

ITEC 120 Lego - Lab 5

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Reference links:

<http://www.radford.edu/~aaray/template.java>

<http://www.radford.edu/~aaray/FunctionContainer.java>

You will need to turn in a lab report for this lab.

Problem 1: Hello world with arrays

Create an array of strings that can hold up to two strings. Store Hello in the first slot in the array and World in the second slot in the array. Print out both strings to the display on the robot. Use the `rob.displayString` method and pass in the String and the line of output that you want it to display on. *Note:* there are at least 8 lines of output on the Lego Robot screen.

Problem 2: Inventory management

You are working for Sugar Water Inc. and have been tasked to create an inventory system for their products. You will need to show the number of drinks available for the wildly successful Flavored Sugar Water line that consists of white water, black water, and red water. There will be a sheet of paper containing strips of duct-tape (1.85 inches wide) that correspond to one unit of a particular drink. There are six drinks in the inventory currently. You will need to store the complete inventory (in an array) and the number of each type of drink in your program.

Part 1: Read and store the inventory

Write the code necessary to create arrays, store values in the arrays, and print out the array and the number of each type of soda available using the lego robot (on different lines on the screen).

Part 2: Convert the inventory array into a price array

Take each type of drink and store its cost into a new array. Red drinks cost \$3, White \$2, and Black \$1. I.e. create an integer array of size six and store the value of each drink in the original inventory into the new array.

Part 3: Find the min, max, and average value of the inventory

Next, find the minimum, maximum, and average drink costs and print them out.

Part 4: Reverse the order

Your boss believes that fortune will smile upon your company if you reverse the order of the stock in the inventory presented to the customer. Reverse the order of your array of Strings and print out the results of said reversal.

Problem 3: Finding the largest sum in two arrays

Write a function that takes two integer arrays as parameters. Each array sent to the function is of length 2. Inside the function, calculate the sum of the values in each array.

Lastly, return the array that has the largest sum. In event of a tie, return the first array passed into the function.

Write the code necessary to create two arrays that can be used to test the function you just wrote, call the function with these arrays, store the result of the function in a temporary array, and use the temporary array to compare and print out which of the two arrays holds the largest sum.