**Arithmetic API Documentation**

**The Arithmetic API provides endpoints for basic arithmetic operations: addition, subtraction, multiplication, and division. Each endpoint accepts two numbers as input and returns the result with detailed step-by-step processing.  
  
  
  
  
Base URL:** <https://arithmeticapi-1.onrender.com>  
 **Endpoints**

**1. Welcome Endpoint**

**Description**

Returns a welcome message to confirm the API is working.

* URL: /
* Method: GET
* Response:
  + Status: 200 OK
  + Body: **Json : { "message": "Welcome to the Arithmetic API" }**

**2. Addition Endpoint**

**Description**

Adds two numbers and provides a step-by-step breakdown.

* URL: /add
* Method: POST
* Request Body: **Json { "a": number, "b": number }**

**Response:**

* Status: 200 OK
* Body: **JSON { "step1": "Start with {a} and {b}",   
   "step2": "Add {a} + {b}",  
   "result": number}**

**Example**

**Request:**

**JSON:**

{

"a": 10,

"b": 5

}

**Response:**

**JSON:**

{

"step1": "Start with 10 and 5",

"step2": "Add 10 + 5",

"result": 15

}

**3. Subtraction Endpoint**

**Description**

Subtracts one number from another and provides a step-by-step breakdown.

* URL: /subtract
* Method: POST
* Request Body: **JSON { "a": number, "b": number }**

**Response:**

* Status: 200 OK
* Body: **JSON { "step1": "Start with {a} and {b}",   
   "step2": "Subtract {b} from {a}",   
   "result": number }**

**Example**

**Request:**

**JSON:**

{

"a": 10,

"b": 5

}

**Response:**

**JSON:**

{

"step1": "Start with 10 and 5",

"step2": "Subtract 5 from 10",

"result": 5

}

**4. Multiplication Endpoint**

**Description**

Multiplies two numbers and provides a step-by-step breakdown.

* URL: /multiply
* Method: POST
* Request Body: **JSON**

**{ "a": number,**

**"b": number }  
  
Response:**

* Status: 200 OK
* Body: **JSON { "step1": "Start with {a} and {b}",   
   "step2": "** **Multiply {a} \* {b}",   
   "result": number }**

**Example**

**Request:**

**JSON:**

{

"a": 10,

"b": 5

}

**Response:**

**JSON:**

{

"step1": "Start with 10 and 5",

"step2": "Multiply 10 \* 5",

"result": 50

}

**5. Division Endpoint**

**Description**

Divides one number by another and provides a step-by-step breakdown. Division by zero is not allowed.

* **URL**: /divide
* **Method**: POST
* **Request Body**: **JSON**

**{ "a": number,**

**"b": number }  
  
Response:**

* Status: 200 OK
* Body: **JSON { "step1": "Start with {a} and {b}",   
   "step2": "Divide {a} by {b}",  
   "result": number }**
* **Error (If Division by Zero)**:

**Status**: 400 Bad Request

**Body: JSON { "error": "Division by zero is not allowed" }**

**Example:**

**Request:**

**JSON:**

{

"a": 10,

"b": 5

}

**Response:**

**JSON:**

{

"step1": "Start with 10 and 5",

"step2": "Divide 10 by 5"

"result": 2

}

5 from 10",

"result": 5

}