LAB #13

Objective: Creation of script and Functions.

Exercise#01: Write function M-file "mysum.m" to add two numbers. The syntax should be like: y = mysum(c,d);

Source code:

```
function y = mysum(c,d)
y=c+d;
end
display('Sum Calculation ');
no1= input('enter the first number:');
no2= input('enter the Second number:');
display('Sum of input numbers is: ');
mysum(no1,no2)
```

Output:

```
Lab13t1
Sum Calculation
enter the first number:
3
enter the Second number:
4
Sum of input numbers is:
ans =
7
```

Exercise#02: Write function M-file "mysqrt.m" and take the sum. The syntax should be like: y = mysqrt(c,d);

Source Code:

```
function y = mysqrt(c,d)
y=c+d;
end
display('Sum Calculation ');
no1= input('enter the first number:');
no2= input('enter the Second number:');
display('Sum of input numbers is: ');
mysqrt(no1,no2)
```

Output:

```
Lab13t2
Sum Calculation
enter the first number:
5
enter the Second number:
3
Sum of input numbers is:
ans =
    8
```

Exercise#03: Write function M-file "cart2plr.m" to convert the Cartesian coordinates into Polar coordinates. The syntax should be like:

[r,t] = cart2plr(x,y);

Source Code:

```
function [r,t] = cart2plr(x,y)
r=sqrt(x*x+y*y)
t=rad2deg(atan(y/x))
end
display('cartesion to polar conversion');
x= input('enter the first cordinate:');
y= input('enter the Second cordinate:');
display('Values in polar cordinates are: ');
cart2plr(x,y)
```

Output:

```
lab13t3
cartesion to polar conversion
enter the first cordinate:3
enter the Second cordinate:4
Values in polar cordinates are:
r =
     5
t =
   53.1301
```

Exercise#04: Write function M-file "quadeq.m" to solve the quadratic equation. The syntax should be like:

[r1,r2] = quadeq(a,b,c);

Source Code:

```
function [r1,r2] = quadeq(a,b,c)
r1=(-b-sqrt(b*b-4*a*c))/(2*a)
r2=(-b+sqrt(b*b-4*a*c))/(2*a)
end
display('Roots calculation:');
e= input('enter the x^2 coefficient:');
f= input('enter the x^1 coefficient:');
g= input('enter the constant term:');
display('Roots are: ');
quadeq(e,f,g)
```

Output:

```
lab13t4
Roots calculation:
enter the x^2 coefficient:3
enter the x^1 coefficient:5
enter the constant term:2
Roots are:
r1 =
    -1
r2 =
   -0.6667
```