Chase Lotito

Q1:

Editor - C:\Users\Chase Lotito\Desktop\SIUC\SPRING 2024\355 - SIGNALS AND SYSTEMS\LABS\TASK2\q1.m

q1.m

```
% Chase Lotito - ECE355L Task 2
% Q1: Write a for loop in MATLAB to calculate the sum of squares for
% numbers 1 to 10
function sum = q1(n)
sum = 0;
for i = 1:(n+1)
    sum = sum + i^2;
    disp(sum + ", ");
end

end
```

Command Window

```
>> q1(10)
1,
5,
14,
30,
55,
91,
140,
204,
285,
385,
506,

ans =

   506
```

Q2:

Editor - C:\Users\Chase Lotito\Desktop\SIUC\SPRING 2024\355 - SIGNALS AND SYSTEMS\LABS\TASK2\q2.m

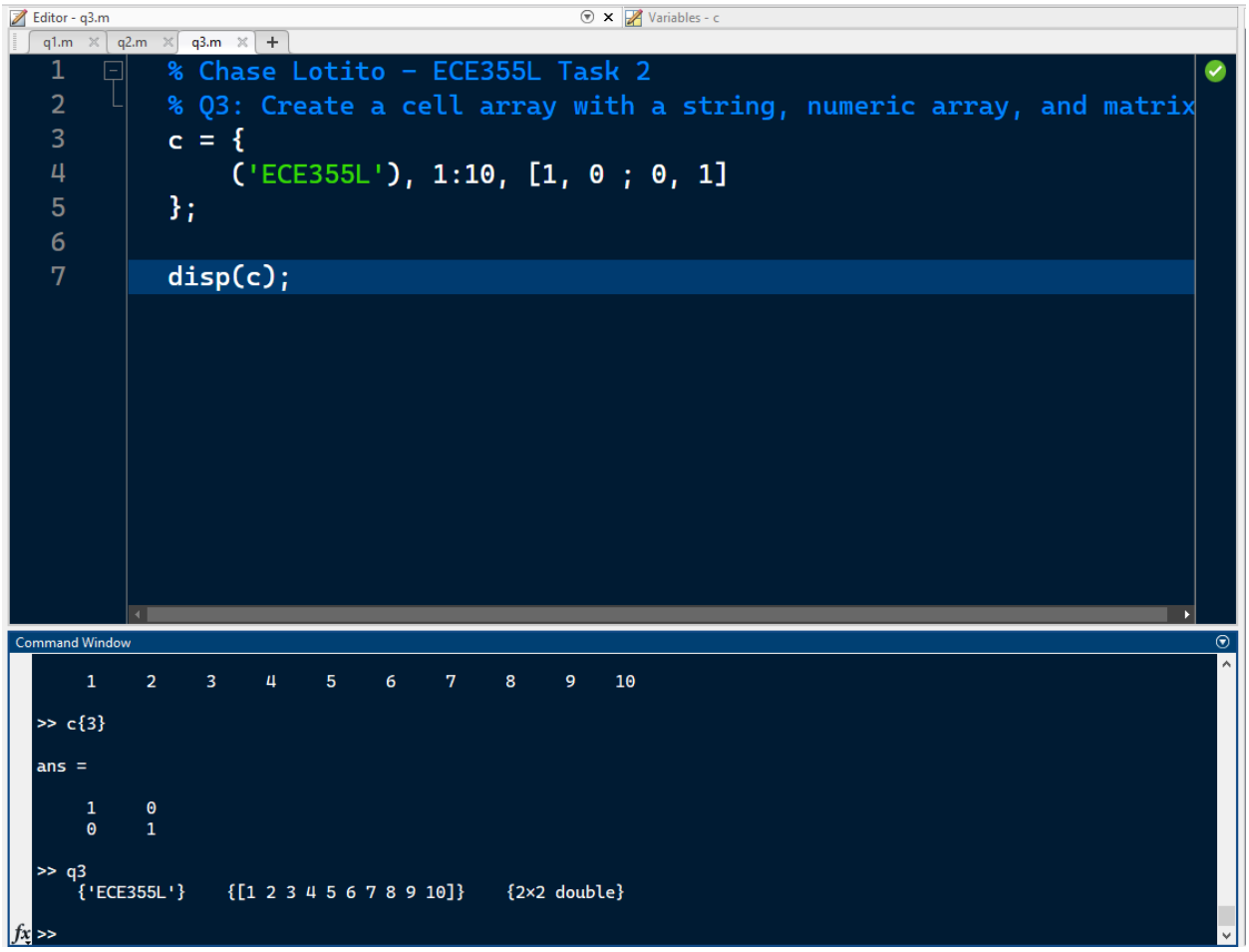
q1.m | q2.m

```
% Chase Lotito - ECE355L Task 2
% Q2: Create a function that calculates the factorial of a given
% positive integer.

% n! = n(n-1)(n-2)...(2)(1) ⟶ while loop this

function ans = factorial(n)
    % initialize output
    ans = 0;

    % loop until n = 0
    while n > 0
        ans = ans * n;
        n = n - 1;
    end
end
```

Command Window

```
>> factorial(5)

ans =

   120

>> factorial(3)

ans =

     6

>>
```

Q3:


Editor - q3.m
Variables - c
q1.m
q2.m
q3.m
% Chase Lotito - ECE355L Task 2
% Q3: Create a cell array with a string, numeric array, and matrix
c = {
('ECE355L'), 1:10, [1, 0 ; 0, 1]
};
disp(c);
Command Window
1 2 3 4 5 6 7 8 9 10
>> c{3}
ans =
1 0
0 1
>> q3
{'ECE355L'} {[1 2 3 4 5 6 7 8 9 10]} {2×2 double}
>>