# Refactoring Documentation for Project “GameFifteen”

Team “Chlorine”

1. Redesigned the project structure:
2. Changes in class **….**
3. Changes in class **GameFifteen**
   * Made various identifier name changes - indexer variables (i, j -> row, col), matrix identifiers, renamed Cyrillic names to their correct English counterpart, removed some unnecessary comments, changed row- and column-related names to expose their real usage
   * Fixed spacings around control structures, brackets, and array initializers.
   * Changes in the main game controller - magical numbers fixed, formatting and renaming, unclear naming fixed, unnecessarily complex control structures simplified and fixed
   * Introduced constants - game field size, number of players in the highscores table
   * Fixed output message errors (putted, invalid spacing, inconsistent or improper messages)
   * Changed some exceptions (e. g. ArgumentException for null game board should be ArgumentNullException) and fixed the expected exceptions in the unit tests to show that behaviour
   * Fixed about 250 Stylecop warnings (mostly whitespaces left where there shouldn't be any and wrong placement of brackets
   * Fixed method UpdateAndDrawBoard - does two things and accepts too many parameters
   * Refactored the Highscores class a little
   * Refactored the GameBoard class - too many instance methods