Octave Lab Practical Sheet - 05

01.

(a).

```
>> num2cell('hello')
ans =
{
  [1,1] = h
  [1,2] = e
  [1,3] = l
  [1,4] = l
  [1,5] = o
}
```

(b).

```
>>
>> num2cell(hello)
error: 'hello' undefined near line 1, column 10
>>
```

(c).

```
>> num2cell("hello")
ans =
{
  [1,1] = h
  [1,2] = e
  [1,3] = l
  [1,4] = l
  [1,5] = o
}
```

(d).

```
>>
>> num2cell("()*&^%$")
ans =
{
  [1,1] = (
  [1,2] = )
  [1,3] = *
  [1,4] = &
  [1,5] = ^
  [1,6] = %
  [1,7] = $
}

>>
>>
```

(e).

```
>> num2cell("()*&^%$")
ans =
{
  [1,1] = (
  [1,2] = )
  [1,3] = *
  [1,4] = &
  [1,5] = ^
  [1,6] = %
  [1,7] = $
}
```

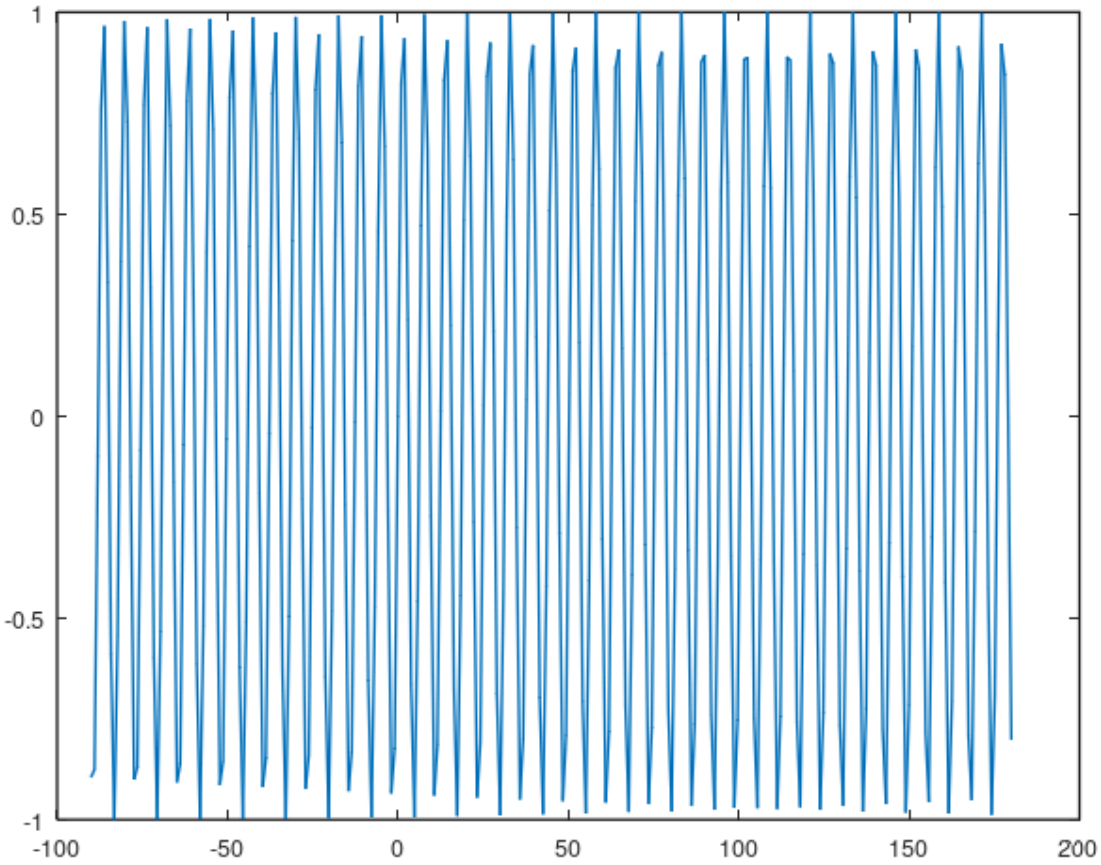
(f).

```
>> num2cell("()*&^%$")
ans =
{
  [1,1] = (
  [1,2] = )
  [1,3] = *
  [1,4] = &
  [1,5] = ^
  [1,6] = %
  [1,7] = $
}

>>
```

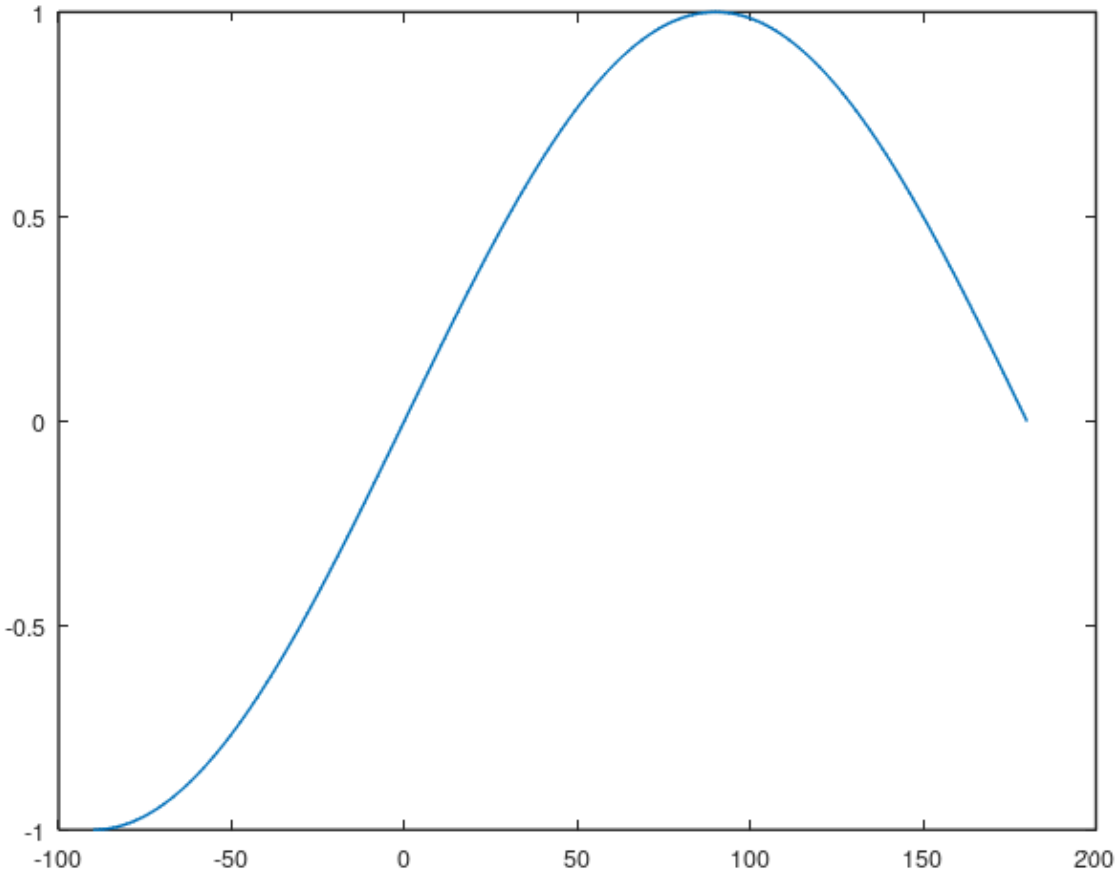
(g).

```
>>
>> num2cell("()*112$")
ans =
{
  [1,1] = (
  [1,2] = )
  [1,3] = *
  [1,4] = 1
  [1,5] = 1
  [1,6] = 2
  [1,7] = $
}

>>
```

02. (a)

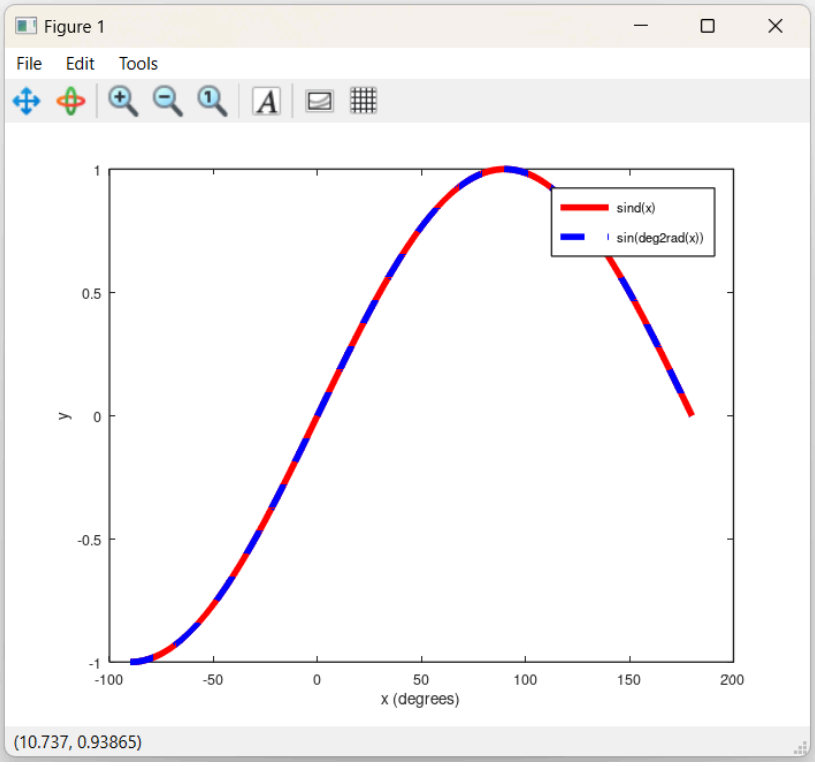

1
0.5
0
-0.5
-1
-100
-50
0
50
100
150
200

(b)



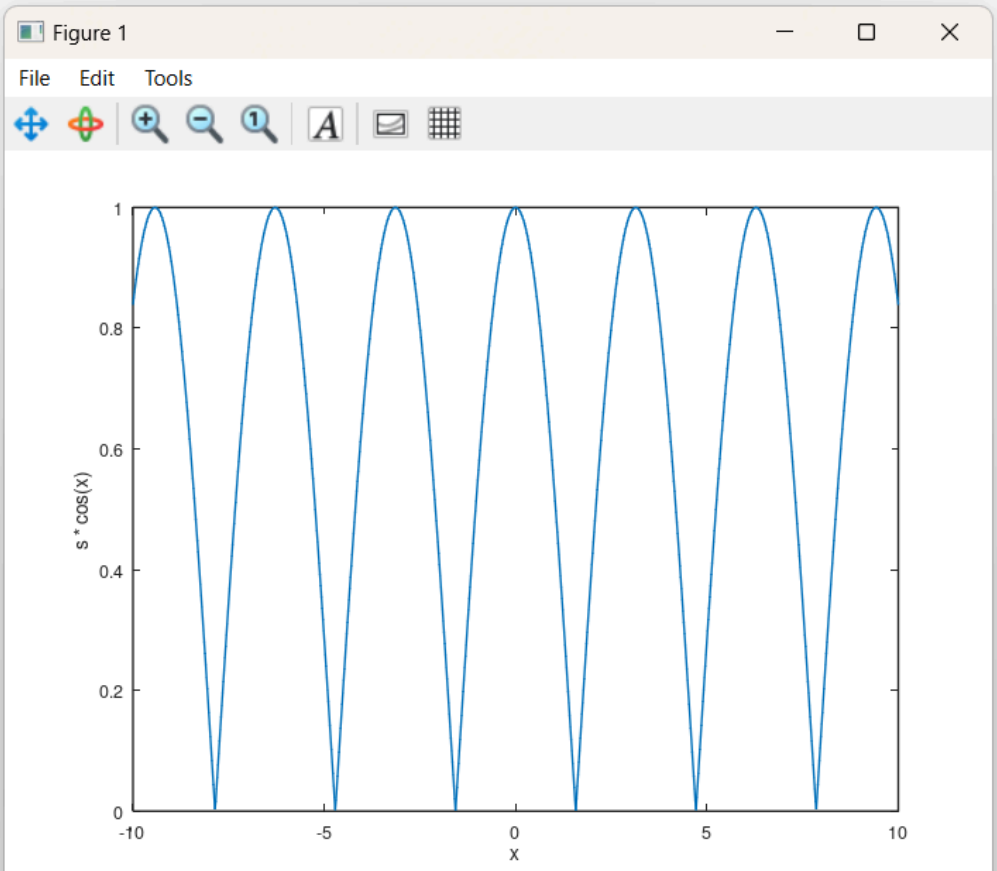
03.

```
>> x = linspace(-90, 180, 280);
>> y1 = sind(x);
>> y2 = sin(deg2rad(x));
>> plot(x, y1, 'r-', 'LineWidth', 2);
>> hold on;
>> plot(x, y2, 'b--', 'LineWidth', 2);
>> hold off;
>> legend('sind(x)', 'sin(deg2rad(x))');
>> xlabel('x (degrees)');
>> ylabel('y');
>> name = 'M.A.M.Damsara_22000275';
>>
>> print([name, '.jpg'], '-djpg');
>> print([name, '.jpeg'], '-djpeg');
>> print([name, '.bmp'], '-dbmp');
>> print([name, '.gif'], '-dgif');
>> print([name, '.png'], '-dpng');
>>
```



04.

```
>> n = 1000;
>> x = linspace(-10, 10, n);
>> y = cos(x);
>> s = sign(y);
>> plot(x, s .* y);
>> xlabel('x');
>> ylabel('s * cos(x)');
>> filename = 'M.A.M.Damsara_22000275.png';
>> print(filename, '-dpng');
>>
```



05.

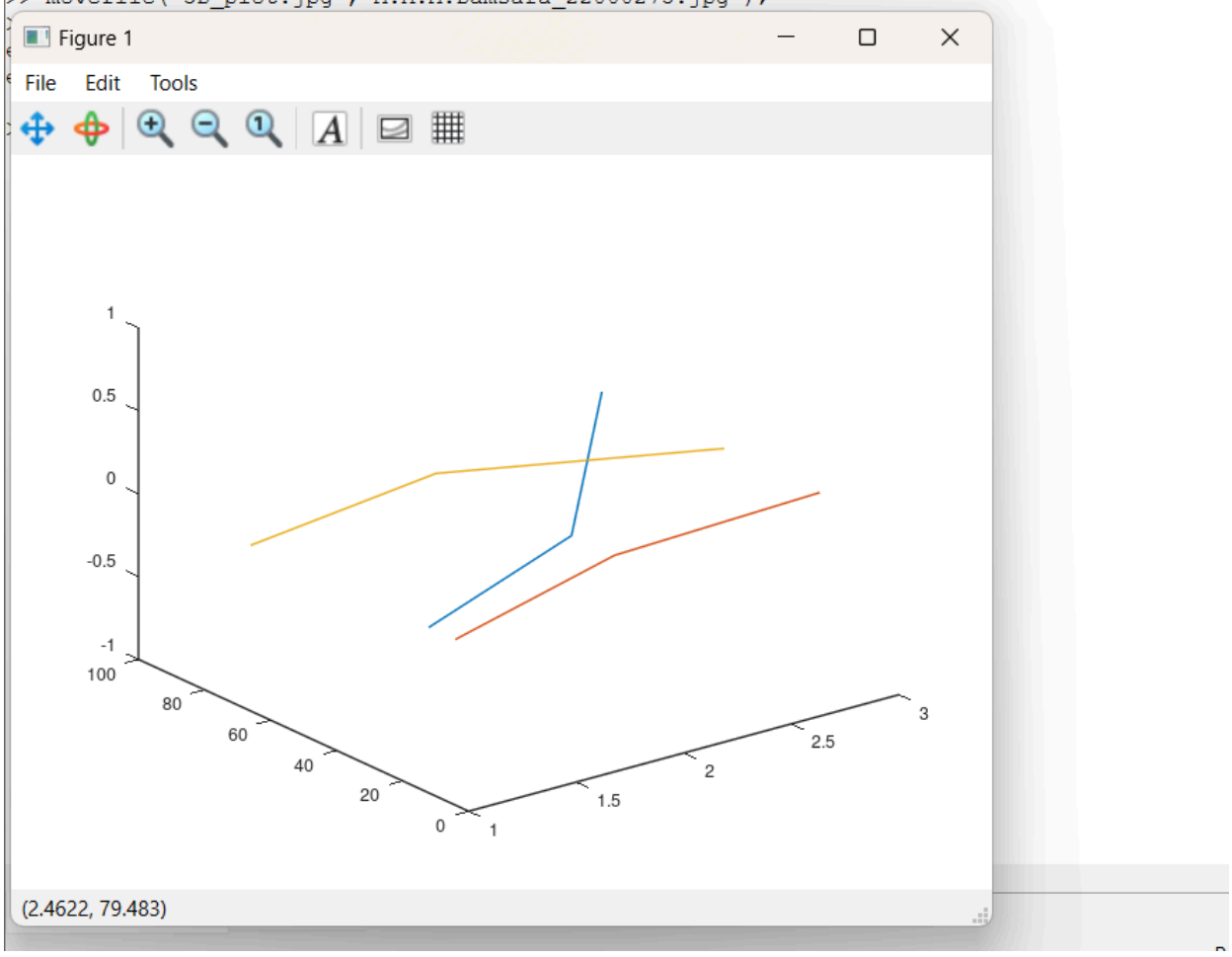
```
>> 8 < 3 & 2 > 9
ans = 0
>>
>>
>> 7 > 5 & 120 < 98.666
ans = 0
>>
>>
>> 9 == 9 & 100 > 49
ans = 1
>>
>>
>> 5 == 6 & 3 > 1 & 7 > 0
ans = 0
>>
>>
>> 'y' != 'z' & 4 < 3 & 5 > 2
ans = 0
>>
>>
>> "%" != "%" & 7 == 2 & 7840 > 7940
ans = 0
>>
>>
>>
>> 'y' == "y" & "x" == 'x'
ans = 1
>>
>>
>>
>>
```

06.

```
>> 23 < 5 | 3 == 7
ans = 0
>>
>>
>> 8 < 7 | 3 > 0
ans = 1
>>
>>
>> 4 > 2 | 0 == -1 | 7 < 100
ans = 1
>>
>>
>> 5 != 5 | 8 != 2 | 567 > 124
ans = 1
>>
>>
>>
>> "abc" == 'abc' | e == pi
ans =

  1  1  1

>>
>>
>> 'xyz' != "xyz" | e != pi
ans =

  1  1  1

>>
>>
>> "|" != '|' | "&@" == '&@' | 10000000 != 10000000
ans =

  1  1

>>
>>
>>
```

07.

```
>> mkdir('UoC');
warning: mkdir: directory exists
>> cd('UoC');
>> mkdir('UCSC');
warning: mkdir: directory exists
>> mkdir('IBMBB');
warning: mkdir: directory exists
>> cd('IBMBB');
>> plot3([12,4,66; 34,21,75; 90,24,53]);
>> print('3D_Plot', '-djpeg');
>> movefile('3D_plot.jpg','M.A.M.Damsara_22000275.jpg');
```

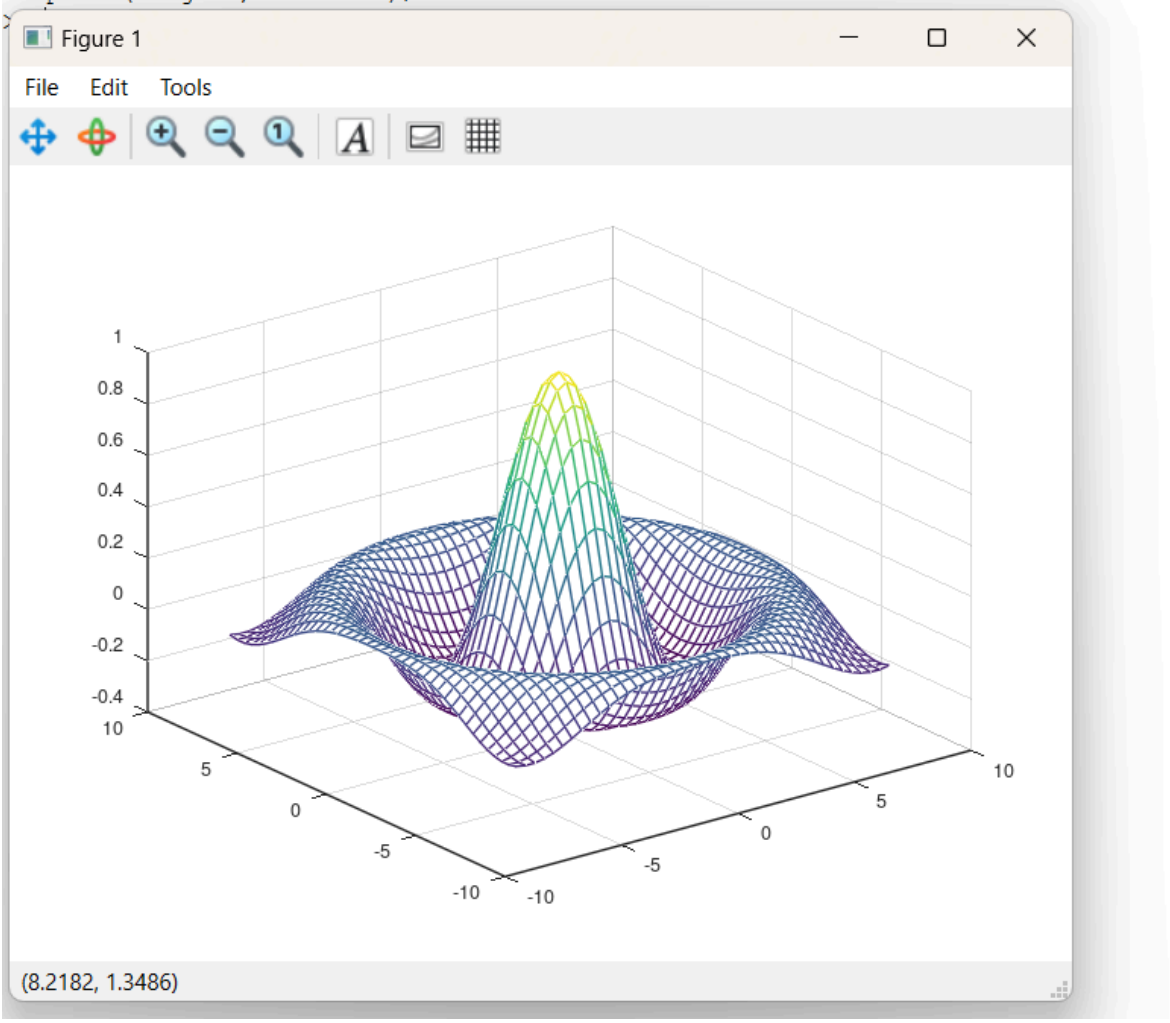


08.

```
>> initials = 'M.A.M';
>> myfName = 'Damsara';
>> fid = fopen('Malith_Damsara.txt', 'wt');
>> fprintf(fid, '%s\n', myfName);
>> fclose(fid);
>> fid = fopen('Malith_Damsara.txt', 'rt');
>> fileContent = fgetl(fid);
>> disp(fileContent);
Damsara
>> fclose(fid);
>>
```

09.

```
>> a = b = linspace(-8, 8, 41);
>> [xx, yy] = meshgrid(a, b);
>> c = sqrt(xx.^2 + yy.^2) + eps;
>> d = sin(c)./c;
>> mesh(a, b, d);
>> filename = 'Malith_Damsara_22000275.gif';
>> print('-dgif', filename);
```



10.

Command Window

```
>> print('-dgif', 'output.gif');
error: print: no figure to print
error: called from
    print at line 467 column 5
>>
>>
>> close;
>>
>> print('-dgif', 'output.gif');
error: print: no figure to print
error: called from
    print at line 467 column 5
>>
>>
```