**Salesforce Apex Programming Practical**

**Mathematical Calculator:**

public class Calculator {

public static void add(Decimal num1, Decimal num2) {

Decimal ans=num1+num2;

System.debug('Addition of num1+num2:'+ans);

}

public static void subtract(Decimal num1, Decimal num2) {

Decimal ans=num1-num2;

System.debug('Subtraction of num1-num2:'+ans);

}

public static void multiply(Decimal num1, Decimal num2) {

Decimal ans=num1\*num2;

System.debug('Multiplication of num1\*num2:'+ans);

}

public static void divide(Decimal num1, Decimal num2) {

if (num2 == 0) {

System.debug('Division by zero is not allowed.');

}

Decimal ans=num1/num2;

System.debug('Division of num1/num2:'+ans);

}

public static void exponentiation(Integer base, Integer exponent) {

Decimal ans=Math.pow(base,exponent);

System.debug('Exponentitation of num1\*\*num2:'+ans);

}

public static void modulo(Integer num1, Integer moduloBy) {

if (moduloBy == 0) {

System.debug('Division by zero is not allowed.');

}

Integer ans= Math.mod(num1, moduloBy);

System.debug('Modulo of num1 % moduloBy:'+ans);

}

public static void square(Integer num) {

Decimal ans =num \* num;

System.debug('Square of number is :'+ans);

}

public static void squareRoot(Decimal num) {

if (num < 0) {

System.debug('Square root of negative number is not allowed.');

}

Decimal ans= Math.sqrt(num);

System.debug('Square Root of num is:' +ans);

}

}

**Student Marksheet Generator:**

**public class StudetMarkSheet {**

**public static void generateMarkSheet(String studentName, Integer englishM, Integer mathM, Integer scienceM) {**

**Decimal totalM = mathM + englishM + scienceM;**

**Decimal percent = (totalM / 300) \* 100;**

**String grade;**

**if (percent >= 90) {**

**grade = 'A+';**

**} else if (percent >= 80) {**

**grade = 'A';**

**} else if (percent >= 70) {**

**grade = 'B';**

**} else if (percent >= 60) {**

**grade = 'C';**

**} else if (percent >= 50) {**

**grade = 'D';**

**} else {**

**grade = 'F';**

**}**

**System.debug('Student Name: ' + studentName);**

**System.debug('English Marks: ' + englishM);**

**System.debug('Math Marks: ' + mathM);**

**System.debug('Science Marks: ' + scienceM);**

**System.debug('Total Marks Out of 300: ' + totalM);**

**System.debug('Percentage: ' + percent.setScale(2));**

**System.debug('Grade: ' + grade);**

**}**

**}**

**Greatest Three Number:**

public class ThreeNumber {

public static void findGreatest(Decimal num1,Decimal num2,Decimal num3){

if (num1 == num2 && num2 == num3) {

System.debug('All numbers are equal.');

}

else{

Decimal ans=num1;

if(num2>ans){

ans=num2;

}

if(num3>ans){

ans=num3;

}

System.debug('Greatest among All three Numbers is : '+ans);

}

}

}

**Celsius to Fahrenheit converter:**

public class Temperature {

//Celsius to Fahrenheit =(Celcius \* 9/5) + 32

//Fahrenheit to Celcius =(Fahrenheit - 32) \* 5/9;

public static void CelsiusToFahrenheit(Decimal Celsius) {

Decimal ans = (Celsius \* 9/5) + 32;

System.debug('Celsius: ' + Celsius + '°C = Fahrenheit: ' + ans + '°F');

}

public static void FahrenheitToCelsius(Decimal Fahrenheit) {

Decimal ans = (Fahrenheit - 32) \* 5/9;

System.debug('Fahrenheit: ' + Fahrenheit + '°F = Celsius: ' + ans + '°C');

}

}

**Currency Converter:**

public class CurrencyConverter {

// Exchange rates (as of current rates)

private static Decimal USD\_TO\_EUR\_RATE = 0.85; // 1 USD = 0.85 EUR

private static Decimal EUR\_TO\_USD\_RATE = 1.18; // 1 EUR = 1.18 USD

private static Decimal USD\_TO\_INR\_RATE = 74.5; // 1 USD = 74.5 INR

private static Decimal INR\_TO\_USD\_RATE = 0.013; // 1 INR = 0.013 USD

// Convert from USD to EUR

public static void convertUSDToEUR(Decimal usdAmount) {

Decimal eurAmount =usdAmount \* USD\_TO\_EUR\_RATE;

System.debug(eurAmount);

}

// Convert from EUR to USD

public static Decimal convertEURToUSD(Decimal eurAmount) {

return eurAmount / EUR\_TO\_USD\_RATE;

}

// Convert from USD to INR

public static Decimal convertUSDToINR(Decimal usdAmount) {

return usdAmount \* USD\_TO\_INR\_RATE;

}

// Convert from INR to USD

public static void convertINRToUSD(Decimal inrAmount) {

Decimal USDAmount =inrAmount \* INR\_TO\_USD\_RATE;

System.debug(USDAmount);

}

}

**Electricity Bill:**

public class BillGenerator {

public static void generate(Integer unit){

Decimal BillAmount=0;

Decimal Rate1=5;

Decimal Rate2=7;

Decimal Rate3=10;

if(unit<=100){

BillAmount=Rate1\*unit;

}

else if(unit<=200){

BillAmount=(100\*Rate1)+((unit-100)\*Rate2);

}

else{

BillAmount=(100\*Rate1)+(100\*Rate2)+((unit-200)\*Rate3);

}

System.debug('Unit Consumed:' +unit);

System.debug('Bill Amount: '+BillAmount);

}

}