

Directed Activities: Demonstrate your work for the instructor after each activity.

Question 01) Write a Python function, '**maxInFirst(myList)**', that accepts a list and finds the maximum element in the list, then swaps that element with the first element (element with index 0). Test your function by creating a list and populate it with random/any values, then call '**maxInFirst(currList)**' and pass that list to the function; print the list before and after the function call.

Question 02) An archery target consists of a central circle of yellow surrounded by concentric rings of red, blue, black and white. Each ring has the same width, which is the same as the radius of the yellow circle. Write a program that draws an archery target. Write your code in the function '**drawTarget()**'.

Hint: Objects drawn later will appear on top of objects drawn earlier.

Question 03) Write a Python function called '**myCircle()**' to draw a circle. The first mouse click determines the center of the circle. The second mouse click determines a point on its circumference. Use the Euclidean distance formula to determine the length of the radius:

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

Question 04) Create a Python function called '**drawHouse()**' that allows the user to draw a simple house using four mouse clicks. The first two clicks will be the opposite corners of the rectangular frame of the house. The third click will indicate the center of the top edge of a rectangular door. The door should have a total width that is 1/5 of the width of the house frame. The fourth click will indicate the center of a square window. The window should be half the width of the door.

