APEX: ADDITION , DIVISION

✅ Step-by-Step Guide

Saved memory full ⓘ

1. Login to Salesforce Developer Console

- Go to: https://login.salesforce.com
- Open **Developer Console** from your profile (top right corner).

---

2. Create an Apex Class

➤ **Go to:** `Developer Console > File > New > Apex Class`

Name: `AdditionExample`

📄 **Code for Addition:**

apex Copy Edit

```apex
public class AdditionExample {
    // Method to add two numbers
    public static Integer addNumbers(Integer num1, Integer num2) {
        return num1 + num2;
    }
}
```

3. Test the Method with an Apex Anonymous Script

➤ **Go to:** `Developer Console > Debug > Open Execute Anonymous Window`

📄 **Script to execute:**

apex Copy Edit

```apex
Integer result = AdditionExample.addNumbers(10, 15);
System.debug('Sum is: ' + result);
```

🔍 Check the result in the **Logs** tab (Ctrl + E → Execute → Logs → Debug Only).

✅ Output:

csharp Copy Edit

```csharp
Sum is: 25
```

DIVISION

✅ 15. Division of Two Numbers

🔹 Apex Class: `DivisionExample`

apex Copy Edit

```
public class DivisionExample {
    public static Decimal divideNumbers(Decimal num1, Decimal num2) {
        if (num2 == 0) {
            throw new ArithmeticException('Cannot divide by zero.');
        }
        return num1 / num2;
    }
}
```

🔹 Execute in Anonymous Window:

apex Copy Edit

```
Decimal result = DivisionExample.divideNumbers(20, 4);
System.debug('Quotient is: ' + result);
```

> ⚠️ Note: Always handle division by zero when dividing numbers.

CALCULATOR (+ - * /)

✅ Apex Class: `CalculatorExample`

apex Copy Edit

```
public class CalculatorExample {

    public static Integer add(Integer a, Integer b) {
        return a + b;
    }

    public static Integer subtract(Integer a, Integer b) {
        return a - b;
    }

    public static Integer multiply(Integer a, Integer b) {
        return a * b;
    }

    public static Decimal divide(Decimal a, Decimal b) {
        if (b == 0) {
            throw new ArithmeticException('Cannot divide by zero.');
        }
        return a / b;
    }
}
```

✅ Anonymous Apex Code to Test

You can run this in the **Execute Anonymous Window**:

apex Copy Edit

```
Integer a = 20;
Integer b = 10;

System.debug('Addition: ' + CalculatorExample.add(a, b));
System.debug('Subtraction: ' + CalculatorExample.subtract(a, b));
System.debug('Multiplication: ' + CalculatorExample.multiply(a, b));
System.debug('Division: ' + CalculatorExample.divide(a, b));
```

✅ Sample Output in Debug Logs:

makefile Copy Edit

```
Addition: 30
Subtraction: 10
Multiplication: 200
Division: 2
```

MULTIPLES OF 5, 10

✅ Apex Class: `MultiplesOfFive`

apex Copy Edit

```
public class MultiplesOfFive {

    public static void displayTable() {
        for (Integer i = 1; i <= 10; i++) {
            Integer result = 5 * i;
            System.debug('5 x ' + i + ' = ' + result);
        }
    }
}
```

✅ Execute in Anonymous Window

Go to **Developer Console → Debug → Open Execute Anonymous Window**, and run:

apex Copy Edit

```
MultiplesOfFive.displayTable();
```

✅ Output in Debug Logs:

Copy Edit

```
5 x 1 = 5
5 x 2 = 10
5 x 3 = 15
5 x 4 = 20
5 x 5 = 25
5 x 6 = 30
5 x 7 = 35
5 x 8 = 40
5 x 9 = 45
5 x 10 = 50
```

WELCOME MESSAGE

✅ Apex Class: `WelcomeMessage`

apex — Copy — Edit

```
public class WelcomeMessage {
    public static void printMessage() {
        System.debug('Welcome to Apex Programming Language of Salesforce Platform');
    }
}
```

✅ How to Execute:

1. Open **Developer Console**
2. Go to `Debug > Open Execute Anonymous Window`
3. Paste and run this code:

apex — Copy — Edit

```
WelcomeMessage.printMessage();
```

✅ Output (in Debug Logs):

pgsql — Copy — Edit

```
Welcome to Apex Programming Language of Salesfor Platform
```

VIVA QUESTIONS ON THIS APEX

Saved memory full

1. What is Apex in Salesforce?

Answer:

Apex is a programming language used in Salesforce to write custom business logic. It's similar to Java and runs on the Salesforce platform.

---

2. Why do we use Apex in Salesforce?

Answer:

We use Apex to add custom features like automation, data processing, triggers, and to create logic that can't be done using just point-and-click tools.

---

3. What are the different data types in Apex?

Answer:

Some common data types are:

- `Integer` – for whole numbers
- `Decimal` – for numbers with points
- `String` – for text
- `Boolean` – for true/false
- `Date`, `Datetime` – for dates and times

4. What is a class in Apex?

Saved memory full ⓘ

Answer:

A class is a collection of variables and methods. It's like a blueprint that defines how something works.

---

5. What is a method in Apex?

Answer:

A method is a block of code that performs a specific task like addition or printing a message.

---

6. How do you print output in Apex?

Answer:

We use `System.debug()` to print output in the debug log.

---

7. How do you write a simple addition program in Apex?

Answer:

Create a class with a method that takes two numbers and returns their sum using `return num1 + num2;`.

---

8. What is an Anonymous Window in Salesforce?

Answer:

It's a place in Developer Console where we can write a ↓ un Apex code temporarily to test it.

9. What is the difference between a class and a method?

Answer:

A class contains one or more methods. A method is the function or task inside the class.

---

10. How can you handle division by zero in Apex?

Answer:

We check if the second number is zero using an `if` condition before dividing. If it's zero, we throw an error or print a message.

---

11. What is Visualforce?

Answer:

Visualforce is a framework in Salesforce used to create custom user interfaces (like web pages).

---

12. Can you write Apex without using Visualforce or Lightning?

Answer:

Yes, we can write and run Apex code using the Developer Console or Anonymous Window.

13. What is the output of this code: `System.debug('5 x 3 = ' + 5*3);`?

Answer:

It will print: `5 x 3 = 15`.

---

14. Why use static methods in Apex?

Answer:

Static methods can be called without creating an object of the class. They're simple and easy to use for utility tasks.

---

15. Can we use loops in Apex?

Answer:

Yes, we can use `for`, `while`, and `do-while` loops just like in Java.

---

16. How many times will the loop run?

apex Copy Edit

```apex
for (Integer i = 1; i <= 10; i++) {
   System.debug(i);
}
```

Answer:

It will run 10 times, printing numbers from 1 to 10.

📘 1. Salesforce Basics

Q1. What is Salesforce?

A: Salesforce is a cloud-based CRM (Customer Relationship Management) platform used to manage customer relationships, data, and business processes.

Q2. What is CRM?

A: CRM stands for Customer Relationship Management. It helps businesses manage their customer data, support, marketing, and sales.

Q3. What is the use of Salesforce.com?

A: It is used to develop cloud applications, automate tasks, manage data, and improve business workflow without needing on-premise servers.

💻 2. Apex Programming Language

Q4. What is Apex?

A: Apex is a strongly typed, object-oriented programming language used in Salesforce to write business logic.

Q5. Is Apex similar to Java?

A: Yes, Apex syntax is similar to Java, and it follows object-oriented programming principles.

Q6. Where can you write Apex code?

A: You can write Apex in the Developer Console, Visual Studio Code with Salesforce CLI, or in Setup → Apex Classes.

Q7. What is the use of `System.debug()`?

A: It is used to print output to the debug log, like a print statement.

3. Classes and Methods

Saved memory full

Q8. What is a class in Apex?

A: A class is a container for code — it holds variables and methods.

Q9. What is a method?

A: A method is a block of code that performs a specific task (like add two numbers).

Q10. What is a static method?

A: A static method belongs to the class, not an object. It can be called directly using the class name.

Q11. How do you call a method in Apex?

A: Use `ClassName.methodName();` — if it's static.

---

4. Data Types and Variables

Q12. What are the data types in Apex?

A: Common ones are:

- Integer – whole numbers
- Decimal – numbers with decimals
- String – text
- Boolean – true/false
- Date – dates
- List – a collection of elements

Q13. What is a variable?

A: A variable is used to store data in memory (e.g., `Integer a = 5;`).

Q14. How do you declare a variable?

A: `DataType variableName = value;`

Example: `Integer x = 10;`

🔁 5. Control Statements and Loops

Q15. What is a loop?

A: A loop is used to repeat a block of code multiple times.

Q16. What are the types of loops in Apex?

A:

- `for` loop
- `while` loop
- `do-while` loop
- `for-each` loop (for collections)

Q17. What is an if-else condition?

A: It is used to make decisions in code based on conditions.

➗ 6. Arithmetic Operations in Apex

Q18. How do you perform addition in Apex?

A: Using `+` operator: `Integer sum = a + b;`

Q19. How do you perform subtraction, multiplication, division?

A:

- Subtraction: `a - b`
- Multiplication: `a * b`
- Division: `a / b`

Q20. How to handle divide by zero in Apex?

A: Use an `if` condition:

apex Copy Edit

```apex
if (b != 0) {
  result = a / b;
}
```

📜 7. Miscellaneous

Q21. What is the Developer Console?

A: It is a tool in Salesforce used to write, run, and debug Apex code.

Q22. What is the Execute Anonymous Window?

A: A window in Developer Console where we can write temporary code to test it quickly.

Q23. What is the debug log?

A: A log that shows the output and execution flow of Apex code using `System.debug()`.

Q24. Can you create custom applications using Apex?

A: Yes, we can build complete applications using Apex, Visualforce, and Lightning.

Q25. Can Apex be used to interact with the database?

A: Yes, using SOQL and DML operations, Apex can read and write data from Salesforce objects.