

## Homework 8 MATLAB: *for loop cont.*

Q1) The difference between the for loops, the first for loop changes the assigned value to the variable  $x$  during each iteration of the for loop. The  $x$  variable starts with 1, then changed to  $2^2$ , next changed to  $3^2$ , etc. The for loop disposes of each output for  $i^2$ . Rather than the second for loop does that does save each value of  $i^2$  inside a row vector. With each iteration of the second loop, it saves  $i^2$  inside its corresponding index. First index has  $1^2$ , second index has  $2^2$ , and so on.

Q2)

% Assignment 8 Q2

for j = 1:6

for k = 1:6

t(j, k) = 2\*j-3\*k;

end

end

t

T = inv(t);

T

Output

T =

Columns 1 through 4:

1.7871e+14	-2.0119e+13	1.6378e+14	-7.7931e+13
2.5493e+14	5.7396e+14	-3.3977e+15	2.2232e+15
-1.8586e+15	-8.0476e+14	6.5512e+15	-3.1172e+15
9.6722e+14	-1.1788e+15	0	0
1.7282e+15	2.5766e+15	-6.8814e+15	8.4842e+14
-1.2704e+15	-1.1469e+15	3.5642e+15	1.2351e+14

Columns 5 and 6:

-1.1486e+15	9.0413e+14
2.1762e+15	-1.8306e+15
-9.0677e+14	1.3624e+14
-1.2090e+14	3.3248e+14
1.6006e-02	1.7282e+15
1.6616e-02	-1.2704e+15

Q3)

% Assignment 8 Q3

x = -2: 0.1:2

y = -2:0.1:2

for i = 1:41

for j = 1:41

z(i,j) = x(i)\*exp(-(x(i)^2)\*(y(j)^2));

end

end

surf(z)

Output

