

CS100M: Lab Exercises for Feb. 14–15

1. Complete the following code so that all the numbers between F_n and F_{n+1} are printed. As a reminder, $F_1 = 1$, $F_2 = 1$, and $F_k = F_{k-1} + F_{k-2}$ for $k > 2$. For example, if $n = 6$, then the numbers between $F_6 (= 8)$ and $F_7 (= 13)$ are 9, 10, 11 and 12. Do not use the *for* loop, use the *while* loop instead.

```
N = input('Input N: ');
tempValue1 = 1;
tempValue2 = 1;
% Add the necessary code here
```

2. Write a script that, given a number n , prints out all the prime numbers from 2 to n inclusive. As a reminder, a number m is prime if and only if it is not 1, and the only divisors of m are 1 and itself. It should ask for the user to key in the value of n , and displays all the necessary prime numbers after its computations.

3. Write a Matlab function *aprime(m)* that has an input parameter m . Function *aprime(m)* returns 1 if m is prime, and 0 otherwise. Remember to write a concise comment to describe the function, including its parameters, under the function header. After doing so, go back to problem 2 and write a program that would make use of the function *aprime(m)* that you have just created here to complete the tasks stated in problem 2.

Please delete your files from the computer before you leave!