**Part 67 - Optional parameters in c#**

In this video, we will discuss the different ways that are available to make method parameters optional. This is a very common interview question.  
  
**There are 4 ways that can be used to make method parameters optional.**  
**1.** Use parameter arrays  
**2.** Method overloading  
**3.** Specify parameter defaults  
**4.** Use OptionalAttribute that is present in System.Runtime.InteropServices namespace

**Using parameter arrays, to make method parameters optional:**  
AddNumbers function, allows the user to add 2 or more numbers. firstNumber and secondNumber parameters are mandatory, where as restOfTheNumbers parameter is optional.

public static void AddNumbers(int firstNumber, int secondNumber,   
    params object[] restOfTheNumbers)  
{  
    int result = firstNumber + secondNumber;  
    foreach (int i in restOfTheNumbers)  
    {  
        result += i;  
    }  
  
    Console.WriteLine("Total = " + result.ToString());  
}  
  
**Please note that, a parameter array must be the last parameter** in a formal parameter list. The following function will not compile.  
public static void AddNumbers(int firstNumber, params object[] restOfTheNumbers,   
    int secondNumber)  
{  
    // Function implementation  
}   
  
If the user wants to add just 2 numbers, then he would invoke the method as shown below.  
AddNumbers(10, 20);  
  
On the other hand, if the user wants to add 5 numbers, then he would invoke the method as shown below.  
AddNumbers(10, 20, 30, 40, 50);  
**or**  
AddNumbers(10, 20, new object[] { 30, 40, 50 });  
  
**In our next video**, we will discuss method overloading, specifying parameter defaults & using OptionalAttribute.