Session 5: User Defined Functions, Selection Statement

In-class Exercises

PART 1: USER DEFINED FUNCTIONS

Ex1: define a function with no input, no output, display a message "hello world!"

Ex2: define a function with 2 inputs x and y, no output, the function plots x vs. y as a red star

Ex3: define a function with 3 inputs a, b, and c, 1 output delta which contains b^2-4ac

Ex4: define a function with 1 input r, no output, the function plots a circle with radius r

PART 2: IF-ELSE STATEMENT

Ex5: write a Matlab program which allows users input 3 values: a, b, c in the command window, calculate delta using b^2-4ac, display a message based on the delta value: "2 solutions", "1 solution", "no solution"

PART 3: SWITCH-CASE STATEMENT

Ex6: design a customer survey which asks users input a value 1-3: 1 means unhappy, 2 means ok, 3 means happy. For any invalid inputs (not a value from 1-3), display a message "invalid input".

PART 4: MORE SELECTION STATEMENT

Ex7: Calculate c based on the a, b values:
if a>=0 and b>=0, then c = a+b;
if a<0 and b<0 , then c = |a|+|b| (absolute values of a and b);
if one of the two values is positive, the other one is negative, c=a*b.