exp 1.1 emf.sce (C:\Users\sneha\exp 1.1 emf.sce) - SciNotes

File Edit Format Options Window Execute ?

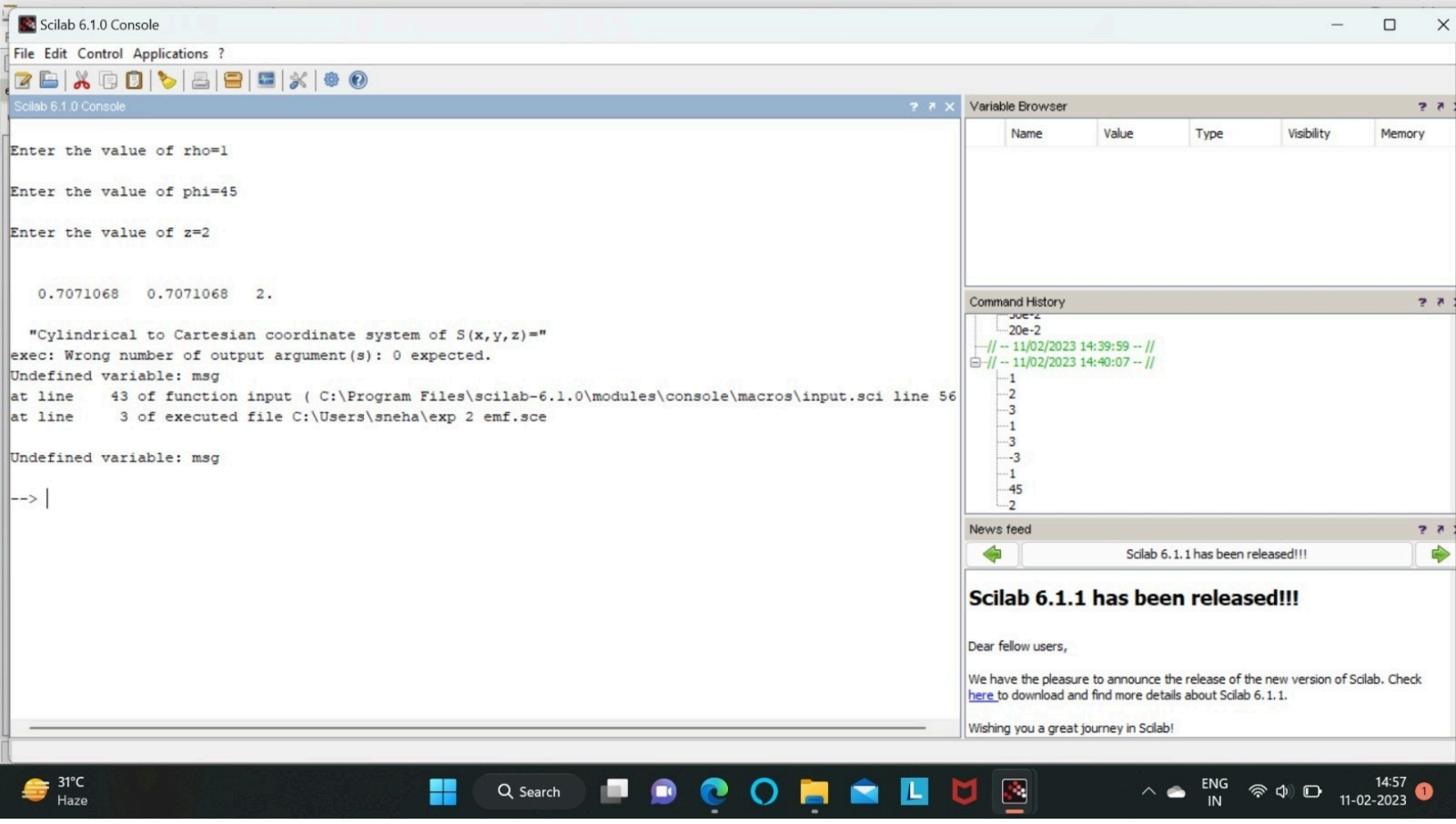
Minimize

exp 1.1 emf.sce (C:\Users\sneha\exp 1.1 emf.sce) - SciNotes

exp 1.1 emf.sce

```
clc;
clear;
x=input('Enter the value of x=');
y=input('Enter the value of y=');
z=input('Enter the value of z=');
r1=sqrt(x^2+y^2+z^2);
teta=acosd(z/r1);
phi=atand(y/x);
disp([r1 teta phi],'Cartesian to Spherical coordinate system of S(r1 teta phi)=');

```


Scilab 6.1.0 Console
File Edit Control Applications ?
Scilab 6.1.0 Console
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)="
exec: Wrong number of output argument(s): 0 expected.
Undefined variable: msg
at line 43 of function input (C:\Program Files\scilab-6.1.0\modules\console\macros\input.sci line 56
at line 3 of executed file C:\Users\sneha\exp 2 emf.sce
Undefined variable: msg
--> |
Variable Browser
Name Value Type Visibility Memory
Command History
20e-2
// -- 11/02/2023 14:39:59 -- //
// -- 11/02/2023 14:40:07 -- //
1
2
3
1
3
-3
1
45
2
News feed
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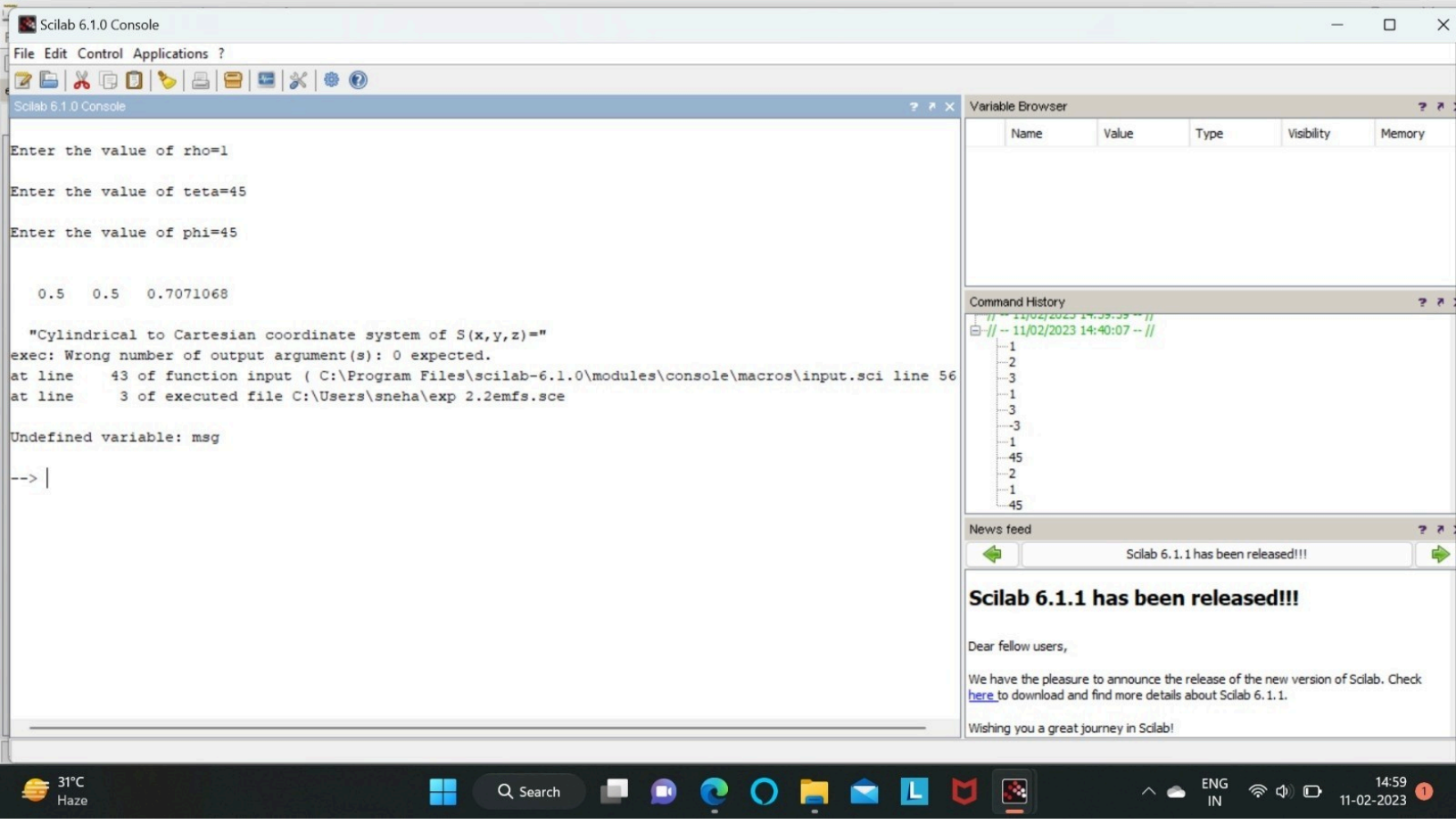
Scilab 6.1.0 Console
File Edit Control Applications ?
Scilab 6.1.0 Console
Enter the value of rho=1
Enter the value of teta=45
Enter the value of phi=45
0.5 0.5 0.7071068
"Cylindrical to Cartesian coordinate system of S(x,y,z)="
exec: Wrong number of output argument(s): 0 expected.
at line 43 of function input (C:\Program Files\scilab-6.1.0\modules\console\macros\input.sci line 56
at line 3 of executed file C:\Users\sneha\exp 2.2emfs.sce
Undefined variable: msg
-->
Variable Browser
Name
Value
Type
Visibility
Memory
Command History
// -- 11/02/2023 14:40:07 -- //
1
2
3
1
3
-3
1
45
2
1
45
News feed
Scilab 6.1.1 has been released!!!
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exp 4 emf.sce (C:\Users\sneha\exp 4 emf.sce) - SciNotes

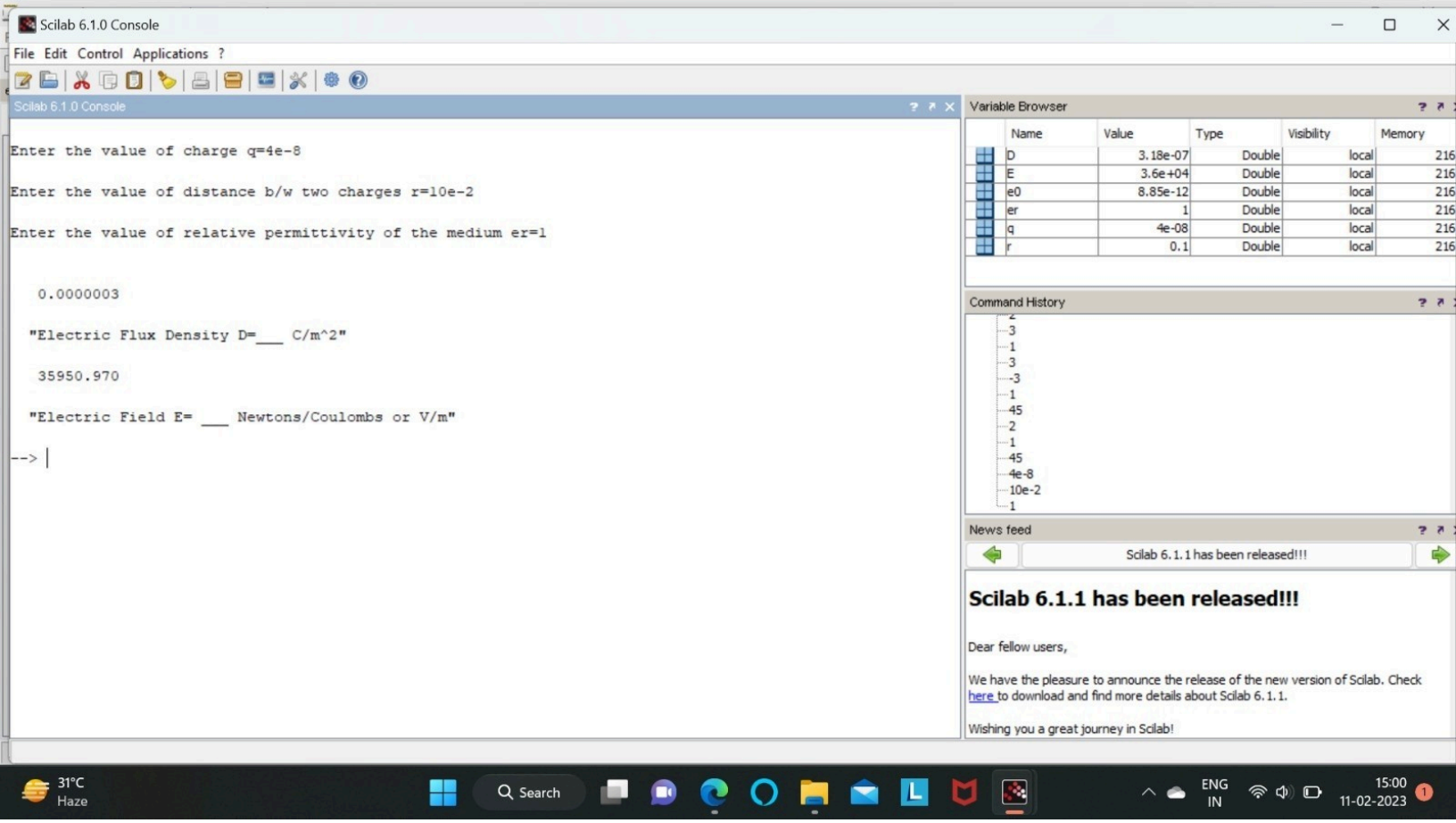
File Edit Format Options Window Execute ?

exp 4 emf.sce (C:\Users\sneha\exp 4 emf.sce) - SciNotes

exp 4 emf.sce

```
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;
D=(q)/(4*%pi*r^2);
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');

```


Scilab 6.1.0 Console
File Edit Control Applications ?
Scilab 6.1.0 Console
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"
-->
Variable Browser
Name Value Type Visibility Memory
D 3.18e-07 Double local 216
E 3.6e+04 Double local 216
e0 8.85e-12 Double local 216
er 1 Double local 216
q 4e-08 Double local 216
r 0.1 Double local 216
Command History
3
1
3
-3
1
45
2
1
45
4e-8
10e-2
1
News feed
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exp 5emfs.sce (C:\Users\sneha\exp 5emfs.sce) - SciNotes

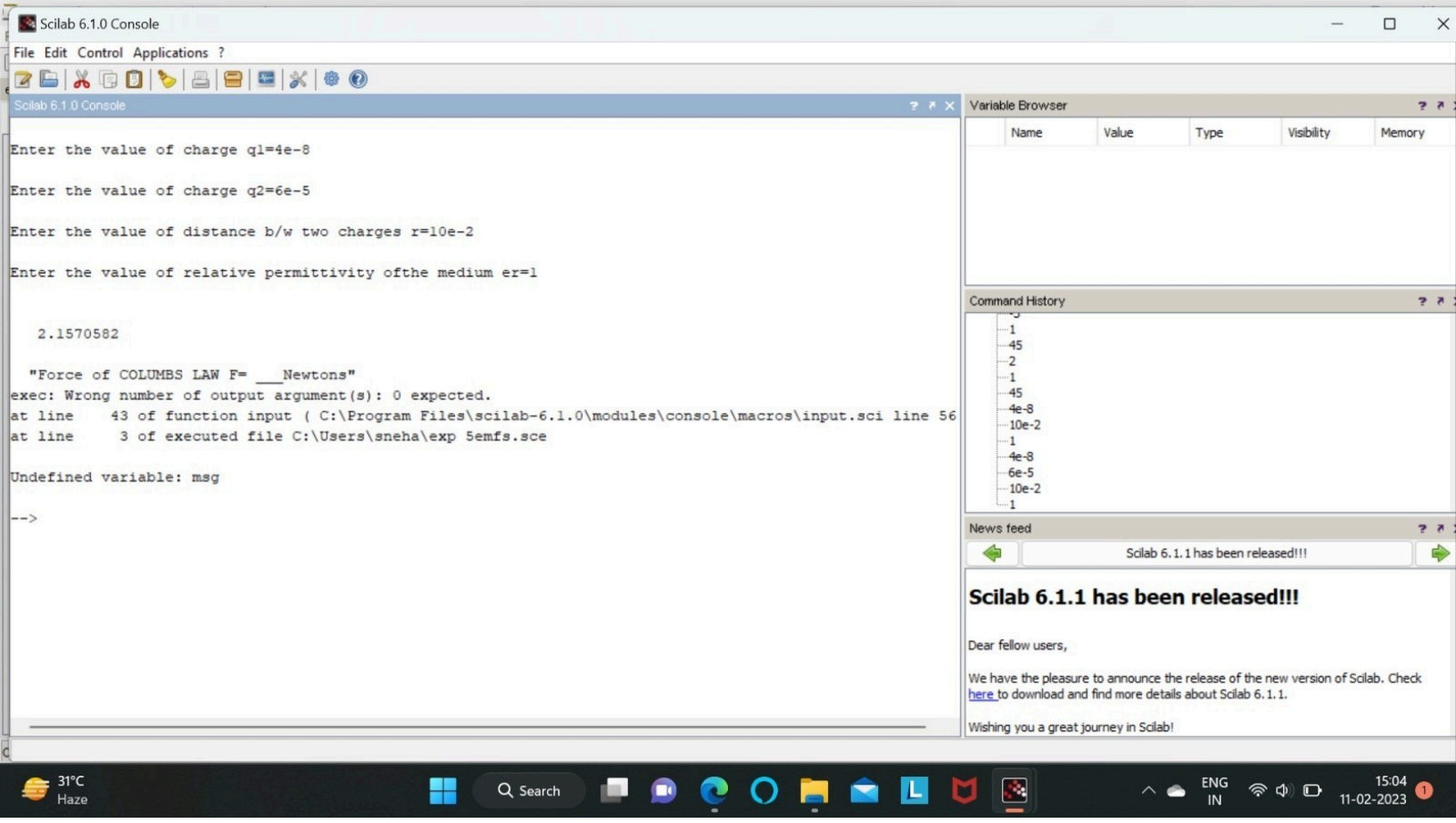
File Edit Format Options Window Execute ?

exp 5emfs.sce (C:\Users\sneha\exp 5emfs.sce) - SciNotes

exp 5emfs.sce

```
1  clc;
2  clear;
3  q1=input('Enter the value of charge q1=');
4  q2=input('Enter the value of charge q2=');
5  r=input('Enter the value of distance b/w two charges r=');
6  er=input('Enter the value of relative permittivity ofthe medium er=');
7  e0=8.854e-12;
8  F=(q1*q2)/(4*%pi*e0*er*r^2);
9  disp(F,'Force of COLUMBS LAW F= ___Newtons')
10
```

Overwrite Mode


Scilab 6.1.0 Console
File Edit Control Applications ?
Scilab 6.1.0 Console
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"
exec: Wrong number of output argument(s): 0 expected.
at line 43 of function input (C:\Program Files\scilab-6.1.0\modules\console\macros\input.sci line 56
at line 3 of executed file C:\Users\sneha\exp 5emfs.sce
Undefined variable: msg
-->
Variable Browser
Name
Value
Type
Visibility
Memory
Command History
1
45
2
1
45
4e-8
10e-2
1
4e-8
6e-5
10e-2
1
News feed
Scilab 6.1.1 has been released!!!
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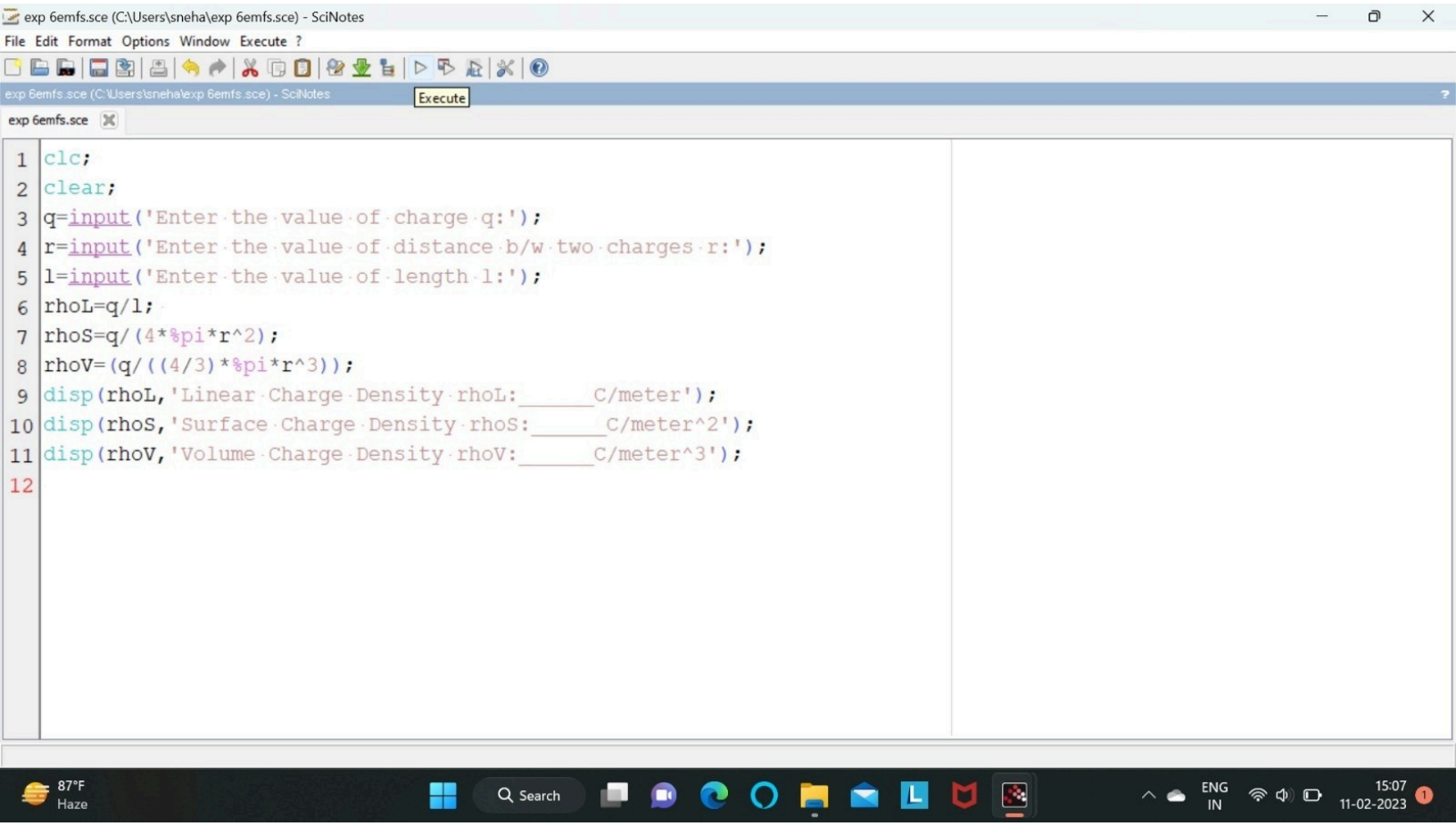
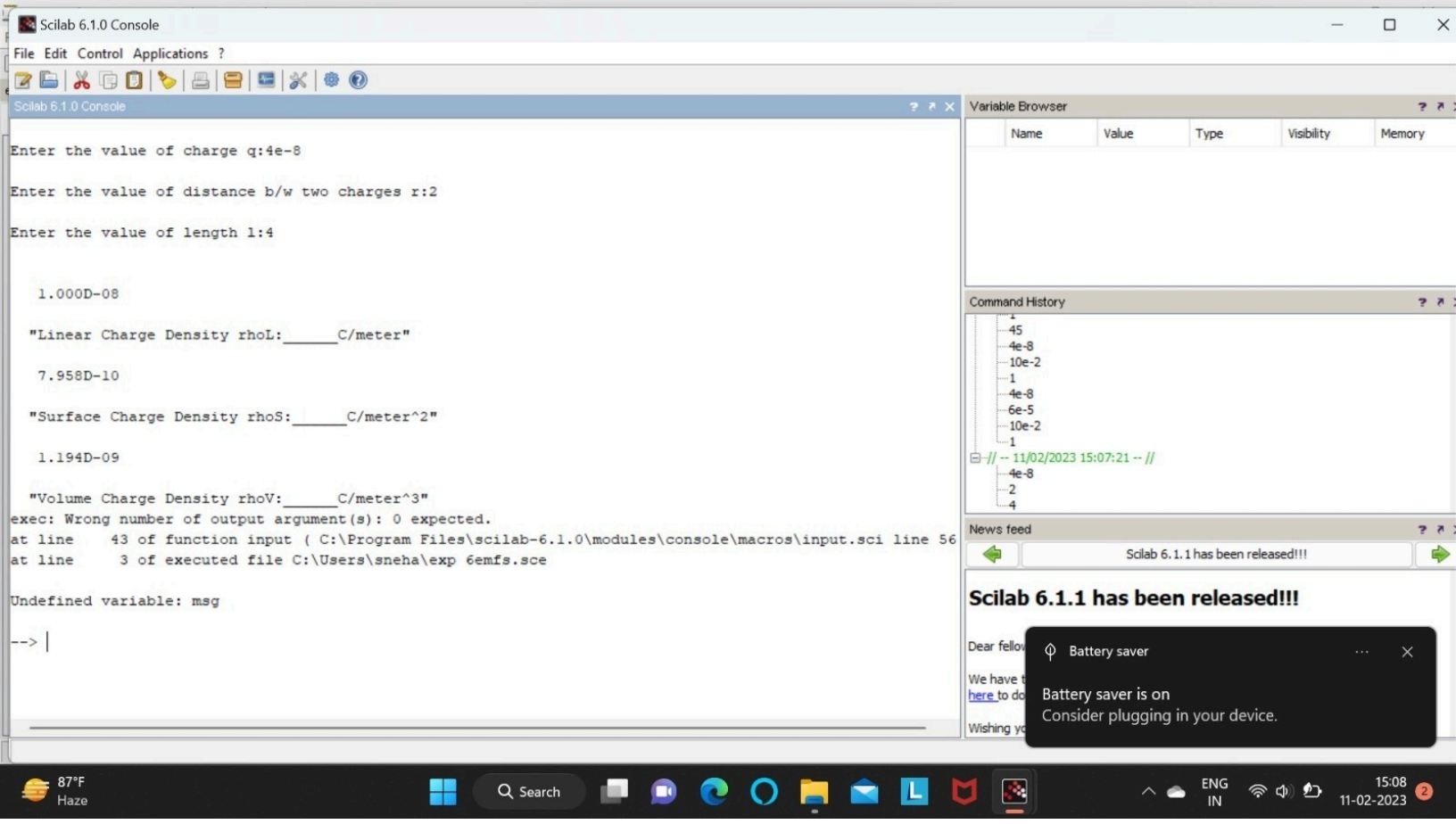

exp 6emfs.sce (C:\Users\sneha\exp 6emfs.sce) - SciNotes
File Edit Format Options Window Execute ?
Execute
exp 6emfs.sce
1 clc;
2 clear;
3 q=input('Enter the value of charge q:');
4 r=input('Enter the value of distance b/w two charges r:');
5 l=input('Enter the value of length l:');
6 rhoL=q/l;
7 rhoS=q/(4*%pi*r^2);
8 rhoV=(q/((4/3)*%pi*r^3));
9 disp(rhoL,'Linear Charge Density rhoL:_____C/meter');
10 disp(rhoS,'Surface Charge Density rhoS:_____C/meter^2');
11 disp(rhoV,'Volume Charge Density rhoV:_____C/meter^3');
12
87°F
Haze
Search
ENG
IN
15:07
11-02-2023


Scilab 6.1.0 Console
File Edit Control Applications ?
Scilab 6.1.0 Console
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-6.1.0\modules\console\macros\input.sci line 56
at line 3 of executed file C:\Users\sneha\exp 6emfs.sce
Undefined variable: msg
-->

Variable Browser
Name
Value
Type
Visibility
Memory

Command History
45
4e-8
10e-2
1
4e-8
6e-5
10e-2
1
// -- 11/02/2023 15:07:21 -- //
4e-8
2
4

News feed
Scilab 6.1.1 has been released!!!
Scilab 6.1.1 has been released!!!
Battery saver
Battery saver is on
Consider plugging in your device.

87°F
Haze
Search
ENG
IN
15:08
11-02-2023

exp 8 emf.sce (C:\Users\sneha\exp 8 emf.sce) - SciNotes

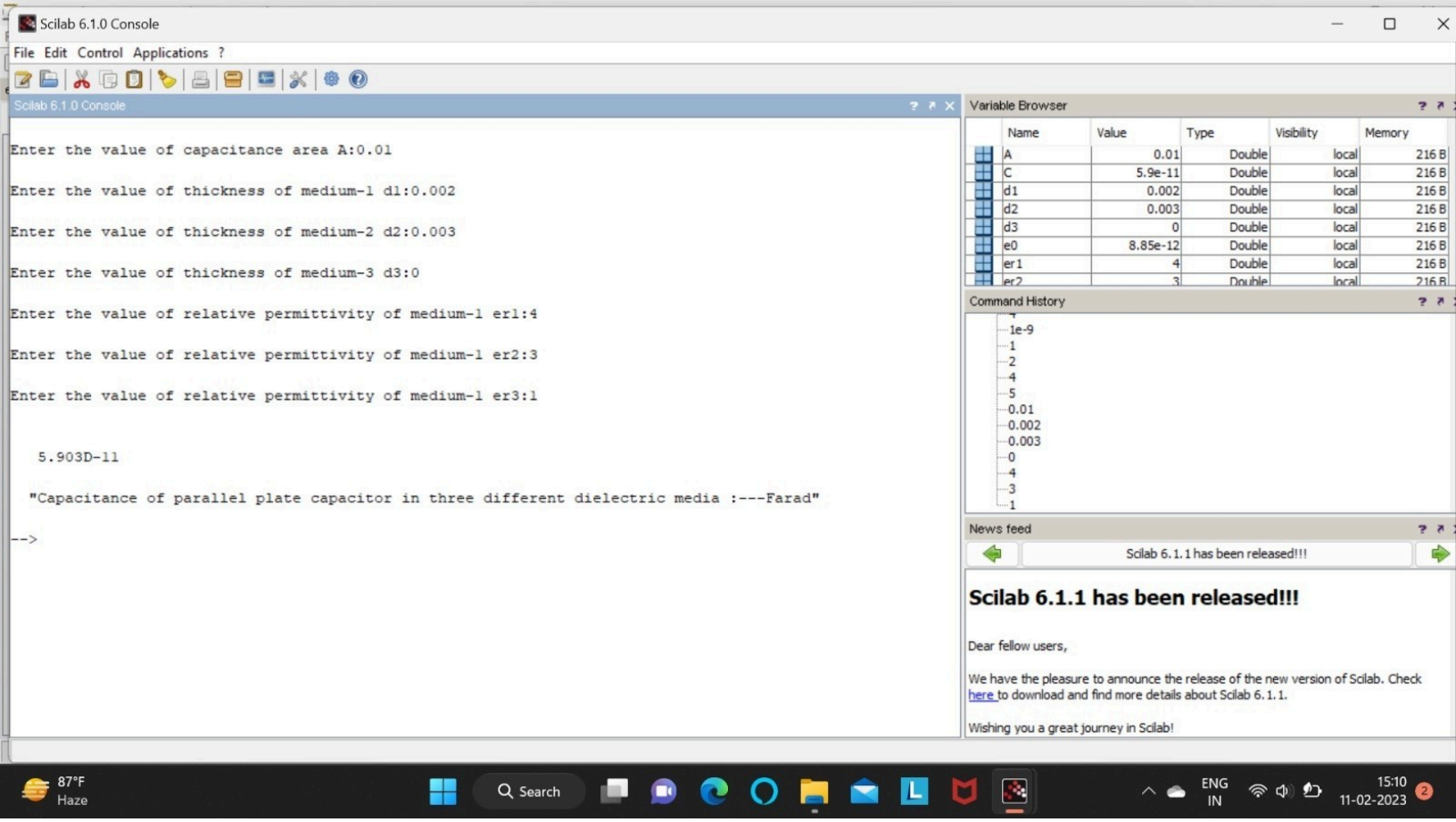
File Edit Format Options Window Execute ?

exp 8 emf.sce (C:\Users\sneha\exp 8 emf.sce) - SciNotes

exp 8 emf.sce

```
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' )

```


Scilab 6.1.0 Console
File Edit Control Applications ?
Scilab 6.1.0 Console
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 dielectric media :---Farad"
-->
Variable Browser
Name Value Type Visibility Memory
A 0.01 Double local 216 B
C 5.9e-11 Double local 216 B
d1 0.002 Double local 216 B
d2 0.003 Double local 216 B
d3 0 Double local 216 B
e0 8.85e-12 Double local 216 B
er1 4 Double local 216 B
Command History
1e-9
1
2
4
5
0.01
0.002
0.003
0
4
3
1
News feed
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exp 9 emf.sce (C:\Users\sneha\exp 9 emf.sce) - SciNotes

File Edit Format Options Window Execute ?

Execute

exp 9 emf.sce (C:\Users\sneha\exp 9 emf.sce) - SciNotes

exp 9 emf.sce

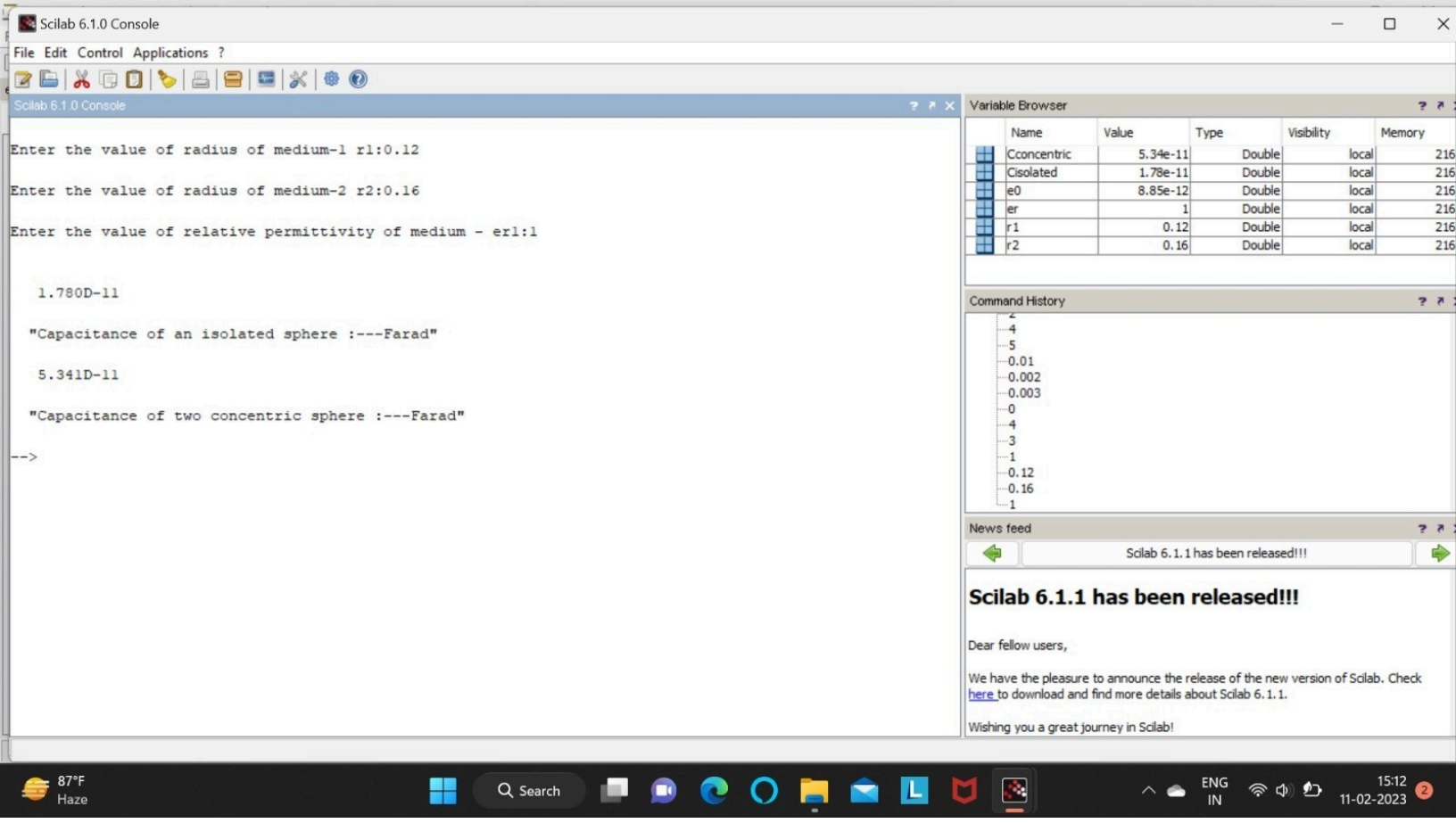
```
clc;
clear;
r1=input('Enter the value of radius of medium-1 r1:');
r2=input('Enter the value of radius of medium-2 r2:');
er=input('Enter the value of relative permittivity of medium - er1:');
e0=8.854e-12;
Cisolated=4*%pi*e0*er*r2
disp(Cisolated,'Capacitance of an isolated sphere :---Farad' );
Cconcentric=4*%pi*e0*er*((r1*r2)/(r2-r1));
disp(Cconcentric, 'Capacitance of two concentric sphere :---Farad');

```

87°F Haze

Search

ENG IN

15:11 11-02-2023


Scilab 6.1.0 Console
File Edit Control Applications ?
Scilab 6.1.0 Console
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"
-->
Variable Browser
Name Value Type Visibility Memory
Cconcentric 5.34e-11 Double local 216
Cisolated 1.78e-11 Double local 216
e0 8.85e-12 Double local 216
er 1 Double local 216
r1 0.12 Double local 216
r2 0.16 Double local 216
Command History
4
5
0.01
0.002
0.003
0
4
3
1
0.12
0.16
1
News feed
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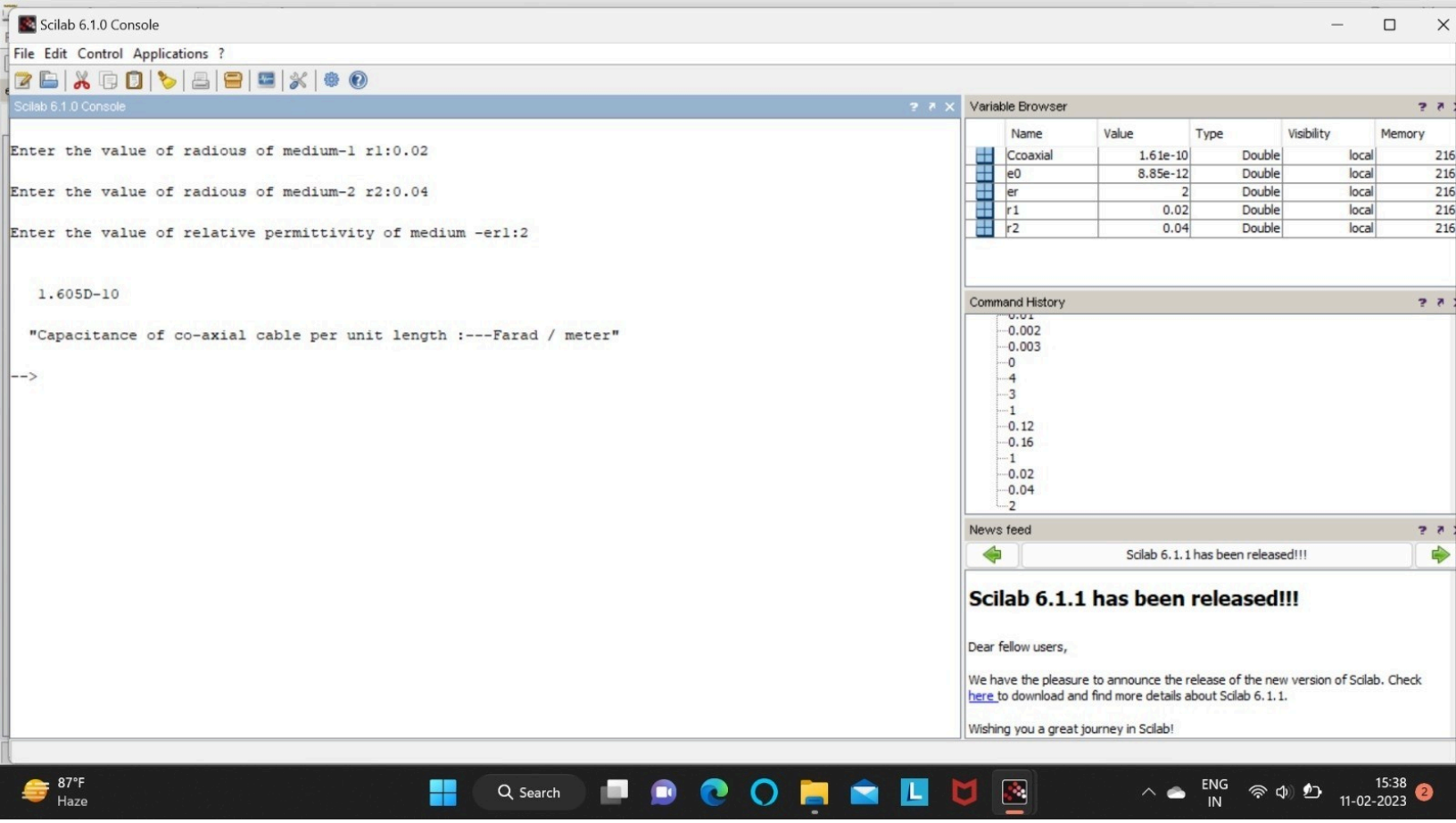
87°F
Haze
Search
ENG
IN
15:12
11-02-2023


Scilab 6.1.0 Console
File Edit Control Applications ?
Scilab 6.1.0 Console
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 / meter"
-->
Variable Browser
Name Value Type Visibility Memory
Ccoaxial 1.61e-10 Double local 216
e0 8.85e-12 Double local 216
er 2 Double local 216
r1 0.02 Double local 216
r2 0.04 Double local 216
Command History
0.002
0.003
0
4
3
1
0.12
0.16
1
0.02
0.04
2
News feed
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exp 11emf.sce (C:\Users\sneha\exp 11emf.sce) - SciNotes

File Edit Format Options Window Execute ?

exp 11emf.sce (C:\Users\sneha\exp 11emf.sce) - SciNotes

*exp 11emf.sce

```
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:')
```

Line 3, Column 39.

exp 12 emf.sce (C:\Users\sneha\exp 12 emf.sce) - SciNotes

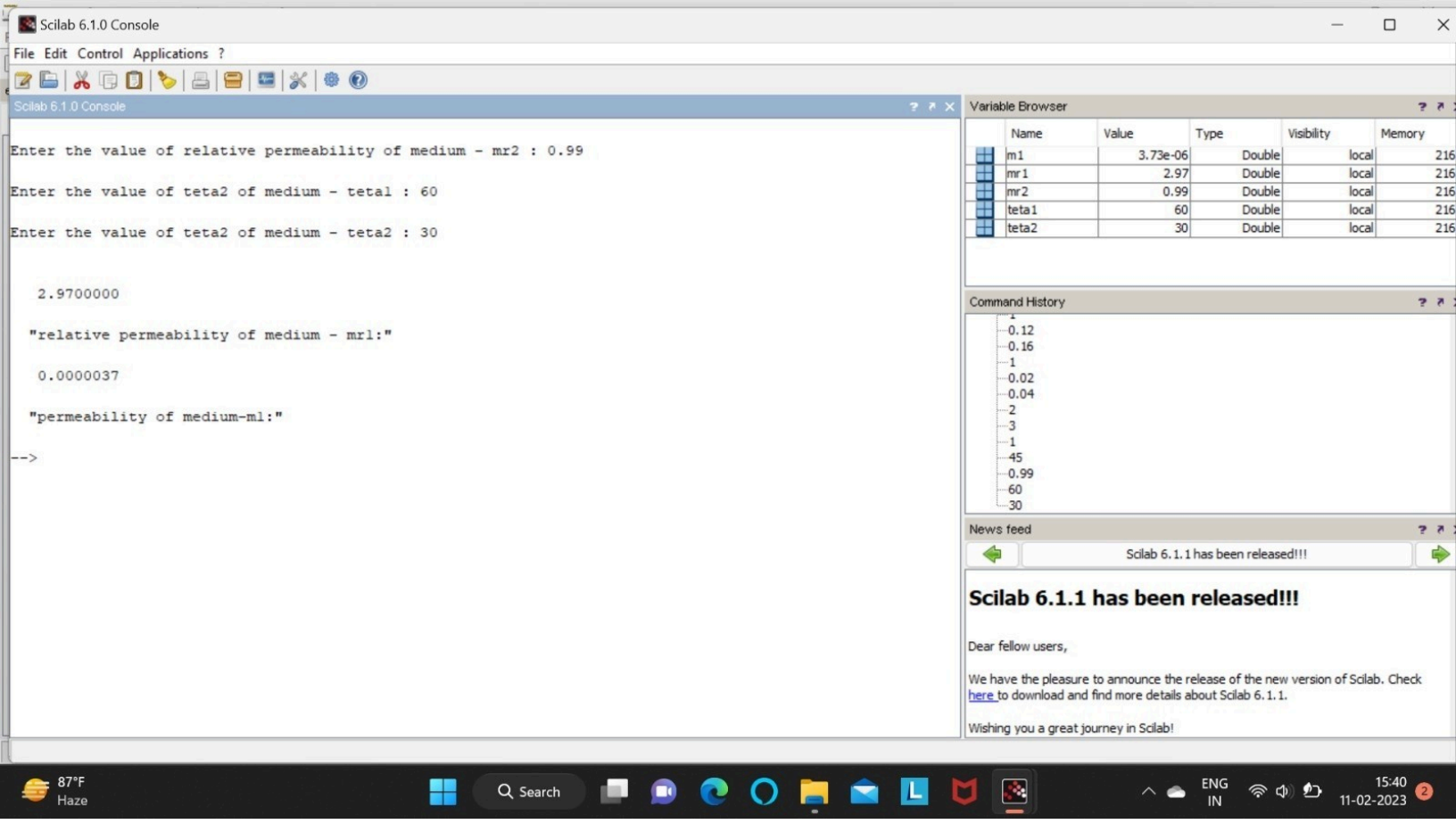
File Edit Format Options Window Execute ?

exp 12 emf.sce (C:\Users\sneha\exp 12 emf.sce) - SciNotes

Execute

exp 12 emf.sce

```
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 : ');
m1=(tand(teta1)/tand(teta2))*mr2*4*3.14e-7;
mr1=m1/(4*3.14e-7);
disp(mr1,'relative permeability of medium - mr1:');
disp(m1,'permeability of medium-m1:');
```


Scilab 6.1.0 Console
File Edit Control Applications ?
Scilab 6.1.0 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-m1:"
-->
Variable Browser
Name Value Type Visibility Memory
m1 3.73e-06 Double local 216
mr1 2.97 Double local 216
mr2 0.99 Double local 216
teta1 60 Double local 216
teta2 30 Double local 216
Command History
0.12
0.16
1
0.02
0.04
2
3
1
45
0.99
60
30
News feed
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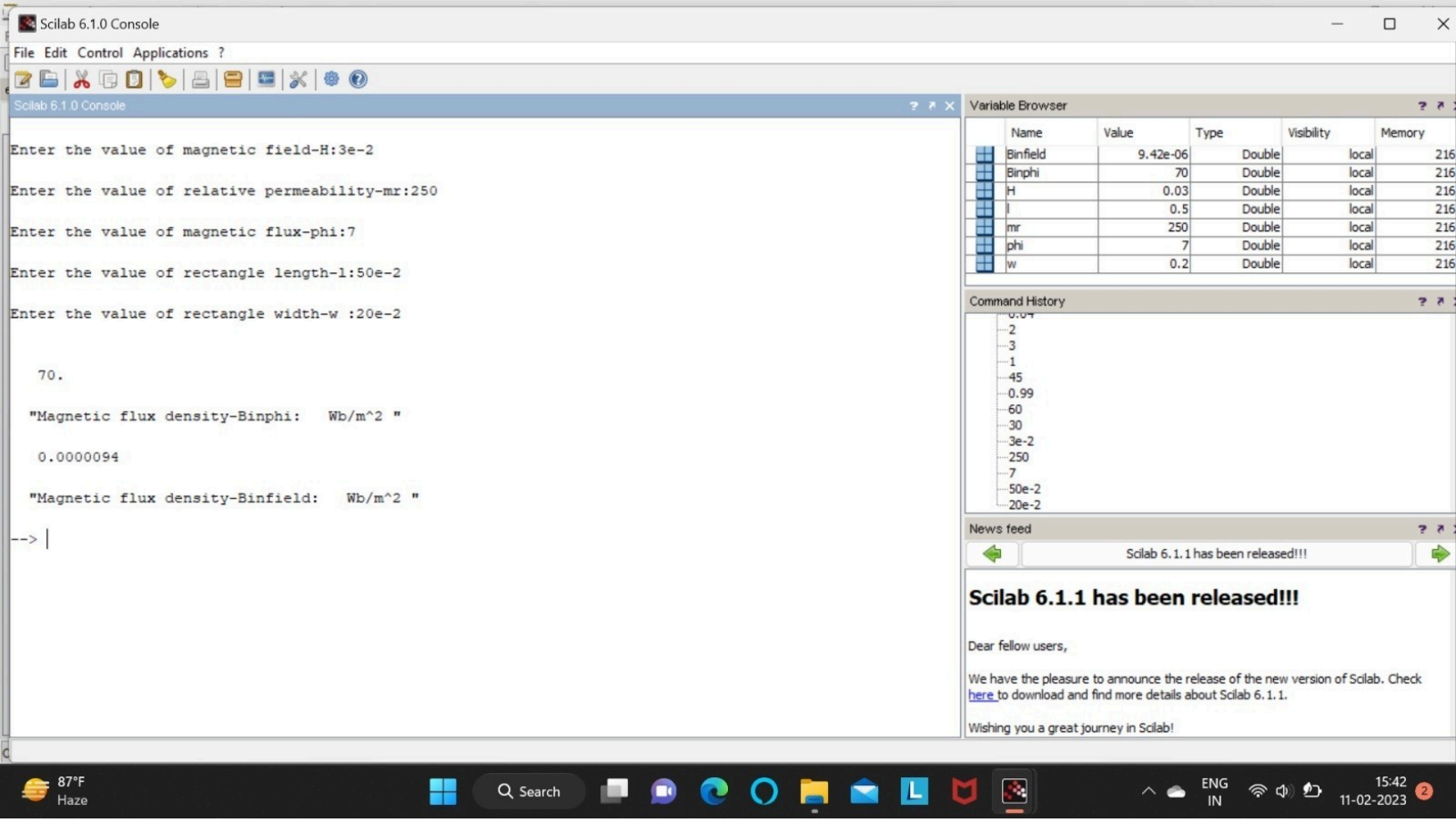
87°F
Haze
Search
ENG
IN
15:40
11-02-2023


Scilab 6.1.0 Console
File Edit Control Applications ?
Scilab 6.1.0 Console
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 "
-->
Variable Browser
Name Value Type Visibility Memory
Binfield 9.42e-06 Double local 216
Binphi 70 Double local 216
H 0.03 Double local 216
l 0.5 Double local 216
mr 250 Double local 216
phi 7 Double local 216
w 0.2 Double local 216
Command History
2
3
1
45
0.99
60
30
3e-2
250
7
50e-2
20e-2
News feed
Scilab 6.1.1 has been released!!!
Scilab 6.1.1 has been released!!!
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87°F
Haze
Search
ENG
IN
15:42
11-02-2023

exp 13 emf.sce (C:\Users\sneha\exp 13 emf.sce) - SciNotes

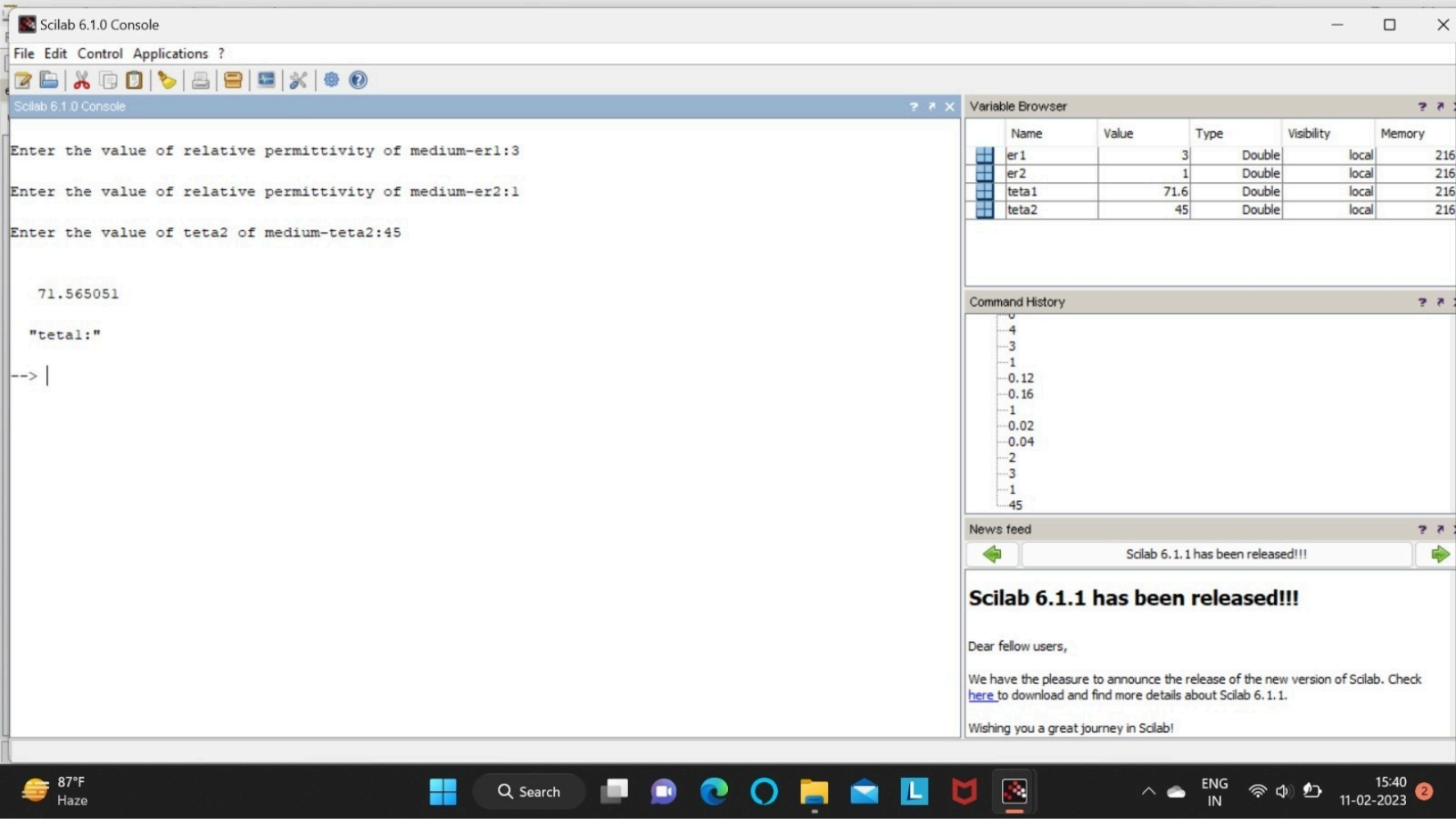
File Edit Format Options Window Execute ?

exp 13 emf.sce (C:\Users\sneha\exp 13 emf.sce) - SciNotes

*exp 13 emf.sce

```
1  clc;
2  clear;
3  H=input('Enter the value of magnetic field-H:');
4  mr=input('Enter the value of relative permeability-mr:');
5  phi=input('Enter the value of magnetic flux-phi:');
6  l=input('Enter the value of rectangle length-l:');
7  w=input('Enter the value of rectangle width-w :');
8  Binphi=phi/(l*w);
9  Binfield=H*mr*4*3.14e-7;
10 disp(Binphi,'Magnetic flux density-Binphi:   Wb/m^2 ');
11 disp(Binfield,'Magnetic flux density-Binfield:   Wb/m^2 ');
12
```

Overwrite Mode


Scilab 6.1.0 Console
File Edit Control Applications ?
Scilab 6.1.0 Console
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:"
--> |
Variable Browser
Name Value Type Visibility Memory
er1 3 Double local 216
er2 1 Double local 216
teta1 71.6 Double local 216
teta2 45 Double local 216
Command History
4
3
1
0.12
0.16
1
0.02
0.04
2
3
1
45
News feed
Scilab 6.1.1 has been released!!!
Scilab 6.1.1 has been released!!!
Dear fellow users,
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exp 10 emf.sce (C:\Users\sneha\exp 10 emf.sce) - SciNotes

File Edit Format Options Window Execute ?

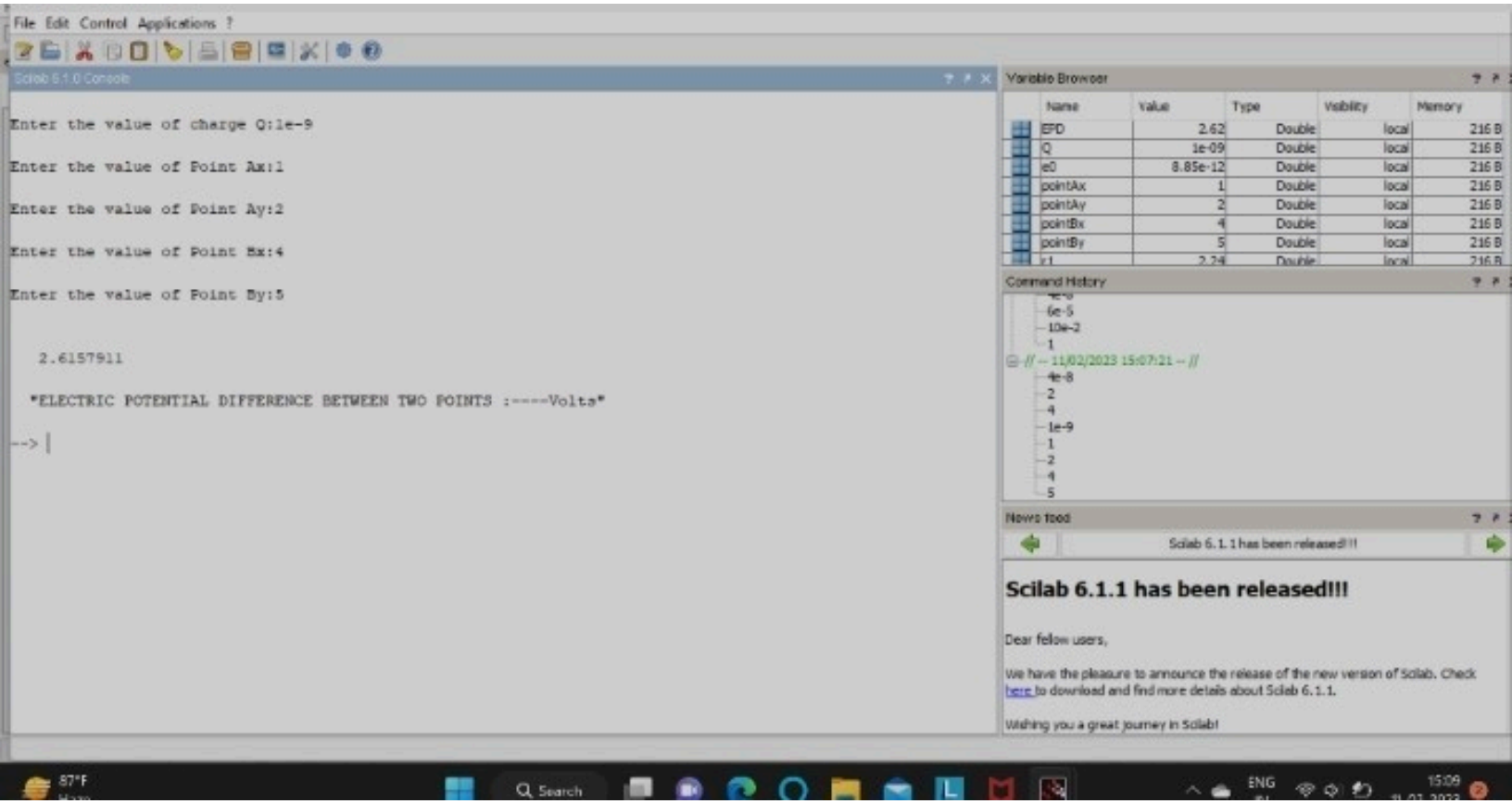
exp 10 emf.sce (C:\Users\sneha\exp 10 emf.sce) - SciNotes

*exp 10 emf.sce

```
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' );

```

Line 9, Column 0.


File Edit Control Applications ?
Scilab 6.1.0 Console
Enter the value of charge Q:1e-9
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
2.6157911
"ELECTRIC POTENTIAL DIFFERENCE BETWEEN TWO POINTS :----Volta"
-->
Variable Browser
Name Value Type Visibility Memory
EPD 2.62 Double local 216 B
Q 1e-09 Double local 216 B
e0 8.85e-12 Double local 216 B
pointAx 1 Double local 216 B
pointAy 2 Double local 216 B
pointBx 4 Double local 216 B
pointBy 5 Double local 216 B
Command History
6e-5
10e-2
1
// -- 11/02/2023 15:07:21 -- //
4e-8
2
4
1e-9
1
2
4
5
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Scilab 6.1.1 has been released!!!
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We have the pleasure to announce the release of the new version of Scilab. Check here to download and find more details about Scilab 6.1.1.
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