**Using Parameters in Methods**

**Objective:**

Use methods and parameters to create reusable code blocks in C# that perform basic calculations.

**Problem 1: Calculate the Volume of a Rectangular Box**

**Problem Statement:**

Write a method that calculates the volume of a rectangular box. The method should accept three integer parameters: length, width, and height. The method should return the volume calculated as:

**Volume = length \* width \* height.**

**Problem 2: Calculate the Average of Three Numbers**

**Problem Statement:**

Write a method that calculates the average of three integer numbers. The method should accept three parameters: num1, num2, and num3. The method should return the average as an integer.

**Code:**

**namespace** **ParamsInMethods**

{

**public** **class** **ParamsInMethods**

{

**public** **static** **void** **Main**()

{

// Problem 1

**int** length = ReadAndValidate("Enter the length: ");

**int** width = ReadAndValidate("Enter the width: ");

**int** height = ReadAndValidate("Enter the height: ");

**int** volume = VolumeOfRectangle(length, width, height);

Console.WriteLine($"The volume of the rectangular box is: {volume}");

// Problem 2

**int** num1 = ReadAndValidate("Enter the first number: ");

**int** num2 = ReadAndValidate("Enter the second number: ");

**int** num3 = ReadAndValidate("Enter the third number: ");

**int** average = CalculateAverage(num1, num2, num3);

Console.WriteLine($"The average of the three numbers is: {average}");

}

**public** **static** **int** **ReadAndValidate**(**string** prompt)

{

**while** (**true**)

{

Console.Write(prompt);

**string?** input = Console.ReadLine();

**if** (**string**.IsNullOrWhiteSpace(input))

{

Console.WriteLine("Input is empty or whitespace.");

**continue**;

}

**if** (!**int**.TryParse(input, **out** **int** number) || number <= **0**)

{

Console.WriteLine("Input must be a valid integer greater than 0.");

**continue**;

}

**return** number;

}

}

**public** **static** **int** **VolumeOfRectangle**(**int** length, **int** width, **int** height)

{

**return** length \* width \* height;

}

**public** **static** **int** **CalculateAverage**(**int** num1, **int** num2, **int** num3)

{

**return** (num1 + num2 + num3) / **3**;

}

}

}