**Coding Challenge # 1**

clear all

B = [3,2];

A = [1 2 3 6;

4 5 6 8;

7 8 9 10];

[rows, col] = size(A);

enlarge\_matrix = zeros(rows\*B(1),col\*B(2));

for i = 1:rows

for j = 1: col

enlarge\_matrix( ((i-1) \* B(1)) +1: i \* B(1), ((j-1) \* B(2)) +1: j \* B(2)) = A(i,j);

end

end

**Coding Challenge # 2**

clear all

n = input('Enter a number');

x = [];

for i=1:n

x((i\*i - length(x) - i)+1 :i\*i - length(x)) = i;

end

**Coding Challenge # 3**

M = input('Enter the input square matrix');

L = length(M);

found = 0;

for i =1: length(M)

[a1 b1] = ismember(M(i,1:L),M(i,1)) ;

[a2 b2] = ismember(M(1:L,i),M(1,i)) ;

if sum(b1) == L | sum(b2) == L

found = 1;

break;

end

end

if found == 1

disp('I found it');

else

disp('I did not found it');

end

**Coding Challenge # 4**

M = input('\n Enter the first vector\n');

N = input('\n Enter the second vector\n');

A = [];

for i=1:length(M)

if M(i)>N(i)

A(length(A)+1: length(A)+abs(M(i)-N(i))+1) = M(i):-1:N(i)

else

A(length(A)+1: length(A)+abs(M(i)-N(i))+1) = M(i):N(i);

end

end

A