Group #:
Name:

EOSC 211 – Week 6 – Practice with loops (2)

Write MATLAB code to solve the following problems.

EXERCISE 1: Display the numbers of the series 2 4 6 8 10 12…100 to the screen one by one.

EXERCISE 2: You are given the matrix `A` which is size 10x20. The following code loops through each element `A(i,j)` and calculates `i*j*A(i,j)`. Modify this code to store successive calculations in successive elements of a new variable `B` which will be size 1x200.

```
for i=1:10
     for j=1:20
          i*j*A(i,j);
     end
end
```

EXERCISE 3: Given a variable `x = [1 12 53 34 61 16 17 38 20]`, generate a new variable `y` whose elements are

a. 2 times the value of the corresponding element in `x` if the latter is even
b. 3 times the value of the corresponding element in `x` if the latter is odd

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EXERCISE 4: Given a user's input of some integer `num`, calculate the factorial of the input. Definition: n! = n(n-1)(n-2)...(3)(2)(1)

```
num = input('Enter an integer: ');
```

EXERCISE 5: Modify the above factorial calculation to return an error message if `num` is negative or is not an integer. You can use Matlab's built-in `round()` function.

To exit and display an error, include `error('Error message here')`