PROMINEO TECH

Week 4 Coding Assignment

Instructions

- In Eclipse IDE, write the code that accomplishes the objectives listed below and ensures that the code compiles and runs as directed.
- Comment your code, to prove that you understand what you have written -- this is required!
- Create a new repository on GitHub for this week's assignments and push your code to the repository.
- Create a Video showcasing your assignment.
- Submit the two URL links for the GitHub repo and Video in the Text box.

Easy way to Create a video: Start a meeting in Zoom, share your screen, open Eclipse with the code and your Console window, start recording & record yourself describing and running the program showing the results. When you click "End Meeting" it will save the video on your computer.

- Create a video, up to five minutes max, showing and explaining how your project works with an emphasis on the portions you contributed.
- This video should be done using screen share and voice over.
- This should then be uploaded to a publicly accessible site, such as YouTube. Ensure the link you share is PUBLIC or UNLISTED!

Coding Steps:

1. Create an Array of int called ***ages*** that contains the following values: 3, 9, 23, 64, 2, 8, 28, 93.

    a. Programmatically subtract the value of the first element in the Array from the value in the last element of the Array (i.e. do not use ages[7] in your code). Print the result to the console.

    b. Create a new array of int called ***ages2*** with 9 elements (**ages2** will be longer than the ***ages*** array, and have more elements).

        i. Make sure that there are 9 elements of type int in this new array.

        ii. Repeat the subtraction from **Step 1.a.** (*Programmatically subtract the value of the first element in the new array **ages2** from the last element of **ages2**).*

        iii. Show that using the index values for the elements is dynamic (works for arrays of different lengths).

    c. Use a loop to iterate through the Array and calculate the average age. Print the result to the console.

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2. Create an Array of String called names that contains the following values: "Sam", "Tommy", "Tim", "Sally", "Buck", "Bob".

    a. Use a loop to iterate through the Array and calculate the average number of letters per name. Print the result to the console.

    b. Use a loop to iterate through the Array again and concatenate all the names together, separated by spaces, and print the result to the console.

3. How do you access the last element of any Array?

4. How do you access the first element of any Array?

5. Create a new Array of int called nameLengths. Write a loop to iterate over the previously created names Array and add the length of each name to the nameLengths Array.

6. Write a loop to iterate over the nameLengths Array and calculate the sum of all the elements in the Array. Print the result to the console.

7. Write a method that takes a String, word, and an int, n, as arguments and returns the word concatenated to itself n number of times. (i.e. if I pass in "Hello" and 3, I expect the method to return "HelloHelloHello").

8. Write a method that takes two Strings, firstName and lastName, and returns a full name (the full name should be the first and the last name as a String separated by a space).

9. Write a method that takes an Array of int and returns true if the sum of all the ints in the Array is greater than 100.

10. Write a method that takes an Array of double and returns the average of all the elements in the Array.

11. Write a method that takes two Arrays of double and returns true if the average of the elements in the first Array is greater than the average of the elements in the second Array.

12. Write a method called willBuyDrink that takes a boolean isHotOutside, and a double moneyInPocket, and returns true if it is hot outside and if moneyInPocket is greater than 10.50.

13. Create a method of your own that solves a problem. In comments, write what the method does and why you created it.

Submission Text Box Format

- **GitHub Repository URL:**

  https://github.com/my_github_user_name/repository_name_here

- **Video URL:** *https://youtu.be/your_video_info_here*

Additional Information

Due Date:

- Each Coding Assignment is due by midnight on Saturday.

Late Policy:

- Assignments turned in late will result in a 10% deduction of points.

Tips:

- Start the assignment early in the week and before your live class.
- Bring questions to your class, to office hours or a mentor session.
- Be sure to follow **all instructions** as there are no resubmissions or regrades.