Lab Assignment 1

Contents

Problem 1

```
% definitions of a,b,c, & x used for calculating E1 through E10

a = 3
b = -6
c = 4
x = 2
```

```
a =

     3


b =

    -6


c =

     4


x =

     2
```

compute E1 through E10 using the given formulas:

```
E1 = sqrt(a^2 + b^2 + c^2)
E2 = (-b-sqrt(b^2-4*a*c))/(2*a)
E3 = log(3*x-a)
E4 = log10(3*abs(b)+(c/5))
E5 = (a*x+(a*b/c))^(1/3)
E6 = (x^2+1)/((a*x-1)*abs(b-exp(x)))
E7 = (cos(sqrt(a)/3*pi))^2+cos((sqrt(a)/3*pi)^2)
```

```
E8 = exp(pi*sqrt(-1))
E9 = acos(cos(x))
E10 = (a+2*c)/(sin((b+2*c)/sqrt(a^2+b^2+c^2)))
```

```
E1 =

    7.8102


E2 =

   1.0000 - 0.5774i


E3 =

    1.0986


E4 =

    1.2742


E5 =

    1.1447


E6 =

    0.0747


E7 =

   -0.9311


E8 =

  -1.0000 + 0.0000i


E9 =

     2


E10 =

   43.4295
```

Problem 2

2a

```
% Data given in the table:
Year = 2007:2015
Wins = [7 9 8 5 7 3 1 5 8]
Losses = [6 4 2 7 6 9 11 7 5]
```

```
Year =

  Columns 1 through 6

       2007        2008        2009        2010        2011        2012

  Columns 7 through 9

       2013        2014        2015


Wins =

     7     9     8     5     7     3     1     5     8


Losses =

     6     4     2     7     6     9    11     7     5
```

2b

```
% Correct the 3rd entry in Losses:
Losses(3)=5
```

```
Losses =

     6     4     5     7     6     9    11     7     5
```

2c

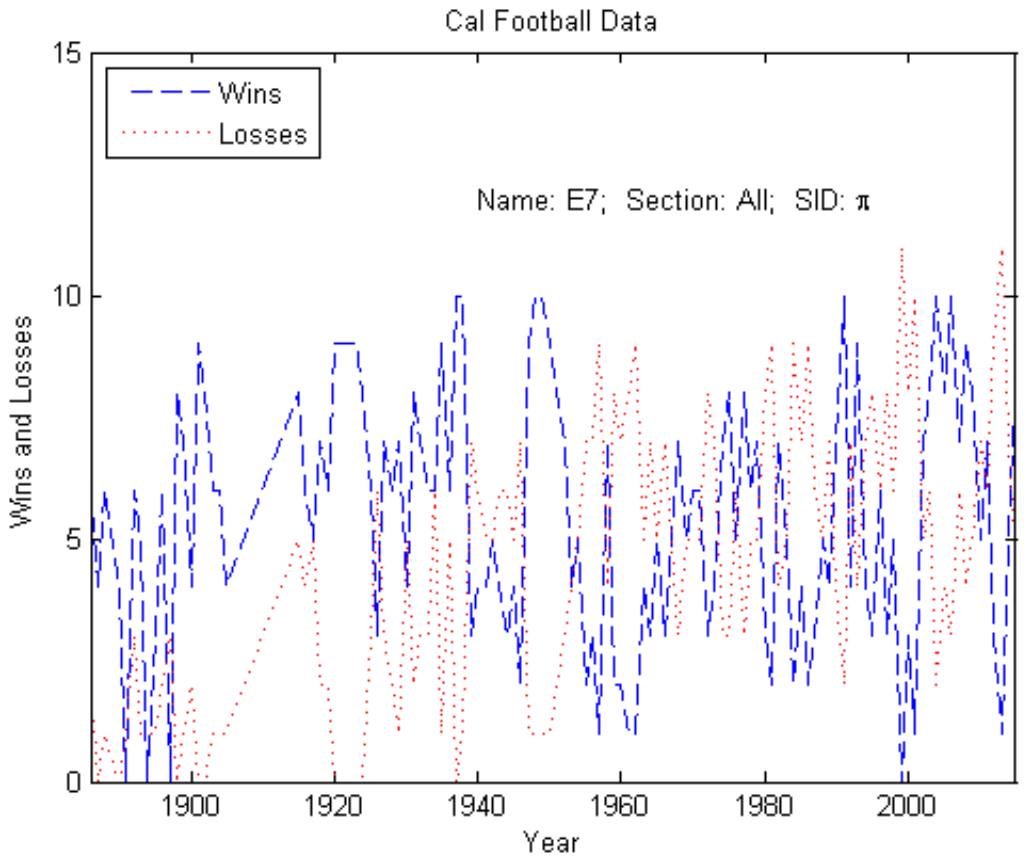
```
% LOAD DATA:
load('CalFB_HistoricalData.mat')

% combine data from table with data from file
Y_all= [Y' Year];
W_all= [W' Wins];
L_all= [L' Losses];
```

2d--2e

make a plot for 1886--2015:

```
plot(Y_all, W_all,'b--', Y_all, L_all,'r:')  % create plot
xlabel('Year') % add x-axis label
ylabel('Wins and Losses') % add y-axis label
title('Cal Football Data') % add title
legend('Wins','Losses','Location','northwest') % add legend
axis([min(Y_all) max(Y_all) 0 15])  % set axis range
text( 1940, 12, 'Name: E7;  Section: All;  SID: \pi') % add a text box
```



Published with MATLAB® R2013a