

Java Freshers

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Screening Test

Completed on : 30-Nov-2024 09:24 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	Yes	1
8	Do you know how to write unit testcases using Junit	Yes	1
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 : 10/11 (Promoted)

Coding Test

Completed on : 02-Dec-2024 10:38 PM

1. Question: Implement an EMI Calculator in Java. The objective is to create a program that calculates the Equated Monthly Installment (EMI) for a given loan. The EMI is calculated based on the principal loan amount, annual rate of interest, and loan tenure. Sample Input : Principal amount: 500000 Annual rate of interest: 7.5 Loan tenure: 20
Expected Output : The calculated EMI is: 3982.71
Marks Scored : 0

```
public class EMI_Calculator {

    // Method to calculate EMI
    public double calculateEMI(double principal, double annualRateOfInterest, int loanTenure) {
        if (principal < 0) {
            throw new IllegalArgumentException("Principal amount cannot be negative");
        }
        if (annualRateOfInterest < 0) {
            throw new IllegalArgumentException("Interest rate cannot be negative");
        }
        if (loanTenure <= 0) {
            throw new ArithmeticException("Loan tenure cannot be zero or negative");
        }

        // implement your code here
        double monthlyRate = annualRateOfInterest / 1200;
        double emi = principal * monthlyRate * Math.pow(1 + monthlyRate, loanTenure) /
            (Math.pow(1 + monthlyRate, loanTenure) - 1);
        return emi;
    }

    // Main method to test the EMI calculation
    public static void main(String[] args) {
        // Create an instance of EMI_Calculator
        EMI_Calculator calculator = new EMI_Calculator();

        // implement your code here
        double principal = 500000;
        double annualRateOfInterest = 10;
        int loanTenure = 240;
        double emi = calculator.calculateEMI(principal, annualRateOfInterest, loanTenure);
        System.out.println("The EMI is :" + emi);
    }
}
```

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;
import java.util.HashSet;
import java.util.regex.Matcher;
import java.util.regex.Pattern;
import java.util.Set;

public class WordProcessor {

    public static Set extractUniqueWords(String content) {
        Pattern pattern = Pattern.compile("\\b[a-zA-z]{8,}\\b");
        Matcher matcher = pattern.matcher(content);
        Set uniqueWords = new HashSet<>();

        while (matcher.find()){
            uniqueWords.add(matcher.group().toLowerCase());
        }

        return uniqueWords;
    }

    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 a program to demonstrate most simple usage, application of design pattern prototype. Expected Output: Original: Shape[type=Circle, color=Red] Cloned: Shape[type=Circle, color=Red] After modifying cloned object: Original: Shape[type=Circle, color=Red] Cloned: Shape[type=Circle, color=Blue]

Marks Scored : 6

```
// PrototypeDemo.java
import java.util.Arrays;
```

```
class Shape implements Cloneable {
    private String type;
    private int[] dimensions;

    public Shape(String type, int[] dimensions) {
        // CODE HERE
        this.type = type;
        this.dimensions = dimensions.clone();
    }

    public String getType() {
        // CODE HERE
        return type;
    }

    public int[] getDimensions() {
        // CODE HERE
        return dimensions;
    }

    @Override
    protected Shape clone() {
        try {
            // CODE HERE
            Shape cloned = (Shape) super.clone();
            cloned.dimensions = this. dimensions.clone();
            return cloned;
        } catch (CloneNotSupportedException e) {
            return null;
        }
    }

    @Override
    public String toString(){
        return "Shape[type=" + type + ", dimensions=" + Arrays.toString(dimensions)+"]";
    }
}

public class PrototypeDemo {
    public static void main(String[] args) {
        Shape original = new Shape("Circle", new int[]{7});
        Shape cloned = original.clone();
        cloned.getDimensions()[0] =14;
        System.out.println("Original Shape: " + original.getType() + " with dimensions " + java.util.Arrays.toString(original.getDimensions()));
        System.out.println("Cloned Shape: " + cloned.getType() + " with dimensions " + java.util.Arrays.toString(cloned.getDimensions()));
    }
}
```

Overall Score : 6/12 (Promoted)

Interview

Interviewed on : 03-Dec-2024 11:00 AM

Interviewd by : Srinivas Gadepalli

Interview Summary

Personal	2.67
Java Programming	1.33
Java Technology	2.5
OOPS	2.0
Average interview rating	2.12

Question wise rating:

Personal

what is the Necessity of Job	3
Tell Me About yourself	3
Career Plan	2
Average rating	2.67

Java Programming

Memory management	1
JUNIT?	2
Data Structures	1
Average rating	1.33

Java Technology

JVM	3
JDK/JRE	2

Average rating	2.5
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OOPS	
Inheritance	2
Average rating	2.0

Interviewer Remarks:

No Remarks

Interviewer's Feedback:

Interviewer	Decision	Notes
Srinivas Gadepalli	Not Hire	He is kind of good on communication, but from Bsc Agri. also not hands with Java Programming