**3.Write Program for percentage formula using Apex Programming Language.**

public class PercentageCalculator {

public static Decimal calculatePercentage(Decimal numerator, Decimal denominator) {

if (denominator == 0) {

// Handle division by zero error

return 0;

}

Decimal percentage = (numerator / denominator) \* 100;

return percentage.setScale(2); // Set scale to 2 decimal places

}

}

Decimal numerator = 25;

Decimal denominator = 50;

Decimal percentage = PercentageCalculator.calculatePercentage(numerator, denominator);

System.debug('The percentage is: ' + percentage + '%');

**4.Write a program for Calculator using Apex Programming Language.**

public class Calculator {

public static Decimal add(Decimal operand1, Decimal operand2) {

return operand1 + operand2;

}

public static Decimal subtract(Decimal operand1, Decimal operand2) {

return operand1 - operand2;

}

public static Decimal multiply(Decimal operand1, Decimal operand2) {

return operand1 \* operand2;

}

public static Decimal divide(Decimal operand1, Decimal operand2) {

if (operand2 == 0) {

// Handle division by zero error

System.debug('Error: Division by zero');

return 0;

}

return operand1 / operand2;

}

}

Decimal operand1 = 10;

Decimal operand2 = 5;

Decimal resultAddition = Calculator.add(operand1, operand2);

System.debug('Addition Result: ' + resultAddition);

Decimal resultSubtraction = Calculator.subtract(operand1, operand2);

System.debug('Subtraction Result: ' + resultSubtraction);

Decimal resultMultiplication = Calculator.multiply(operand1, operand2);

System.debug('Multiplication Result: ' + resultMultiplication);

Decimal resultDivision = Calculator.divide(operand1, operand2);

System.debug('Division Result: ' + resultDivision);

**5.Write a program for temperature convertor using Apex Programming Language.**

public class TemperatureConverter {

// Convert Celsius to Fahrenheit

public static Decimal celsiusToFahrenheit(Decimal celsius) {

return (celsius \* 9/5) + 32;

}

// Convert Fahrenheit to Celsius

public static Decimal fahrenheitToCelsius(Decimal fahrenheit) {

return (fahrenheit - 32) \* 5/9;

}

// Convert Celsius to Kelvin

public static Decimal celsiusToKelvin(Decimal celsius) {

return celsius + 273.15;

}

// Convert Kelvin to Celsius

public static Decimal kelvinToCelsius(Decimal kelvin) {

return kelvin - 273.15;

}

// Convert Fahrenheit to Kelvin

public static Decimal fahrenheitToKelvin(Decimal fahrenheit) {

return (fahrenheit + 459.67) \* 5/9;

}

// Convert Kelvin to Fahrenheit

public static Decimal kelvinToFahrenheit(Decimal kelvin) {

return kelvin \* 9/5 - 459.67; }

}

Decimal celsius = 100;

Decimal fahrenheit = TemperatureConverter.celsiusToFahrenheit(celsius);

System.debug(celsius + ' Celsius is ' + fahrenheit + ' Fahrenheit');

Decimal kelvin = TemperatureConverter.celsiusToKelvin(celsius);

System.debug(celsius + ' Celsius is ' + kelvin + ' Kelvin');

**6.Write a program for number to Decimal convertor in Apex Programming Language.**

public class NumberToDecimalConverter {

// Convert integer to Decimal

public static Decimal convertToDecimal(Integer number) {

return Decimal.valueOf(number);

}

// Convert double to Decimal

public static Decimal convertToDecimal(Double number) {

return Decimal.valueOf(number);

}

// Convert string to Decimal

public static Decimal convertToDecimal(String numberString) {

try {

return Decimal.valueOf(numberString);

} catch (NumberFormatException e) {

// Handle invalid input

System.debug('Invalid input: ' + e.getMessage());

return null;

}

}}

Integer intNumber = 42;

Decimal decimalFromInt = NumberToDecimalConverter.convertToDecimal(intNumber);

System.debug('Decimal from Integer: ' + decimalFromInt);

Double doubleNumber = 3.14;

Decimal decimalFromDouble = NumberToDecimalConverter.convertToDecimal(doubleNumber);

System.debug('Decimal from Double: ' + decimalFromDouble);

String stringNumber = '7.5';

Decimal decimalFromString = NumberToDecimalConverter.convertToDecimal(stringNumber);

if (decimalFromString != null) {

System.debug('Decimal from String: ' + decimalFromString);

}

7.Write a program for creating MCQ page using Apex Programming Language.

public class MCQQuestion {

public String questionText { get; set; }

public List<String> options { get; set; }

public Integer correctOptionIndex { get; set; }

public MCQQuestion(String questionText, List<String> options, Integer correctOptionIndex) {

this.questionText = questionText;

this.options = options;

this.correctOptionIndex = correctOptionIndex;

}

}

public class MCQQuiz {

public List<MCQQuestion> questions { get; set; }

public MCQQuiz() {

questions = new List<MCQQuestion>();

}

public void addQuestion(String questionText, List<String> options, Integer correctOptionIndex) {

MCQQuestion question = new MCQQuestion(questionText, options, correctOptionIndex);

questions.add(question);

}

}

MCQQuiz quiz = new MCQQuiz();

quiz.addQuestion(

'What is the capital of France?',

new List<String>{'London', 'Paris', 'Berlin', 'Madrid'},

1

);

quiz.addQuestion(

'Which planet is closest to the Sun?',

new List<String>{'Mars', 'Venus', 'Mercury', 'Earth'},

2

);// Now you can use the quiz object to manage MCQ questions