# Jagged Array Real-World Example in C#

🔷 Scenario:  
Suppose you're building a simple app for a school, where each class can have a different number of students. You want to store the names of students in each class. Since each class can have a different number of students, a jagged array is a perfect fit.

## ✅ Code Example:

using System;  
  
class Program  
{  
 static void Main()  
 {  
 Console.Write("Enter number of classes: ");  
 int numClasses = int.Parse(Console.ReadLine());  
  
 string[][] school = new string[numClasses][];  
  
 for (int i = 0; i < numClasses; i++)  
 {  
 Console.Write($"Enter number of students in class {i + 1}: ");  
 int numStudents = int.Parse(Console.ReadLine());  
  
 school[i] = new string[numStudents];  
  
 for (int j = 0; j < numStudents; j++)  
 {  
 Console.Write($"Enter name of student {j + 1} in class {i + 1}: ");  
 school[i][j] = Console.ReadLine();  
 }  
 }  
  
 Console.WriteLine("\n--- Student List ---");  
 for (int i = 0; i < school.Length; i++)  
 {  
 Console.WriteLine($"Class {i + 1}:");  
 for (int j = 0; j < school[i].Length; j++)  
 {  
 Console.WriteLine($"- {school[i][j]}");  
 }  
 }  
 }  
}

## 🧠 Explanation:

- string[][] school is a jagged array where:  
 - Each element is an array of student names.  
 - Different classes can have different numbers of students.  
  
- User provides:  
 - The number of classes.  
 - The number of students in each class.  
 - Names of each student.  
  
- The outer array length is fixed (based on number of classes), but each inner array length varies based on how many students are in that class.

## 🏁 Output Sample:

Enter number of classes: 2  
Enter number of students in class 1: 2  
Enter name of student 1 in class 1: Alice  
Enter name of student 2 in class 1: Bob  
Enter number of students in class 2: 3  
Enter name of student 1 in class 2: John  
Enter name of student 2 in class 2: Sara  
Enter name of student 3 in class 2: Mike  
  
--- Student List ---  
Class 1:  
- Alice  
- Bob  
Class 2:  
- John  
- Sara  
- Mike