## Bulls and Cows

Bulls and Cows is an old code-breaking game for two players.

One of the players writes a 4-digit secret number. The digits must be all different, digit zero (0) is not allowed. Then the other player tries to guess their opponent's number who gives the number of matches. If the matching digits are on their right positions, they are "bulls", if on different positions, they are "cows". Example:

* Secret number: 4271
* Opponent's try: 1234
* Answer: 1 bull and 2 cows. (The bull is "2", the cows are "4" and "1".)

The task is to figure out the secret number (“4 bulls”).

### Part 1

Write a web Application where computer generates a 4 digits number (the digits must be all different, digit zero (0) is not allowed), and then repeatedly asks for the human guesses, and prints the output, until the number is found.   
  
For example, computer generated 6958 (output is console-like here, but should be a web application instead):

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| Input number:  >1234  1234 => bulls 0, cows 0  Input number:  >5678  5678 => bulls 1, cows 2  Input number:  >8567  8567 => bulls 0, cows 3  Input number:  >8659  8659 => bulls 1, cows 3  Input number:  >6958  6958 => bulls 4, cows 0  Game over! |

### Part 2 (harder)

Write the opposite program, where human comes up with a secret number, and computer figures it out.

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| Attempt #1. My guess: 3618  >02  Attempt #2. My guess: 1473  >12  Attempt #3. My guess: 1847  >11  Attempt #4. My guess: 1739  >20  Attempt #5. My guess: 1534  >30 Your number is 1234 |