

Algorithms, Part 3 of 3

Topics

- In-Class Project: The Box
- In-Class Project: Drawing a Rectangle

Reading

- None

Writing Algorithms from Scratch

- Given a problem statement, we are going to write the corresponding generic algorithm for the solution.
- We will use the following procedure:
 - Determine the algorithm inputs and outputs
 - Pseudocode a rough algorithm
 - Complete the pseudocode

The Box

- Problem:
 - Write an interactive program to compute and display the volume and surface area of a box. The program must also display the box dimensions. Error checking must be done to ensure that all box dimensions are greater than zero.
 - Enter width of box -> 4
 - Enter length of box -> 5
 - Enter height of box -> 3
 - The box has dimensions 4 x 5 x 3
 - Volume of the box is 60.
 - Surface area of the box is 94.

Drawing a Rectangle

- Write an interactive program that will draw a solid rectangle of asterisks (*). The program must also display the dimensions of the rectangle. Error checking must be done to ensure that the dimensions are greater than zero.
- For example:
 - Enter height of rectangle -> 4
 - Enter width of rectangle -> 16
 - *****
 - *****
 - *****
 - *****