PROGRAM -1

import java.util.\*;

public class Program2 {

public static void main(String[] args) {

Scanner sc =new Scanner(System.in);

int a=sc.nextInt();

int b=sc.nextInt();

int c=a+b;

System.out.print(c);

}

}

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PROGRAM-2

import java.util.\*;

public class Program2 {

public static void main(String[] args) {

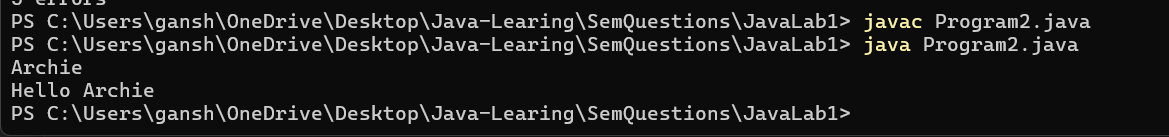
Scanner sc=new Scanner(System.in);

String a=sc.nextLine();

System.out.print("Hello "+a);

}

}



PROGRAM-3

import java.util.Scanner;

public class Program3 {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.println("Enter coefficient");

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

double a = scanner.nextDouble();

System.out.print("b: ");

double b = scanner.nextDouble();

System.out.print("c: ");

double c = scanner.nextDouble();

double discriminant = b \* b - 4 \* a \* c;

if (discriminant > 0) {

double root1 = (-b + Math.sqrt(discriminant)) / (2 \* a);

double root2 = (-b - Math.sqrt(discriminant)) / (2 \* a);

System.out.println("Two distinct real roots:");

System.out.println("Root 1 = " + root1);

System.out.println("Root 2 = " + root2);

} else if (discriminant == 0) {

double root = -b / (2 \* a);

System.out.println("One repeated real root:");

System.out.println("Root = " + root);

} else {

double realPart = -b / (2 \* a);

double imaginaryPart = Math.sqrt(-discriminant) / (2 \* a);

System.out.println("Two complex (imaginary) roots:");

System.out.println("Root 1 = " + realPart + " + " + imaginaryPart

+ "i");

System.out.println("Root 2 = " + realPart + " - " + imaginaryPart

+ "i");

}

}

}

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Program-4

import java.util.Scanner;

public class Fibonacci {

static void Fibo(int n) {

int num1 = 0, num2 = 1;

System.out.println("Fibonacci Series up to " + n + " terms:");

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

System.out.print(num1 + " ");

int sum = num1 + num2;

num1 = num2;

num2 = sum;

}

}

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

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

int n = scanner.nextInt();

Fibo(n);

}

}

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Program-5

mport java.util.Scanner;

public class Factorial {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.println("Enter a Number");

int n=scanner.nextInt();

int ans=1;

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

ans=ans\*i;

}

System.out.println("Factorial is");

System.out.println(ans);

}}

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Program 6

import java.util.Scanner;

public class Calculator {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

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

double num1 = scanner.nextDouble();

System.out.print("Enter the operation (+, -, \*, /): ");

String operator = scanner.next();

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

double num2 = scanner.nextDouble();

double result;

if (operator.equals("+")) {

result = num1 + num2;

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

} else if (operator.equals("-")) {

result = num1 - num2;

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

} else if (operator.equals("\*")) {

result = num1 \* num2;

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

} else if (operator.equals("/")) {

if (num2 != 0) {

result = num1 / num2;

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

} else {

System.out.println("Error: Division by zero is not allowed.");

}

} else {

System.out.println("Error: Invalid operator entered.");

}

scanner.close();

}

}

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Program 7

import java.util.Scanner;

public class NumberCheck {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

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

int num1 = scanner.nextInt();

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

int num2 = scanner.nextInt();

String num1Str = String.valueOf(num1);

String num2Str = String.valueOf(num2);

boolean isPresent = true;

for (char ch : num2Str.toCharArray()) {

if (num1Str.indexOf(ch) == -1) {

isPresent = false;

break;

}

}

if (isPresent) {

System.out.println(num2 + " is present in " + num1);

} else {

System.out.println(num2 + " is NOT present in " + num1);

}

scanner.close();

}

}

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Program 8

import java.util.Scanner;

public class CharacterCount {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

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

String inputString = scanner.nextLine();

int digitCount = 0;

int letterCount = 0;

int specialCharCount = 0;

for (char ch : inputString.toCharArray()) {

if (Character.isDigit(ch)) {

digitCount++;

} else if (Character.isLetter(ch)) {

letterCount++;

} else {

specialCharCount++;

}

}

System.out.println("Number of digits: " + digitCount);

System.out.println("Number of alphabetic characters: " + letterCount);

System.out.println("Number of special characters: " +

specialCharCount);

scanner.close();

}

}

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Program 9

import java.util.Scanner;

public class CharacterTransform {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

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

String inputString = scanner.nextLine();

StringBuilder transformedString = new StringBuilder();

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

char ch = inputString.charAt(i);

if (Character.isLetterOrDigit(ch)) {

ch++;

}

if (Character.isUpperCase(ch)) {

ch = Character.toLowerCase(ch);

} else if (Character.isLowerCase(ch)) {

ch = Character.toUpperCase(ch);

}

transformedString.append(ch);

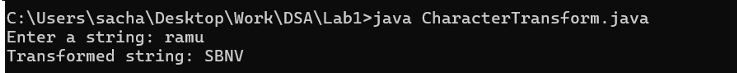
}

System.out.println("Transformed string: " + transformedString);

scanner.close();

}

}



Program-10

import java.util.Scanner;

public class LoginSystem {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int maxAttempts = 3;

String correctUsername = "admin";

String correctPassword = "password123";

boolean loggedIn = false;

for (int attempt = 1; attempt <= maxAttempts; attempt++) {

System.out.print("Enter username: ");

String username = scanner.nextLine();

System.out.print("Enter password: ");

String password = scanner.nextLine();

if (username.equals(correctUsername) && password.equals(correctPassword)) {

loggedIn = true;

break;

} else {

System.out.println("Incorrect username or password. Attempts left: " + (maxAttempts - attempt));

}

}

if (loggedIn) {

System.out.println("Welcome, " + correctUsername + "!");

} else {

System.out.println("Maximum login attempts reached. Program will terminate.");

}

scanner.close();

}

}

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