JAVA - J2EE Batch 2

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Assignment-1

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1. Write a program which accepts an integer number as input from the user and perform the following conditional checks:

   a. Print Tom if number is odd and exists between 20 to 30

   b. Print Jerry, if number is even and exists between 20 and 30

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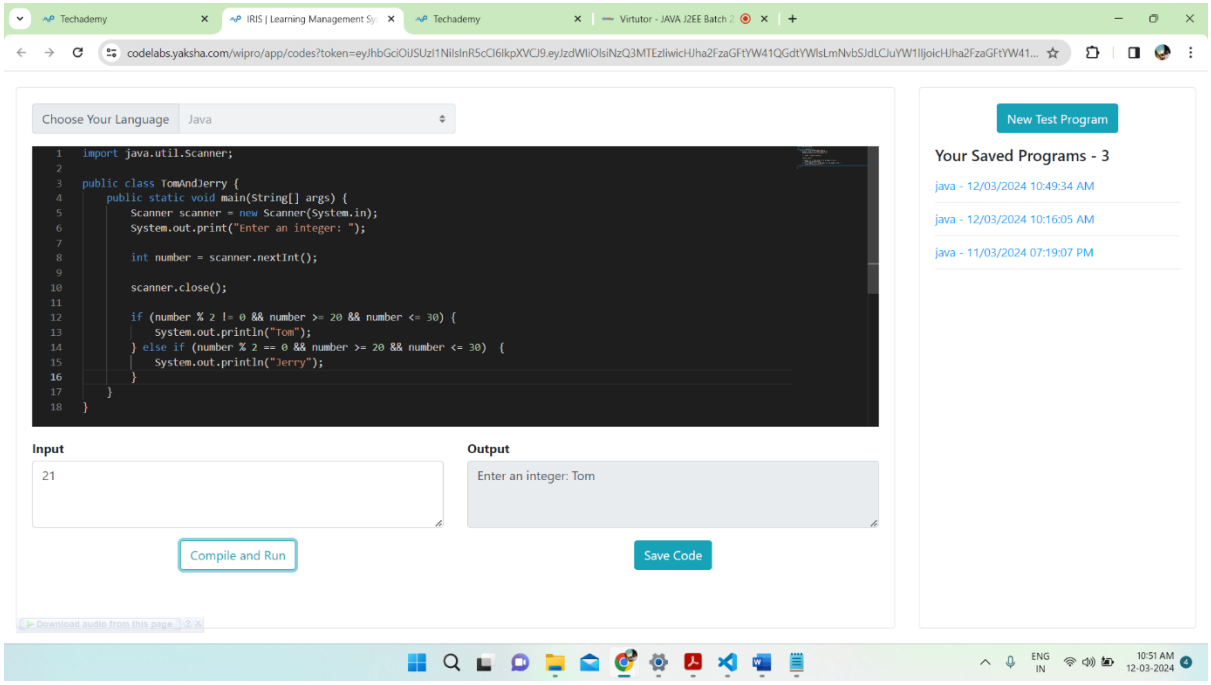

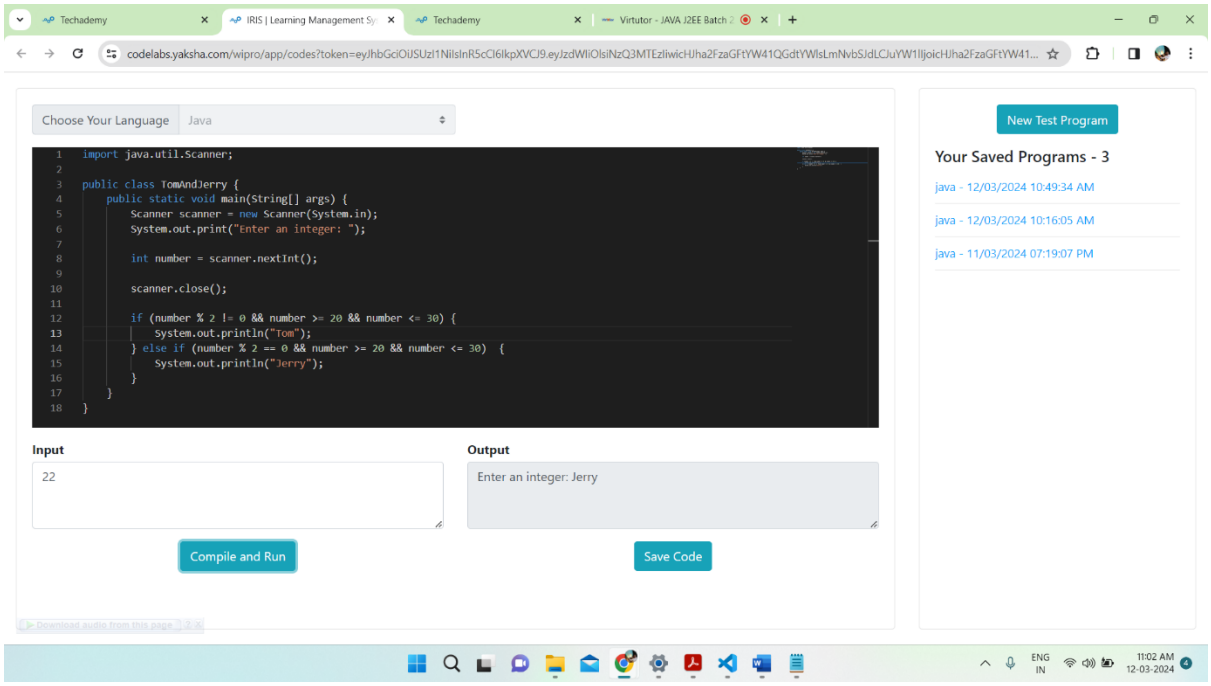

2. Write a program which accepts a number as input and check whether the given

number is palindrome or not If it is a palindrome then

a. Add all the even numbers and check whether the sum is more than 25. b. Print success and failure messages for all 3 conditions

Input: `2468642`

Output: `2468642 is palindrome and the sum of even numbers is greater than 25`

Input: `12345`

Output: `12345 is not palindrome`

Input: `12345654321`

Output: `12345654321 is palindrome and sum of even numbers is less than25`

→

```java
import java.util.Scanner;

public class PalindromeCheck {
    Run | Debug
    public static void main(String[] args) {
        // Create a Scanner object to get input from the user
        Scanner scanner = new Scanner(System.in);

        // Get input from the user
        System.out.print(s:"Enter a number: ");
        long number;
            number = scanner.nextLong();

        // Check if the number is a palindrome
        if (isPalindrome(number)) {
            System.out.println(number + " is palindrome");

            // Check the sum of even digits
            long evenSum = sumOfEvenDigits(number);
            if (evenSum > 25) {
                System.out.println(x:"Sum of even numbers is greater than 25");
            } else {
                System.out.println(x:"Sum of even numbers is less than or equal to 25");
            }
        } else {
            System.out.println(number + " is not palindrome");
        }

        // Close the Scanner
        scanner.close();
    }

    // Method to check if a number is a palindrome
    private static boolean isPalindrome(long num) {
        long originalNum = num;
        long reverseNum = 0;

        while (num > 0) {
            long digit = num % 10;
            reverseNum = reverseNum * 10 + digit;
            num /= 10;
        }

        return originalNum == reverseNum;
    }

    // Method to calculate the sum of even digits in a number
    private static long sumOfEvenDigits(long num) {
        long sum = 0;

        while (num > 0) {
            long digit = num % 10;
            if (digit % 2 == 0) {
                sum += digit;
            }
            num /= 10;
        }

        return sum;
    }
}
```

Input

2468642

Compile and Run

Output

Enter a number: 2468642 is palindrome
Sum of even numbers is greater than 25

Save Code

Input

12345

Compile and Run

Output

Enter a number: 12345 is not palindrome

Save Code

Input

12345654321

Compile and Run

Output

Enter a number: 12345654321 is palindrome
Sum of even numbers is less than or equal to 25

Save Code

3. Write a program that reads an unspecified number of integer arguments using Scanner Class and adds them together. The program should display the total of the given input number and should only consider integer value.The program should display an error message if there are any non-integer values

Input : 12 23 2 4

Output : 41

→

```java
import java.util.Scanner;

public class SumOfIntegers {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        int sum = 0;

        System.out.println("Enter integers (press Enter after each integer)");

        while (scanner.hasNext()) {
            if (scanner.hasNextInt()) {
                int num = scanner.nextInt();
                sum += num;
            } else {
                System.out.println("Error: Non-integer value detected. Please enter integers only.");
                scanner.next();
            }
        }

        System.out.println("Sum of integers: " + sum);
    }
}
```

Input

```
12
23
2
4
```

Output

```
Enter integers (press Enter after each integer)
Sum of integers: 41
```

Compile and Run Save Code

4. Write a program to find whether input integer is Unique or not. A Unique number is a positive integer (without leading zeros) with no duplicate digits. For example 7, 135, 214 are all unique numbers whereas 33, 3121, 300 are not.

→

```java
import java.util.Scanner;

public class UniqueNumberChecker {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.println("Enter an integer: ");
        int number = scanner.nextInt();

        if (isUniqueNumberV1(number)) {
            System.out.println(number + " is a unique number.");
        } else {
            System.out.println(number + " is not a unique number.");
        }
    }

    static boolean isUniqueNumberV1(int num) {
        String strNum = String.valueOf(num);
        return strNum.chars().distinct().count() == strNum.length();
    }
}
```

Input

```
7
```

Output

```
Enter an integer:
7 is a unique number.
```

Compile and Run Save Code

Input

```
135
```

Output

```
Enter an integer:
135 is a unique number.
```

Compile and Run Save Code

Input

214

Compile and Run

Output

Enter an integer:
214 is a unique number.

Save Code

Input

33

Compile and Run

Output

Enter an integer:
33 is not a unique number.

Save Code

Input

300

Compile and Run

Output

Enter an integer:
300 is not a unique number.

Save Code

Input

3121

Compile and Run

Output

Enter an integer:
3121 is not a unique number.

Save Code