

Programming – DT282/1 & DT228/1

Lab 19 – Tuesday, March 28th, 2017

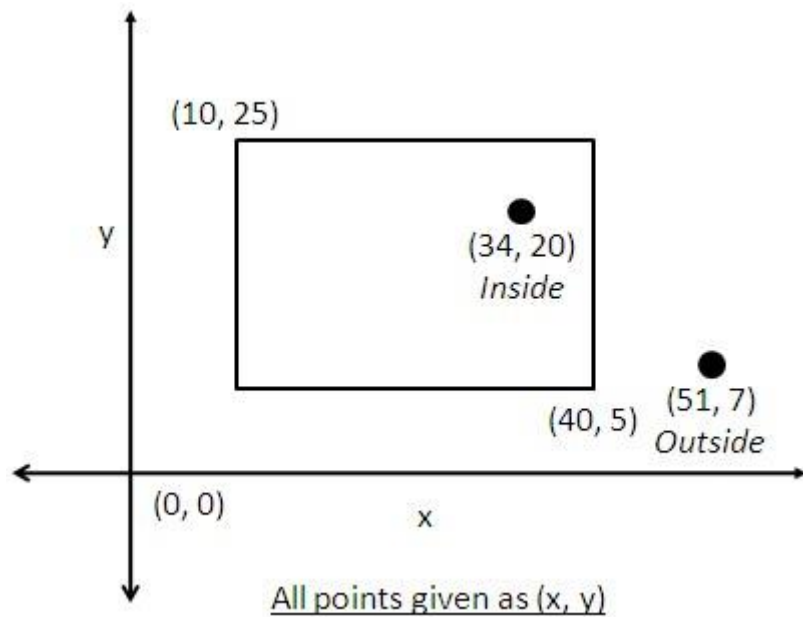
Note: You are expected to finish all programs in your own time if you do not get these done during the lab session. This is your own responsibility.

Revision

Remember: Use Symbolic names in your programs. Do not hard-code.

1. Write a programs to do the following:
 - (a) Define two 1-Dimensional float arrays called Euro and Dollar containing 5 elements each.
 - (b) Using a FOR loop, show how you would read in values from the keyboard into the Euro array.
 - (c) Copy the values in the Euro array into the Dollar array.
 - (d) Assuming that the conversion rate is 1.05 Dollars in a Euro:
 - i. Fill the Dollar array with new values based on the formula above.
 - ii. Print the contents of the corresponding elements of both arrays, i.e. print the first element of the Euro array beside the first element of the Dollar array, the second element of the Euro array beside the second element of the Dollar array, etc. and continue this sequence.
2. Write a program which takes the x and y coordinates of the upper left and bottom right corners of a rectangle, as well as the x and y coordinates of some other point. The program should tell the user whether the point is inside or outside the rectangle:

For example, consider the rectangle and points shown below:



The rectangle shown in Figure 1 has a top left corner at (10, 25) and a bottom right corner at (40, 5). The point (34, 20) is inside the rectangle and the point (51, 7) is outside the rectangle.

Your program must produce output in the form shown below (user input is shown in bold):

Enter x, y for top left: **10 25**

Enter x, y for bottom right: **40 5**

Enter x, y for point: **34 20**

(34, 20) is inside the rectangle

Enter x, y for top left: **10 25**

Enter x, y for bottom right: **40 5**

Enter x, y for point: **51 7**

(51, 7) is outside the rectangle