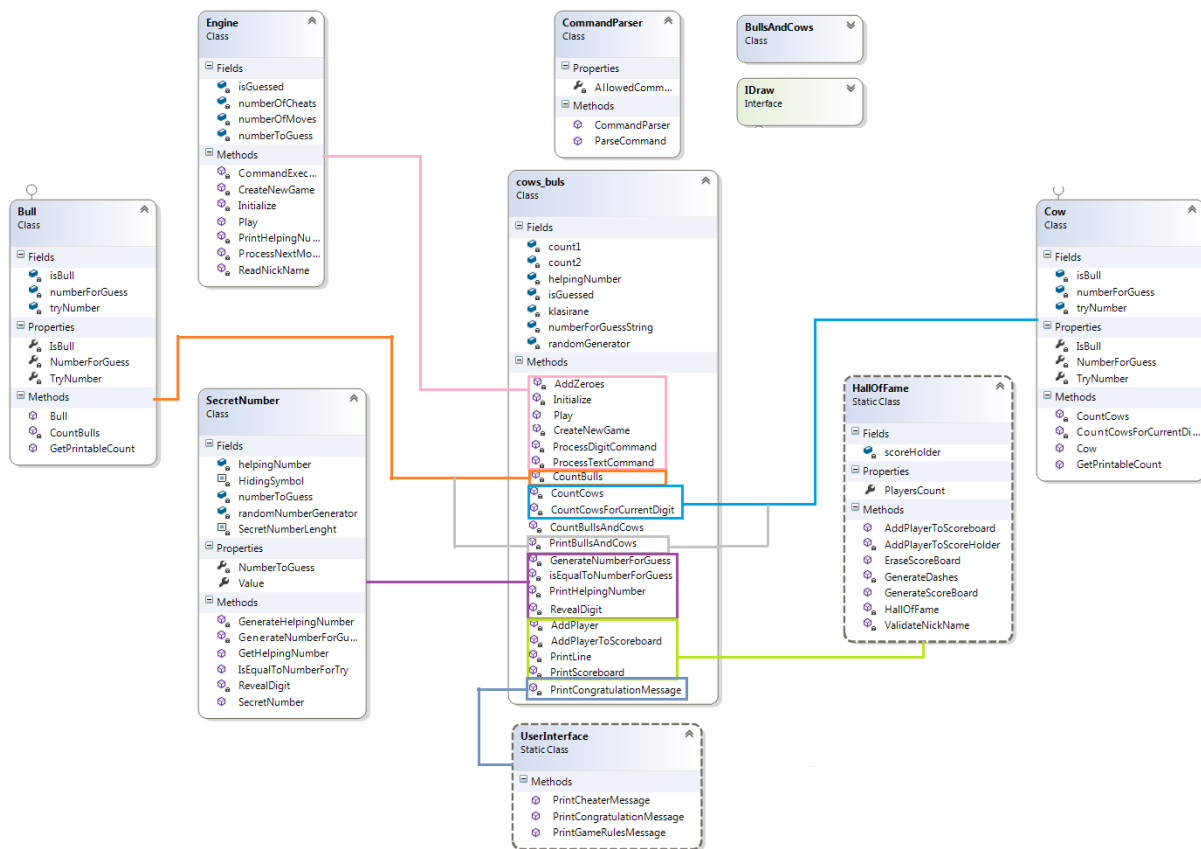


Refactoring Documentation for Project "Cows & Bulls"

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1. Redesigned the project structure:

Project name `cows_bulls` renamed to `BullsAndCows`.

Project Main class renamed From `BullsAndCowsTest` to `BullsAndCows`

Divided the project into separated files, that contains only one class, with name, that describes his purpose. The idea is to create a new classes that were a part of the code of an old big file. The new classes/interfaces are:

- **Bull.cs**
- **CommandParser.cs**
- **Cow.cs**
- **Engine.cs**
- **IDraw.cs**
- **SecretNumber.cs**
- **UserInterface.cs**
- **HallOfFame.cs**
- **SecretNumber.cs**

2. Reformatted source code:

Mainly StyleCop standards are applied for code format and documentation.

Code formatting applied at 100%.

XML documentation presented only for public Methods, properties, fields and classes. XML comments will be added to private members if those members aren't already obvious from their names.

3. Class Structures

Bull class

Counting Bull logic not changed.

Variable manipulation:

numberForGuessString → numberForGuess

tryNumberString → tryNumber

bulls → isBull

Cow class

Counting cows logic changed for good. Bug for incorrect cow counting in some special cases fixed was found and fixed.

Variable manipulation:

numberForGuessString → numberForGuess

tryNumberString → tryNumber

bulls → isBull

‘For cycle’ indexers naming changed: I → numberIndex

J → currentIndex

Implemented IDraw interface for both Cow and Bull classes → Method PrintCowsAndBulls deleted.

CommandParser class

This class ‘translate’ the user command for the Engine class.

It has one public method ParseCommand that returns user command to the Engine after reformatting it in readable format for the Engine.

Variables manipulations:

Presented property AllowedCommands holding the commands that Engines can understand.

Engine class

Determines the game flow.

Method ProcessTextCommand → CommandExecution

Method ProcessDigitCommand → ProcessNextMove

Presented PrintHelpingNumber, ValidateNickName

AddZeroes method deleted. Logic of the secret number(numberToGuess) changed.

Method CountCowsAndBulls deleted for being unnesesry.

Variable manipulation:

count1 → numberOfCheats

count2 → numberOfMoves

numberForGuessString → numberForGuess

tryNumberString → tryNumber

HallOfFame class

Methods for printing messages on the console in are presented in HallOfFame class.

IDraw interface

Implemets method GetPrintableCount

PlayerInfo class

Not changed.

SecretNumber class

Method GenrateNumberForGuess logic changed.

Presented methods: GenerateHelpingNumber,GetHelpingNumber

Variables manipulation:

bool flag → bool isRevealed

numberForGuessString → numberForGuess

Presented constants:

HidingSymbol

SecretNumberLenght

