String API

1. Challenge: Use charAt(), length(), and substring() methods

public class StringMethods {

public static void main(String[] args) {

String text = "HelloWorld";

System.out.println("Char at index 1: " + text.charAt(1));

System.out.println("Length: " + text.length());

System.out.println("Substring (0, 5): " + text.substring(0, 5));

}

}

2. Challenge: Count the number of vowels in a string

public class CountVowels {

public static void main(String[] args) {

String str = "OpenAI ChatGPT";

int count = 0;

for (char c : str.toLowerCase().toCharArray()) {

if ("aeiou".indexOf(c) != -1) {

count++;

}

}

System.out.println("Number of vowels: " + count);

}

}

3. Challenge: Check if a string is a palindrome

public class PalindromeCheck {

public static void main(String[] args) {

String original = "madam";

String reversed = new StringBuilder(original).reverse().toString();

if (original.equals(reversed)) {

System.out.println(original + " is a palindrome.");

} else {

System.out.println(original + " is not a palindrome.");

}

}

}

4. Challenge: Convert a string to upper case and lower case

public class CaseConversion {

public static void main(String[] args) {

}

String text = "JavaProgramming";

System.out.println("Upper Case: " + text.toUpperCase());

System.out.println("Lower Case: " + text.toLowerCase());

}

5. Challenge: Remove spaces and special characters from a string

public class CleanString {

public static void main(String[] args) {

String str = "Hello @World! 123";

String cleaned = str.replaceAll("[^a-zA-Z0-9]", "");

System.out.println("Cleaned String: " + cleaned);

}

}