

## Design Document: Bulls &amp; Cows

1. Pseudocode: Extract individual digits from an **int**.

start codeblock

set the **int**

create a vector

assign the **int** to a temporary int for the loop

for (iterate down from (number of digits) to 0)

    use integer division to get the digit from the current position

    place digit into vector

    remove the processed digit

end loop

## 2. Pseudocode: Create random code and place it in a list

get seed for random number generator

using seed, generate an int with (user-input (3, 4, or 5)) digits

use the above code, possibly as a method, to separate this int into its digits as well

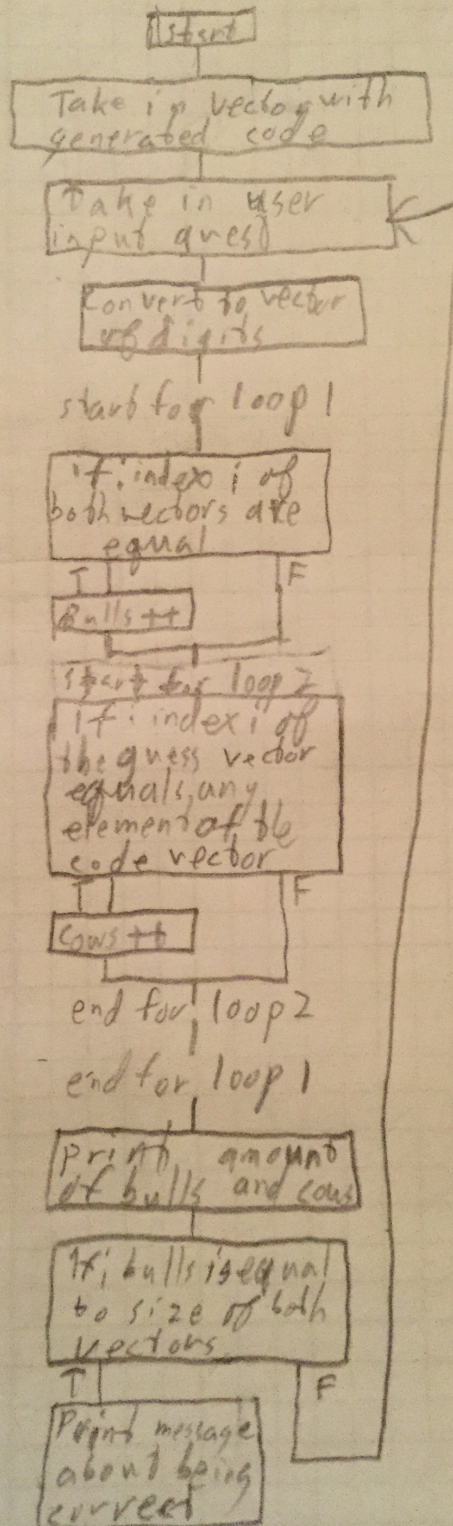
## 3. Flowchart for determining number of bulls and cows (next page)

CSE-121-700

Moore

## Bulls & Cows

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#### 4. Test Cases:

- Inputs of 0
  - Enter 3 digit code
  - Enter 4 digit code
  - Enter 5 digit code
  - Invalid code by format or size
- Inputs of 3
- Inputs of 4
- Inputs of 5
- Invalid inputs
- Input guesses
  - valid, invalid, and wrong types
- Find if loop to beginning functions if user prefers