**Refactoring Documentationfor Project “Battle field 15”**

1. Redesigned the project structure:

* Move all classes in one solution and one project.
* Rename the solution to **BattleField**.
* Rename the project to **BattleFieldGame**.
* Remove all unneeded classes.
* Extracted each class in a separate file with a good name: **Battlefield**.cs, **BattleFieldConsole**.cs, **Engine**.cs, **ExplosionType**.cs, **GameFieldServices**.cs, **GameServices**.cs, **Mine.**cs.
* Add project **BattleFieldTest** which will content the unit tests.

1. Reformatted the source code:
   * Removed all unneeded empty lines in all classes.
   * Inserted empty lines between the methods and everywhere where is necessary.
   * Split the lines containing several statements into several simple lines.
   * Formatted the curly braces **{** and **}** according to the best practices for the C# language.
   * Put **{** and **}** after all conditionals and loops (when missing).
   * Character casing: variables and fields made camelCase; types and methods made PascalCase.
   * Remove the spaces between the brackets.
   * Remove the **[Tab]**’s when they are unneeded.
   * Delete all unneeded comments.
2. Renamed all variables with good names like:
   * **минаЕдно**🡪 **mineOfTypeOne**
   * **минаДве**🡪 **mineOfTypeTwo**
   * etc.
   * **ProizvolniChisla**🡪 **randomNumbers**
   * **Krai** 🡪 **allRowsAndColsAreChecked**
3. Renamed all methods with good names like:

**printirai**()🡪**printTheBattleField**()

**InitMines** ()🡪**ExtractMineFromString**

1. Introduced constants:

* LOWER\_MINES\_COUNT = 0.15;
* UPPER\_MINES\_COUNT = 0.3;
* FIELD\_SYMBOL = '-';
* DESTROYED\_SYMBOL = 'X';

1. Create a unit tests for expected and unexpected inputs.

* [BattlefieldConsoleTest for BattlefieldConsole.cs](https://github.com/lubolub1/Gadolinium/blob/master/BattleField/BattleFieldGameTests/BattlefieldConsoleTests.cs)
* BattleFieldGameTests for BattleFieldGame.cs
* GameFieldServicesTests for GameFieldServices

1. Deleted all unneeded methods like:

* NekaGyrmi4(),
* MineCell(),
* InitField(),
* GrymOtQsnoNebe().