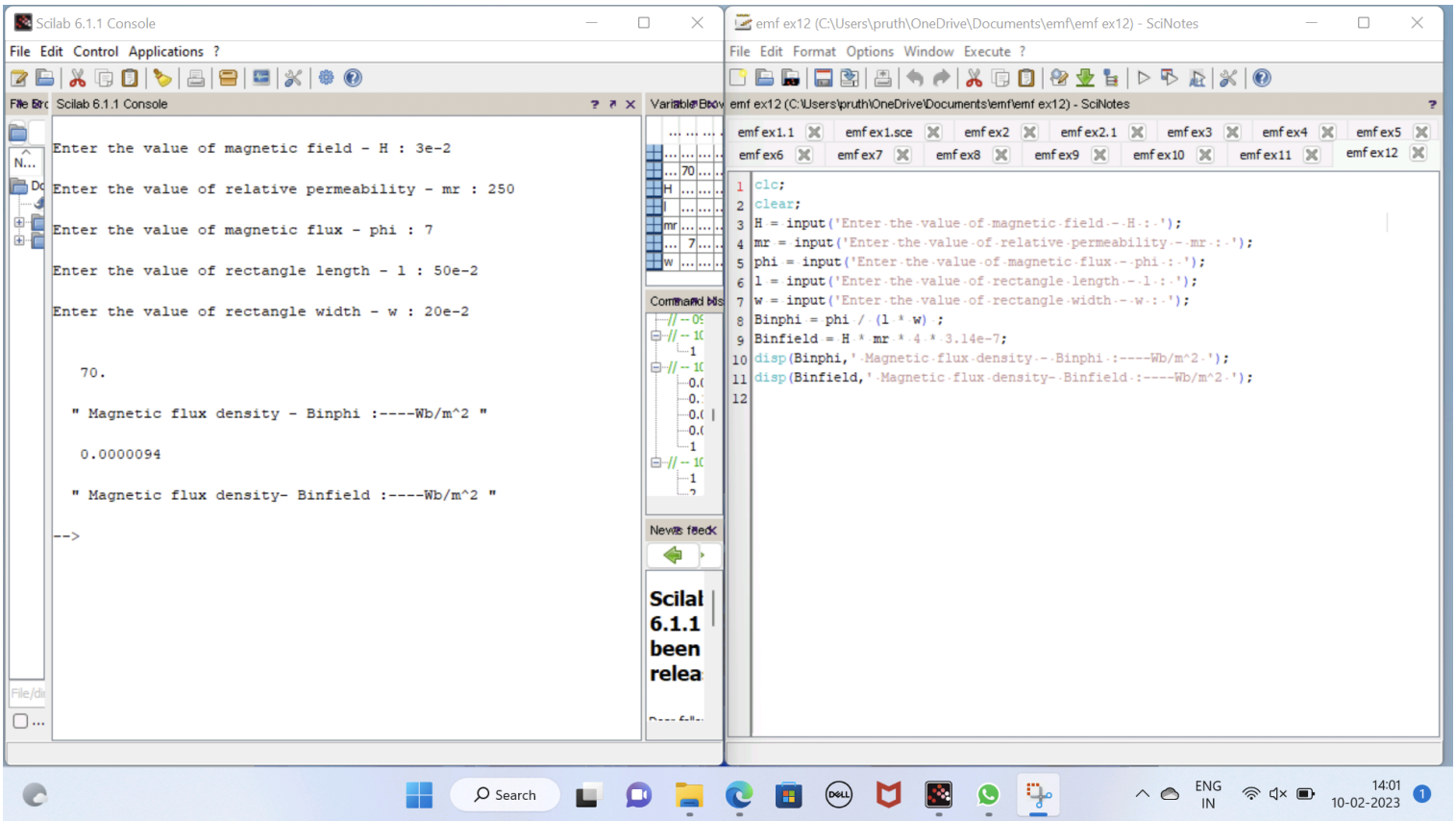

Scilab 6.1.1 Console
File Edit Control Applications ?
Enter the value of capacitance area A:0.01
Enter the value of thickness of medium-1 d1:0.002
Enter the value of thickness of medium-2 d2:0.003
Enter the value of thickness of medium-3 d3:0
Enter the value of relative permittivity of medium-1 er1:4
Enter the value of relative permittivity of medium-1 er2:3
Enter the value of relative permittivity of medium-1 er3:1
5.903D-11
"Capacitance of parallel plate capacitor in three different die
-->
emf ex12 (C:\Users\pruth\OneDrive\Documents\emf\emf ex12) - SciNotes
File Edit Format Options Window Execute ?
emf ex1.1
emf ex1.sce
emf ex2
emf ex2.1
emf ex3
emf ex4
emf ex5
emf ex6
emf ex7
emf ex8
emf ex9
emf ex10
emf ex11
emf ex12
clc;
clear;
A = input ('Enter the value of capacitance area A:');
d1 = input ('Enter the value of thickness of medium-1 d1:');
d2 = input ('Enter the value of thickness of medium-2 d2:');
d3 = input ('Enter the value of thickness of medium-3 d3:');
er1 = input ('Enter the value of relative permittivity of medium-1 er1:');
er2 = input ('Enter the value of relative permittivity of medium-1 er2:');
er3 = input ('Enter the value of relative permittivity of medium-1 er3:');
e0 = 8.854e-12;
C = (A * e0) / (d1/er1 + d2/er2 + d3/er3);
disp (C, 'Capacitance of parallel plate capacitor in three different dielectric media
:---Farad');
Search
ENG
IN
13:54
10-02-2023


Scilab 6.1.1 Console
File Edit Control Applications ?
Enter the value of radius of medium-1 r1:0.12
Enter the value of radius of medium-2 r2:0.16
Enter the value of relative permittivity of medium - er1:1
1.780D-11
"Capacitance of an isolated sphere :---Farad"
5.341D-11
"Capacitance of two concentric sphere :---Farad"
-->
emf ex12 (C:\Users\pruth\OneDrive\Documents\emf\emf ex12) - SciNotes
File Edit Format Options Window Execute ?
emf ex1.1
emf ex1.sce
emf ex2
emf ex2.1
emf ex3
emf ex4
emf ex5
emf ex6
emf ex7
emf ex8
emf ex9
emf ex10
emf ex11
emf ex12
clc;
clear;
r1 = input ('Enter the value of radius of medium-1 r1:');
r2 = input ('Enter the value of radius of medium-2 r2:');
er = input ('Enter the value of relative permittivity of medium - er1:');
e0 = 8.854e-12;
Cisolated = 4 * %pi * e0 * er * r2
disp (Cisolated, 'Capacitance of an isolated sphere :---Farad');
Cconcentric = 4 * %pi * e0 * er * ((r1 * r2) / (r2 - r1));
disp (Cconcentric, 'Capacitance of two concentric sphere :---Farad');
Search
ENG
IN
13:55
10-02-2023


Scilab 6.1.1 Console
File Edit Control Applications ?
Enter the value of radious of medium-1 r1:0.02
Enter the value of radious of medium-2 r2:0.04
Enter the value of relative permittivity of medium - er1:2
1.605D-10
"Capacitance of co-axial cable per unit length :---Farad / mete
-->
emf ex12 (C:\Users\pruth\OneDrive\Documents\emf\emf ex12) - SciNotes
File Edit Format Options Window Execute ?
emf ex1.1
emf ex1.sce
emf ex2
emf ex2.1
emf ex3
emf ex4
emf ex5
emf ex6
emf ex7
emf ex8
emf ex9
emf ex10
emf ex11
emf ex12
clc;
clear;
r1 = input ('Enter the value of radious of medium-1 r1:');
r2 = input ('Enter the value of radious of medium-2 r2:');
er = input ('Enter the value of relative permittivity of medium - er1:');
e0 = 8.854e-12;
Ccoaxial = (2 * %pi * e0 * er) / (log (r2 / r1));
disp (Ccoaxial, 'Capacitance of co-axial cable per unit length :---Farad / meter');
Search
ENG
IN
13:57
10-02-2023


Scilab 6.1.1 Console
File Edit Control Applications ?
Enter the value of relative permittivity of medium - er1: 3
Enter the value of relative permittivity of medium - er2 : 1
Enter the value of teta2 of medium - teta2 : 45
71.565051
"teta1 : "
-->
emf ex12 (C:\Users\pruth\OneDrive\Documents\emf\emf ex12) - SciNotes
File Edit Format Options Window Execute ?
emf ex1.1
emf ex1.sce
emf ex2
emf ex2.1
emf ex3
emf ex4
emf ex5
emf ex6
emf ex7
emf ex8
emf ex9
emf ex10
emf ex11
emf ex12
clc;
clear;
er1=input('Enter the value of relative permittivity of medium - er1: ');
er2=input('Enter the value of relative permittivity of medium - er2 : ');
teta2=input('Enter the value of teta2 of medium - teta2 : ');
teta1=atand((er1 / er2) * tand(teta2));
disp(teta1,'teta1 : ');
Scilab 6.1.1 been relea
Search
ENG IN
13:58
10-02-2023


Scilab 6.1.1 Console
File Edit Control Applications ?
Scilab 6.1.1 Console
Enter the value of relative permeability of medium - mr2 : 0.99
Enter the value of teta2 of medium - teta1 : 60
Enter the value of teta2 of medium - teta2 : 30
2.9700000
"relative permeability of medium - mr1 : "
0.0000037
" permeability of medium - ml : "
-->
emf ex12 (C:\Users\pruth\OneDrive\Documents\emf\emf ex12) - SciNotes
File Edit Format Options Window Execute ?
emf ex1.1
emf ex1.sce
emf ex2
emf ex2.1
emf ex3
emf ex4
emf ex5
emf ex6
emf ex7
emf ex8
emf ex9
emf ex10
emf ex11
emf ex12
clc;
clear;
mr2=input('Enter the value of relative permeability of medium - mr2 : ');
teta1=input('Enter the value of teta2 of medium - teta1 : ');
teta2=input('Enter the value of teta2 of medium - teta2 : ');
ml = (tand(teta1) / tand (teta2)) * mr2 * 4 * 3.14e-7 ;
mr1 = ml / (4 * 3.14e-7);
disp(mr1,'relative permeability of medium - mr1 : ');
disp(ml,' permeability of medium - ml : ');
Search
ENG
IN
13:59
10-02-2023


Scilab 6.1.1 Console
File Edit Control Applications ?
Enter the value of magnetic field - H : 3e-2
Enter the value of relative permeability - mr : 250
Enter the value of magnetic flux - phi : 7
Enter the value of rectangle length - l : 50e-2
Enter the value of rectangle width - w : 20e-2
70.
" Magnetic flux density - Binphi :----Wb/m^2 "
0.0000094
" Magnetic flux density- Binfield :----Wb/m^2 "
-->
emf ex12 (C:\Users\pruth\OneDrive\Documents\emf\emf ex12) - SciNotes
File Edit Format Options Window Execute ?
emf ex1.1
emf ex1.sce
emf ex2
emf ex2.1
emf ex3
emf ex4
emf ex5
emf ex6
emf ex7
emf ex8
emf ex9
emf ex10
emf ex11
emf ex12
clc;
clear;
H = input('Enter the value of magnetic field - H : ');
mr = input('Enter the value of relative permeability - mr : ');
phi = input('Enter the value of magnetic flux - phi : ');
l = input('Enter the value of rectangle length - l : ');
w = input('Enter the value of rectangle width - w : ');
Binphi = phi / (l * w) ;
Binfield = H * mr * 4 * 3.14e-7;
disp(Binphi,' Magnetic flux density - Binphi :----Wb/m^2 ');
disp(Binfield,' Magnetic flux density- Binfield :----Wb/m^2 ');
Search
ENG
IN
14:01
10-02-2023