**Assignment 2**

**1. Product of Even Digits:**

import java.util.Scanner;

public class ProductOfEvenDigits {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter a number: ");

int num = scanner.nextInt();

int product = 1;

while (num > 0) {

int digit = num % 10;

if (digit % 2 == 0) {

product \*= digit;

}

num /= 10;

}

System.out.println("Product of even digits: " + product);

}

}

**2. First Digit of a Number:**

import java.util.Scanner;

public class FirstDigit {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter a number: ");

int num = scanner.nextInt();

while (num >= 10) {

num /= 10;

}

System.out.println("First digit: " + num);

}

}

**3. Last Digit of a Number:**

import java.util.Scanner;

public class LastDigit {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter a number: ");

int num = scanner.nextInt();

int lastDigit = num % 10;

System.out.println("Last digit: " + lastDigit);

}

}

**4. First Digit Raised to the Power of Last Digit:**

import java.util.Scanner;

public class PowerOfDigits {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter a number: ");

int num = scanner.nextInt();

int firstDigit = num;

while (firstDigit >= 10) {

firstDigit /= 10;

}

int lastDigit = num % 10;

int result = 1;

for (int i = 1; i <= lastDigit; i++) {

result \*= firstDigit;

}

System.out.println("Result: " + result);

}

}

**5. Largest and Smallest Digit:**

import java.util.Scanner;

public class LargestSmallestDigit {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter a number: ");

int num = scanner.nextInt();

int largest = 0, smallest = 9;

while (num > 0) {

int digit = num % 10;

largest = Math.max(largest, digit);

smallest = Math.min(smallest, digit);

num /= 10;

}

System.out.println("Largest digit: " + largest);

System.out.println("Smallest digit: " + smallest);

}

}

**6. Repeated Digits:**

import java.util.HashSet;

import java.util.Scanner;

public class RepeatedDigits {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter a number: ");

int num = scanner.nextInt();

HashSet<Integer> digits = new HashSet<>();

while (num > 0) {

int digit = num % 10;

if (!digits.add(digit)) {

System.out.print(digit + " ");

}

num /= 10;

}

}

}

**7. Strong Numbers:**

import java.util.Scanner;

public class StrongNumbers {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter a number: ");

int num = scanner.nextInt();

int originalNum = num;

int sum = 0;

while (num > 0) {

int digit = num % 10;

int factorial = 1;

for (int i = 1; i <= digit; i++) {

factorial \*= i;

}

sum += factorial;

num /= 10;

}

if (sum == originalNum) {

System.out.println(originalNum + " is a strong number.");

} else {

System.out.println(originalNum + " is not a strong number.");

}

}

}

**8. Reverse Second Half of a Number:**

import java.util.Scanner;

public class ReverseSecondHalf {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter a number: ");

int num = scanner.nextInt();

int digits = 0;

int temp = num;

while (temp > 0) {

digits++;

temp /= 10;

}

int divisor = 1;

for (int i = 1; i <= digits / 2; i++) {

divisor \*= 10;

}

int firstHalf = num / divisor;

int secondHalf = num % divisor;

int reversedSecondHalf = 0;

while (secondHalf > 0) {

int digit = secondHalf % 10;

reversedSecondHalf = reversedSecondHalf \* 10 + digit;

secondHalf /= 10;

}

int reversedNum = firstHalf \* divisor + reversedSecondHalf;

System.out.println("Reversed number: " + reversedNum);

}

}