## Coding Conundrums

Number one in a series of more than one. Probably.

### 1.1 Sequence Reversal

I want a program that reads in 10 numbers and prints them out in the reverse order to the order they were entered. I've no idea why I want this, I just do.

You can extend this to a program that asks first how many numbers are to be read in. But again, I've no idea why I want this. I just do.

This might be a really good place to use an array. Or, even better, a list.

### 1.2 Number Shuffle

I want a program that will print out the numbers $1,2,3,4,5,6,7,8,9$ in a shuffled order. The order must be different each time the program runs. It should be possible to extend this to work with 52 numbers, in which case I can make a shuffled deck of cards.

You can use the Random number generator in C\#, but you must make sure that the same number never appears twice, as a deck of cards which contains more than 4 aces has been known to raise suspicion.

### 1.3 Shoe Popularity Contest

I want a program that reads in 20 integers and tells me how much of each number was entered. I actually have a use for this, in that each day I sell 20 pairs of shoes and I want to find out the most popular shoe sizes. It's amazing that I manage to hold down my lecturing job, what with all the shoe sales I'm involved with.

When the program starts it has no idea of what numbers are coming in, but it does know they are integers. Each time a new number is entered the program should print out a display that shows me the count of each different value.

This might be a really good place to use a dictionary.

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