**Java Assignment**

* **Write a program that accepts the marks of 5 subjects and finds the sum and percentage marks obtained by the student.**

import java.util.Scanner;

public class MarksCalculator {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.println("Enter marks for 5 subjects:");

int totalMarks = 0;

for (int i = 0; i < 5; i++) {

totalMarks += scanner.nextInt();

}

double percentage = totalMarks / 5.0;

System.out.println("Total Marks: " + totalMarks);

System.out.println("Percentage: " + percentage);

scanner.close();

}

}

* **Write a program that calculates the Simple Interest and Compound Interest. The Principal, Amount, Rate of Interest and Time are entered through the keyboard.**

import java.util.Scanner;

public class InterestCalculator {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.println("Enter Principal, Rate of Interest, and Time (in years):");

double principal = scanner.nextDouble();

double rate = scanner.nextDouble();

double time = scanner.nextDouble();

double simpleInterest = (principal \* rate \* time) / 100;

double compoundInterest = principal \* Math.pow((1 + rate / 100), time) - principal;

System.out.println("Simple Interest: " + simpleInterest);

System.out.println("Compound Interest: " + compoundInterest);

scanner.close();

}

}

* **Write a program to calculate the area and circumference of a circle.**

import java.util.Scanner;

public class CircleCalculator {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.println("Enter radius of the circle:");

double radius = scanner.nextDouble();

double area = Math.PI \* radius \* radius;

double circumference = 2 \* Math.PI \* radius;

System.out.println("Area: " + area);

System.out.println("Circumference: " + circumference);

scanner.close();

}

}

* **Write a program that accepts the temperature in Centigrade and converts into Fahrenheit using the formula C/5= (F- 32)/9.**

import java.util.Scanner;

public class TemperatureConverter {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.println("Enter temperature in Centigrade:");

double celsius = scanner.nextDouble();

double fahrenheit = (celsius \* 9 / 5) + 32;

System.out.println("Temperature in Fahrenheit: " + fahrenheit);

scanner.close();

}

}

* **Write a program that swaps a programs value of two variables using a third variable.**

import java.util.Scanner;

public class SwapVariables {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.println("Enter two numbers to swap:");

int num1 = scanner.nextInt();

int num2 = scanner.nextInt();

int temp = num1;

num1 = num2;

num2 = temp;

System.out.println("After swapping: num1 = " + num1 + ", num2 = " + num2);

scanner.close();

}

}

* **Write a program that checks whether the two numbers entered by the user are equal or not.**

import java.util.Scanner;

public class EqualityChecker {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.println("Enter two numbers to check equality:");

int a = scanner.nextInt();

int b = scanner.nextInt();

if (a == b) {

System.out.println("Numbers are equal.");

} else {

System.out.println("Numbers are not equal.");

}

scanner.close();

}

}

* **Write a program to find the greatest of three numbers.**

import java.util.Scanner;

public class GreatestNumber {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.println("Enter three numbers:");

int x = scanner.nextInt();

int y = scanner.nextInt();

int z = scanner.nextInt();

int greatest = (x > y) ? (x > z ? x : z) : (y > z ? y : z);

System.out.println("Greatest number is: " + greatest);

scanner.close();

}

}

* **Write a program that finds whether a given number is even or odd.**

**import java.util.Scanner;**

public class EvenOddChecker {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.println("Enter a number to check even or odd:");

int number = scanner.nextInt();

if (number % 2 == 0) {

System.out.println("Number is even.");

} else {

System.out.println("Number is odd.");

}

scanner.close();

}

}

* **Write a program that tells whether a given year is a leap year or not.**

**import java.util.Scanner;**

public class LeapYearChecker {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.println("Enter a year to check if it's a leap year:");

int year = scanner.nextInt();

if ((year % 4 == 0 && year % 100 != 0) || (year % 400 == 0)) {

System.out.println("Year is a leap year.");

} else {

System.out.println("Year is not a leap year.");

}

scanner.close();

}

}

* **Write a program that accepts marks of five subjects and finds percentage and prints grades according to the following criteria:** 
  + **Between 90-100% ------ Print ‘A’**
  + **Shape80-90% ------ Print ‘B’**
  + **Shape60-80% ------ Print ‘C’**
  + **Below 60% ------ Print ‘D’**

import java.util.Scanner;

public class GradeCalculator {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.println("Enter marks for 5 subjects:");

int totalMarks = 0;

for (int i = 0; i < 5; i++) {

totalMarks += scanner.nextInt();

}

double percentage = totalMarks / 5.0;

char grade;

if (percentage >= 90) {

grade = 'A';

} else if (percentage >= 80) {

grade = 'B';

} else if (percentage >= 60) {

grade = 'C';

} else {

grade = 'D';

}

System.out.println("Percentage: " + percentage);

System.out.println("Grade: " + grade);

scanner.close();

}

}