7. QB - Stream API question bank [Basic]

List

⭐ ***All the questions to be solved first with for loop and then with stream api.***

Integer list questions ->

💡 **List<Integer> listInteger = Arrays.asList(2,4,6,8,10);**

💡 **List<Integer> numbers = Arrays.asList(1, 2, 3, 4, 5, 6, 7, 8, 9, 10);**

1. From list of integers extract even number and print them on console.
2. From list of integers extract even number and return them in list.
3. count odd integers from list of integer.
4. Use **listInteger**(provided at top of doc) list to generate output as list
   output →4,16,36,64,100.
5. Use **listInteger**(provided at top of doc), square every element in list and sum all of them, print sum over console.
6. Create a integer list with duplicate and remove those with for loop and stream api.
7. From ***numbers(provided at top of doc)***,Print all numbers greater than 5.
8. From ***numbers(provided at top of doc)***,find the maximum[highest] number.
9. From ***numbers(provided at top of doc)***,find the minimum[lowest] number.
10. From ***numbers(provided at top of doc)***,count how many numbers are greater than 4.
11. From ***numbers(provided at top of doc)***,sort the list in reverse order.
12. From ***numbers(provided at top of doc)***,get the first 5 elements from the list.
13. From ***numbers(provided at top of doc)***,skip the first 5 elements and store rest in list.
14. From ***numbers(provided at top of doc)***,check if all numbers are positive. [o/p - true/false]
15. From ***numbers(provided at top of doc)***,check if any number is divisible by 7.[o/p - true/false]
16. From ***numbers(provided at top of doc)***,convert List<Integer> to List<String>
    // Expected output: ["1", "2", ..., "10"]
17. From ***numbers(provided at top of doc)***,group numbers into even and odd using Collectors.groupingBy()
    // Expected output: {false=[1, 3, 5, 7, 9], true=[2, 4, 6, 8, 10]}

String list questions →

💡 **List<String> words = Arrays.asList("apple", "banana", "mango", "orange", "grape", "kiwi", "melon", "apple", "mango");**

On the 'words' list perform following operations using for loop and stream api.

1. Print all words.
2. Print all words that start with 'a'.
   // Expected output: apple, apple
3. Print all words with length greater than 5.
   // Expected output: banana, orange
4. Convert all strings to uppercase and store it in list.
   // Expected output: [APPLE, BANANA, MANGO, ORANGE, GRAPE, KIWI, MELON, APPLE, MANGO]
5. Convert all strings to lowercase and store it in list.
6. Remove duplicates from the list
   // Expected output: [apple, banana, mango, orange, grape, kiwi, melon]
7. Sort the list alphabetically.
8. Sort the list in reverse alphabetical order
9. Count how many times "apple" appears
10. Count words with length exactly 5
    // Expected output: 2 (grape, mango)
11. Find the longest word
    // Expected output: banana
12. Find the shortest word
    // Expected output: kiwi
13. Join all words into a single string separated by commas
    // Expected output: apple, banana, mango, ...
14. Check if any word contains the letter 'z'
    // Expected output: false
15. Check if all words have more than 3 letters
    // Expected output: true

16. Group words by their length using `Collectors.groupingBy()`

    // Example output: {4=[kiwi], 5=[grape, mango], 6=[banana, orange], ...}

17. Filter and collect words that contain the letter 'e'

    // Expected output: [apple, orange, grape, melon]

18. Map each word to its length and collect the result as a list

    // Expected output: [5, 6, 5, 6, 5, 4, 5, 5, 5]

19. Get the first 3 elements of the list

    // Expected output: [apple, banana, mango]

20. Skip the first 3 elements and print the rest

    // Expected output: [orange, grape, kiwi, melon, apple, mango]

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