**ASSIGNMENT**

1. **Convert String to Date**

import java.text.ParseException;

import java.text.SimpleDateFormat;

import java.util.Date;

public class Main {

public static void main(String[] args) {

String dateStr = "2024-08-10";

SimpleDateFormat formatter = new SimpleDateFormat("yyyy-MM-dd");

try {

Date date = formatter.parse(dateStr);

System.out.println("Date is: " + date);

} catch (ParseException e) {

e.printStackTrace();

}

}

}

**2**. public class Main {

public static void main(String[] args) {

// Integer to String

int num = 123;

String numStr = String.valueOf(num);

// String to Long

String longStr = "123456789";

long numLong = Long.parseLong(longStr);

// String to Float

String floatStr = "123.45";

float numFloat = Float.parseFloat(floatStr);

// String to Double

String doubleStr = "123.456";

double numDouble = Double.parseDouble(doubleStr);

System.out.println("Integer to String: " + numStr);

System.out.println("String to Long: " + numLong);

System.out.println("String to Float: " + numFloat);

System.out.println("String to Double: " + numDouble);

}

}

**3**.import java.text.SimpleDateFormat;

import java.util.Date;

public class Main {

public static void main(String[] args) {

Date date = new Date();

SimpleDateFormat formatter = new SimpleDateFormat("dd-MM-yyyy HH:mm:ss");

String formattedDate = formatter.format(date);

System.out.println("Formatted Date: " + formattedDate);

}

}

**4**. import java.util.Date;

public class Main {

public static void main(String[] args) {

Date date = new Date();

System.out.println("Current Date and Time: " + date);

}

}

**5**. import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

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

int num = scanner.nextInt();

int reversed = 0, original = num;

while (num != 0) {

int digit = num % 10;

reversed = reversed \* 10 + digit;

num /= 10;

}

if (original == reversed) {

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

} else {

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

}

}

}

**6**. public class Main {

public static void main(String[] args) {

String str = "abc";

for (int i = 0; i < str.length(); i++) {

for (int j = i + 1; j <= str.length(); j++) {

System.out.println(str.substring(i, j));

}

}

}

}

**7.** import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter the number of rows for Floyd’s Triangle: ");

int rows = scanner.nextInt();

int num = 1;

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

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

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

num++;

}

System.out.println();

}

}

}

**8.** import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

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

int num = scanner.nextInt();

for (int i = 1; i <= 10; i++) {

System.out.println(num + " x " + i + " = " + num \* i);

}

}

}

**9**. import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter the limit: ");

int limit = scanner.nextInt();

System.out.println("Prime numbers up to " + limit + ":");

for (int i = 2; i <= limit; i++) {

if (isPrime(i)) {

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

}

}

}

public static boolean isPrime(int num) {

if (num <= 1) return false;

for (int i = 2; i <= Math.sqrt(num); i++) {

if (num % i == 0) return false;

}

return true;

}

}

**10**. import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

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

int num = scanner.nextInt();

int original = num, result = 0, n = 0;

while (original != 0) {

original /= 10;

n++;

}

original = num;

while (original != 0) {

int digit = original % 10;

result += Math.pow(digit, n);

original /= 10;

}

if (result == num) {

System.out.println(num + " is an Armstrong number.");

} else {

System.out.println(num + " is not an Armstrong number.");

}

}

}

11. import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

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

int num = scanner.nextInt();

long factorial = 1;

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

factorial \*= i;

}

System.out.println("Factorial of " + num + " is: " + factorial);

}

}

12. import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

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

int num = scanner.nextInt();

if (num % 2 == 0) {

System.out.println(num + " is even.");

} else {

System.out.println(num + " is odd.");

}

}

}

13. import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

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

int a = scanner.nextInt();

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

int b = scanner.nextInt();

int temp = a;

a = b;

b = temp;

System.out.println("After swapping: a = " + a + ", b = " + b);

}

}

14. import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter the number of rows for both matrices: ");

int rows = scanner.nextInt();

System.out.print("Enter the number of columns for both matrices: ");

int columns = scanner.nextInt();

int[][] firstMatrix = new int[rows][columns];

int[][] secondMatrix = new int[rows][columns];

int[][] product = new int[rows][columns];

System.out.println("Enter elements of first matrix:");

for (int i = 0; i < rows; i++) {

for (int j = 0; j < columns; j++) {

firstMatrix[i][j] = scanner.nextInt();

}

}

System.out.println("Enter elements of second matrix:");

for (int i = 0; i < rows; i++) {

for (int j = 0; j < columns; j++) {

secondMatrix[i][j] = scanner.nextInt();

}

}

for (int i = 0; i < rows; i++) {

for (int j = 0; j < columns; j++) {

product[i][j] = 0;

for (int k = 0; k < columns; k++) {

product[i][j] += firstMatrix[i][k] \* secondMatrix[k][j];

}

}

}

System.out.println("Product of the matrices:");

for (int[] row : product) {

for (int column : row) {

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

}

System.out.println();

}

}

}

15. public class MatrixAddition {

public static void main(String[] args) {

int[][] firstMatrix = { {1, 2, 3}, {4, 5, 6}, {7, 8, 9} };

int[][] secondMatrix = { {9, 8, 7}, {6, 5, 4}, {3, 2, 1} };

int rows = firstMatrix.length;

int columns = firstMatrix[0].length;

int[][] sum = new int[rows][columns];

for (int i = 0; i < rows; i++) {

for (int j = 0; j < columns; j++) {

sum[i][j] = firstMatrix[i][j] + secondMatrix[i][j];

}

}

System.out.println("Sum of the matrices:");

for (int i = 0; i < rows; i++) {

for (int j = 0; j < columns; j++) {

System.out.print(sum[i][j] + " ");

}

System.out.println();

}

}

}