

SKIP2103 Advanced Programming

Exercises – Collection: Set & Map

1. Write a Java program that takes two arrays of integers and displays the common elements between the two arrays in ascending order. For example, if
Array 1 = {5, 2, 3, 1, 4} and Array 2 = {7, 6, 3, 5, 4}
Then the output is:
3 4 5
2. Write a Java program that takes an array of integers and returns the second largest number in the array. For example, given the array is [1, 5, 2, 4, 3], the program should display 4, since 4 is the second largest number in the array. If the array is [1, 2, 2, 3, 4, 4, 5], the program should still return 4, since 4 is still the second largest number in the array. If the array is [3,3,3,3] the program should display there is no second largest number in the array.
3. Write a program that counts the occurrences of words in a text input by the user and displays the words and their occurrences in alphabetical order of the words.
4. Modify the program in Question 3 to only display the words that occur at least 2 times in the text, ordered from the most frequent words to the least frequent words.
5. Write a quiz program that asks the user the capitals of the states in Malaysia (store pairs of each state and its capital in a map). Your program should select a random state and prompt the user to enter the capital for the state. Display the correct answer if the user's answer is wrong.