Assignment 2: Array and Functions in Java

Problem 1: Find the Largest Element in an Array

1. Write a Java program that takes an array of integers from the user.

2. Create a function called `findLargest` that accepts this array as a parameter and returns the largest element in the array.

3. Print the largest element found in the array.

Example Input/Output

- Input: `[10, 45, 3, 29, 67, 12]`

- Output: `The largest element is 67`

Steps to Complete

- Define the `findLargest` function with an integer array parameter.

- Use a loop to check each element in the array, keeping track of the largest value found.

- Return the largest value, and display it in the main program.

Problem 2: Print Multiplication Table Using User-Defined Function

1. Write a Java program that asks the user for a number.

2. Create a function called `printMultiplicationTable` that takes this number as a parameter and prints the multiplication table for that number (from 1 to 10).

3. Format each line in the output as `n x i = result`.

Example Input/Output

- Input: `3`

- Output:

```
3 x 1 = 3
3 x 2 = 6
3 x 3 = 9
...
3 x 10 = 30
```

Steps to Complete

- Define the `printMultiplicationTable` function with an integer parameter.

- Use a `for` loop inside the function to iterate from 1 to 10.

- Print each line in the specified format within the function.

Bonus Challenge:

For Problem 1, modify the program to find both the largest and the smallest elements in the array and print both values.