WEEK -1 TASKS :JAVA PROGRAMMING

TASK 1 – BASIC CALCULATOR APPLICATION

import java.util.Scanner;

public class Calculator

{

public static void main(String[] args)

{

Scanner scanner = new Scanner(System.in);

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

double num1 = scanner.nextDouble();

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

double num2 = scanner.nextDouble();

System.out.println("Choose operation (+, -, \*, /): ");

char operation = scanner.next().charAt(0);

double result = 0;

switch (operation)

{

case '+':

result = num1 + num2;

break;

case '-':

result = num1 - num2;

break;

case '\*':

result = num1 \* num2;

break;

case '/':

if (num2 != 0) {

result = num1 / num2;

} else {

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

return;

}

break;

default:

System.out.println("Invalid operation");

return;

}

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

}

}

TASK 2- NUMBER GUESSING GAME

import java.util.Scanner;

import java.util.Random;

public class NumberGuessingGame {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

Random random = new Random();

int lowerBound = 1;

int upperBound = 100;

int randomNumber = random.nextInt(upperBound - lowerBound + 1) + lowerBound;

int attempts = 0;

System.out.println("Welcome to the Number Guessing Game!");

System.out.println("I have selected a random number between " + lowerBound + " and " + upperBound + ". Try to guess it!");

while (true) {

System.out.print("Enter your guess: ");

int userGuess = scanner.nextInt();

attempts++;

if (userGuess < lowerBound || userGuess > upperBound) {

System.out.println("Please enter a number within the specified range.");

} else if (userGuess < randomNumber) {

System.out.println("Too low! Try again.");

} else if (userGuess > randomNumber) {

System.out.println("Too high! Try again.");

} else {

System.out.println("Congratulations! You guessed the number in " + attempts + " attempts.");

break;

}

}

}

}