

Java Freshers

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Screening Test

Completed on : 29-Nov-2024 12:59 PM

#	Question	Response	Marks
1	Have you fully completed your education and prepared to work	Yes	1
2	Have you taken any long term training course on Java Technologies	Yes	1
3	Have you recently completed your education and training, and there is no major Gap (more than one year after the education)	No	0
4	Are you, willing to work on-premises (there is no work from home)	Yes	1
5	Can you write simple Java Programs on your own	Yes	1
6	Are you, available immediately to join us, if we hire you	Yes	1
7	Did you complete any kind of Developer Certification in Java	No	0
8	Do you know how to write unit testcases using Junit	No	0
9	if we hire you, will you be prepared to stay and work with us at least for two years	Yes	1
10	Will you be flexible any role in Software Engineering	Yes	1
11	Explain about yourself why you are the right candidate for this Job	video response	1

Overall Score : 8/11 (Promoted)

Coding Test

Completed on : 30-Nov-2024 01:29 PM

1. Write a program or method to find the smallest and largest numbers in an array of integers. Implement two methods: `findSmallest(int[] numbers)`: Returns the smallest number in the array. `findLargest(int[] numbers)`: Returns the largest number in the array. Sample Input : If the input array is null or empty, the method should throw an `IllegalArgumentException` with the message "Array cannot be null or empty". Use Java's Stream API to solve the problem. Expected Output : Smallest number: 1 Largest number: 20

Marks Scored : 0

```
public class NumberUtils {

    public static int findSmallest(int[] numbers, int index) {
        if(index == numbers.length-1)
        {
            return numbers[index];
        }
        return Math.min(numbers[index], findSmallest(numbers, index+1));
    }

    public static int findLargest(int[] numbers,int index) {
        if( index == numbers.length-1)
        {
            return numbers[index];
        }
        return Math.max(numbers[index], findLargest(numbers, index+1));
    }

    public static void main(String[] args) {
        // Example test cases
        int[] numbers = {5, 3, 8, 1, 2};

        // Testing findSmallest
        int smallest = findSmallest(numbers, 0);
        System.out.println("Smallest number: " + smallest); // Output: 1

        // Testing findLargest
        int largest = findLargest(numbers, 0);
        System.out.println("Largest number: " + largest); // Output: 8
    }
}
```

2. Question: Unique Words Extractor Write a program to extract all unique words from a given text. A word is defined as a sequence of alphanumeric characters separated by non-word characters (e.g., spaces, punctuation). The program should meet the following criteria: Extract words that are at least 8 characters long. Convert all words to lowercase for uniqueness. Preserve the order of their first appearance in the text. Implement the functionality in the `extractUniqueWords` method. The method should return a `Set` containing the filtered words. Sample Input : "The development of artificial intelligence is advancing rapidly. Innovative technologies are shaping the future of the world." Expected Output : Unique words with at least 8 characters: development artificial intelligence advancing

innovative technologies

Marks Scored : 0

```
import java.util.*;
import java.util.stream.Collectors;

public class WordProcessor {

    public static Set extractUniqueWords(String content) {

        String[] words =content.split("\\W+");
        return Arrays.stream(words).filter(word->word.length()>=8)
            .map(String::toLowerCase)
            .collect(Collectors.toSet());

    }

    public static void main(String[] args) {
        // Example content for testing
        String content = "The development of artificial intelligence is advancing rapidly. " +
            "Innovative technologies are shaping the future of the world.";

        // Extract unique words with at least 8 characters
        Set uniqueWords = extractUniqueWords(content);

        // Print the unique words
        System.out.println("Unique words with at least 8 characters:");
        uniqueWords.forEach(System.out::println);
    }
}
```

3. Question: Write Java Program to use and apply the concept of Design Pattern Singleton with simplest program. Expected Output: Instance 1: Singleton@15db9742 Instance 2: Singleton@15db9742 Both instances are the same (Singleton verified). Message from Singleton: Hello from Singleton!

Marks Scored : 0

```
public class Singleton {

    // Private static instance of the class
    private static Singleton instance;

    // Private constructor to prevent instantiation
    private Singleton() {}

    // Public method to provide access to the instance
    public static Singleton getInstance() {

        if(instance == null)
        {
```

```
instance = new Singleton();
}
return instance;

}

// Example method to demonstrate functionality
public String getMessage() {

    return this.toString();
}

// Main method to test the Singleton functionality
public static void main(String[] args) {
    System.out.println("Instance 1:");
    // Get the single instance of Singleton
    Singleton singletonInstance = Singleton.getInstance();

    // Call the getMessage method
    System.out.println(singletonInstance.getMessage());

    // Verify that the same instance is used
    Singleton anotherInstance = Singleton.getInstance();

    // System.out.println("Are both instances the same? " + (singletonInstance == anotherInstance));
}
}
```

Overall Score : 0/12 (Failed)