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| Refactoring Documentation for Project “Game 15” Team “Gallium”   1. Redesigned the project structure:    * Renamed the project to **Game15**.    * Renamed the main class **Program** to **GameFifteen**.    * Extracted each class in a separate file with a good name: **GameFifteen.cs**, **Board.cs**, **Point.cs**.    * Extracted fields like a class and moved related functionality in it: GameField, ScoreBoard, Coordinates. 2. Reformatted the source code:    * Removed all unneeded empty lines, e.g. in the method **PlayGame()**.    * Inserted empty lines between the methods.    * Split the lines containing several statements into several simple lines, e.g.:  |  |  |  | | --- | --- | --- | | **if (input[i] != ' ') break;** | **🡪** | **if (input[i] != ' ')**  **{**  **break;**  **}** |  * + 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**.   + Formatted all other elements of the source code according to the best practices introduced in the course “[High-Quality Programming Code](http://codecourse.telerik.com/)”.   + Inspected project with **StyleCop**, **JustCode** and fixed all warnings.  1. Renamed Method and variables:    * **In class Game15:**    * *najDobrite*🡪 *numberOfMoves*.    * *IskamProizvolnaDyska* 🡪 *RandomField*.    * *Zapochni* -> *Run*    * *Pole* -> *GameField*    * *Nachalo* - > *Initialize*    * *ProverkaGamefieldSolved* -> *GameField*.IsSolved    * *PrintGameField* -> GameField.*ToString*()    * *gameIsFinished* -> *IsGameInProgress*    * *PrintBestOfTheBest* -> ScoreBoard.*GetTopPlayers*    * *AddToScoreBoard* -> ScoreBoard.*Add*    * TryToMoveNumber – splitted to CanMoveNumber and MoveNumber    * **In class Kordinati**    * Class Kordinati -> Coordinates    * ProverkaNeighbout -> CheckNeighbour 2. Extracted methods.    * *Zapochni* -> to Engine - > *Run*    * *PrintGameField* -> to GameField - > *ToString*()    * *AddToScoreBoard* -> to ScoreBoard -> *Add*    * *proverkaGameFieldIsSolved* -> to GameField -> *IsSolved*    * *PrintBestOfTheBest* -> to ScoreBoard -> *GetTopPlayers*    * *TryToMoveNumber* -> to GameField -> *CanMoveNumber* and *MoveNumber*    * *IskamProizvolnaDuska* -> to GameFiled -> *RandomField* 3. Created new methods and classes.    * **In GameField:**    * Only exctracted methods from Game-15    * **In ScoreBoard:**    * *GetScoreBoard*    * *GetTopPlayers*(extracted and renamed)    * *Add*( extracted and renamed)    * **In Communicator**    * *GetNumber*    * *DisplayMessage*    * *GetName*    * *DisplayIntroMessage*    * **In Coordinates:**    * *CheckNeighbour*(renamed and refactored)    * *CheckBottom*(extracted from CheckNeighbour)    * *CheckTop*(extracted from Checkneighbour)    * *CheckRight*(extracted from CheckNeighbour)    * *CheckLeft*(extracted from CheckNeighbour)    * **In Player:**    * ToString    * **In Engine**    * *Initialize*(renamed)    * *Run*(renamed)    * *Readcommand*(extracted)    * Created *isGameInProgress* field |
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