EECE.2160: ECE Application Programming
Spring 2018

Lecture 7: Key Questions
February 5, 2018

1. Describe the basic elements of a flowchart.

2. Design a flowchart to solve the following:
    *   Prompt user to enter four numbers on one line—the contents of a 2x2 matrix
    *   After reading the values, print the matrix represented by these values
        o   For example, if the user enters "1 2 3 4", print:
            ```
            1   2
            3   4
            ```
        o   Assume all values have the same number of digits
    *   Also, calculate the matrix discriminant and print it on a separate line
        o   In the example above, discriminant = (1x4) - (2x3) = 4-6 = -2

Leave space to convert your flowchart to C—I'd recommend writing the flowchart on the left
and the code on the right.

4. Describe the basics of using a debugger.

5. Explain the basic form of an `if` statement.

6. Describe how the expression in `if (<expression>)` is evaluated and show how conditions are evaluated, including multiple conditions in the same expression.

7. Describe how the statement—the actual code to be executed if the condition is true—is written for an `if` statement.

8. Show how multiple if statements can be nested together (`if/else if/else`).