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DEPARTMENT: COMPUTER ENGINEERING

MARIC NUMBER: 16/ENG02/057

ASSIGNMENT 6

MATLAB:

INPUT CODE:

```
commandwindow
clear
clc
Fatima =xlsread('regression')
x0= Fatima(:,4)
x1 = Fatima(:,1)
y = Fatima(:,3)
x = [x0 x1]
dat = regress(y,x)
a0 = dat(1)
a1 = dat(2)
ysim = a0 + (a1*x1)
r = corr(y,ysim)
r_sq=r^2
```

Output:

```
Fatima =


  1.0e+05 *


         0    0.0000    0.0000    0.0000

    0.0000    0.0001    0.0000    0.0000

    0.0000    0.0002    0.0000    0.0000

    0.0000    0.0005    0.0000    0.0000

    0.0000    0.0015    0.0000    0.0000

    0.0001    0.0047    0.0000    0.0000

    0.0001    0.0143    0.0000    0.0000

    0.0001    0.0451    0.0000    0.0000
```

```
    0.0001    0.1294    0.0000    0.0000

    0.0001    0.4113    0.0000    0.0000

    0.0001    1.1102    0.0001    0.0000


x0 =

     1
     1
     1
     1
     1
     1
     1
     1
     1
     1
     1


x1 =

     0
     1
     2
     3
     4
     5
```

```
     6
     7
     8
     9
    10


y =

    0.3010
    0.6990
    1.2788
    1.6990
    2.1790
    2.6721
    3.1569
    3.6544
    4.1118
    4.6141
    5.0454


x =

     1     0
     1     1
     1     2
     1     3
```

```
     1     4
     1     5
     1     6
     1     7
     1     8
     1     9
     1    10


dat =

    0.2751
    0.4797


a0 =

    0.2751


a1 =

    0.4797


ysim =

    0.2751
```

```
    0.7548

    1.2346

    1.7143

    2.1940

    2.6738

    3.1535

    3.6332

    4.1129

    4.5927

    5.0724


r =

    0.9998


r_sq =

    0.9997
```