1. Case study on Amazon EC2 and learn about Amazon EC2 web services. Create VM on EC2.
2. Installation and configure Google App Engine.
3. Write a program for percentage formula using Apex programming Language.
4. Write a program for Calculator using Apex programming Language.
5. Write a program for Temperature convertor using Apex programming Language.
6. Write a program for number to Decimal convertor in Apex programming Language.
7. Write a program for creating MCQ page using Apex programming Language.
8. Design and develop custom Application (Mini Project) using Sales force Cloud.

**1)Write a program for percentage formula using Apex programming Language.**

public class PercentageCalculator {

// Method to calculate percentage

public static Decimal calculatePercentage(Decimal obtainedMarks, Decimal totalMarks) {

if (totalMarks == 0) {

// Prevent division by zero error

return 0;

}

// Calculate percentage

Decimal percentage = (obtainedMarks / totalMarks) \* 100;

return percentage;

}

// Debugging method to test calculatePercentage method

public static void debugPercentageCalculation() {

Decimal obtainedMarks = 85;

Decimal totalMarks = 100;

// Calculate percentage

Decimal percentage = calculatePercentage(obtainedMarks, totalMarks);

// Debugging output

System.debug('Obtained Marks: ' + obtainedMarks);

System.debug('Total Marks: ' + totalMarks);

System.debug('Percentage: ' + percentage);

}

}

**PercentageCalculator.debugPercentageCalculation(); run karnasathi use kartat**

Write a program for Temperature convertor using Apex programming Language. with apex code in debug

public class TemperatureConverter {

// Method to convert Celsius to Fahrenheit

public static Decimal celsiusToFahrenheit(Decimal celsius) {

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

return fahrenheit;

}

// Method to convert Fahrenheit to Celsius

public static Decimal fahrenheitToCelsius(Decimal fahrenheit) {

Decimal celsius = (fahrenheit - 32) \* 5/9;

return celsius;

}

// Debugging method to test temperature conversion

public static void debugTemperatureConversion() {

Decimal celsiusTemp = 30;

Decimal fahrenheitTemp = 86;

// Convert Celsius to Fahrenheit

Decimal convertedToFahrenheit = celsiusToFahrenheit(celsiusTemp);

// Convert Fahrenheit to Celsius

Decimal convertedToCelsius = fahrenheitToCelsius(fahrenheitTemp);

// Debugging output

System.debug('Celsius Temperature: ' + celsiusTemp + '°C');

System.debug('Converted to Fahrenheit: ' + convertedToFahrenheit + '°F');

System.debug('Fahrenheit Temperature: ' + fahrenheitTemp + '°F');

System.debug('Converted to Celsius: ' + convertedToCelsius + '°C');

}

}

TemperatureConverter.debugTemperatureConversion();

**3) Write a program Calculator in Apex programming Language.**

public class calculator {

// Method to add two numbers

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

return num1 + num2;

}

// Method to subtract two numbers

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

return num1 - num2;

}

// Method to multiply two numbers

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

return num1 \* num2;

}

// Method to divide two numbers

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

if (num2 == 0) {

throw new System.MathException('Cannot divide by zero');

}

return num1 / num2;

}

// Debug method to test calculator functions

public static void debugCalculator() {

Decimal num1 = 10;

Decimal num2 = 5;

// Addition

Decimal sum = add(num1, num2);

System.debug('Sum: ' + sum);

// Subtraction

Decimal difference = subtract(num1, num2);

System.debug('Difference: ' + difference);

// Multiplication

Decimal product = multiply(num1, num2);

System.debug('Product: ' + product);

// Division

try {

Decimal quotient = divide(num1, num2);

System.debug('Quotient: ' + quotient);

} catch (Exception e) {

System.debug('Error: ' + e.getMessage());

}

}

}

//**Calculator.debugCalculator();**

1. **Write a program for creating MCQ page using Apex programming Language.**

public with sharing class MCQController {

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

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

public Map<String, String> selectedOptions { get; set; }

public MCQController() {

// Sample questions and options

questions = new List<String>{'What is the capital of France?', 'What is 2 + 2?'};

options = new Map<String, List<String>>{

'What is the capital of France?' => new List<String>{'Paris', 'London', 'Berlin', 'Rome'},

'What is 2 + 2?' => new List<String>{'3', '4', '5', '6'}

};

selectedOptions = new Map<String, String>();

}

public void selectOption(String question, String option) {

selectedOptions.put(question, option);

}

public void submitAnswers() {

// Process submitted answers

for (String question : questions) {

String selectedOption = selectedOptions.get(question);

System.debug('Question: ' + question + ', Selected Option: ' + selectedOption);

}

// Redirect to a thank you page or result page

}

// Method to print questions and selected options

public void printQuestionsAndOptions() {

for (String question : questions) {

System.debug('Question: ' + question);

System.debug('Options: ' + String.join(options.get(question), ', '));

System.debug('Selected Option: ' + selectedOptions.get(question));

}

}

}

**//he run karasathi takaycha new apex code cha tithe**

**/\*MCQController mcqController = new MCQController();**

**mcqController.selectOption('What is the capital of France?', 'Paris');**

**mcqController.selectOption('What is 2 + 2?', '4');**

**mcqController.printQuestionsAndOptions();\*/**

Write a program for number to Decimal convertor in Apex programming Language.

public class ss {

public static Decimal binaryToDecimal(String binary) {

Decimal dec = 0;

Integer power = binary.length() - 1;

for(Integer i = 0; i < binary.length(); i++) {

if(binary.substring(i, i+1) == '1') {

dec += Math.pow(2, power);

}

power--;

}

return dec;

}

}

Decimal result = ss.binaryToDecimal('1011');

System.debug('Decimal result: ' + result);