FIRST DESIGN DRAFT REPORT

SCRABBLE

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Design Explanation

GameManager: Its duty is to do initialization of the game environment and starts/finishes the game.

Referee: Its duty is to validate the words which players submit.

GameTiles: Its duty is to create tiles and words.

GamePlay: Its duty is to handle game-specific actions.

PlayerProfile: Its duty is to hold player's in-game information.

Patterns We Plan to Use

- Observer, in order to update score, board state, rack.

- State, in order to control game state.

- Decorator, in order to calculate player's score and obtain a word by decorating with letters.

GameManager

+ initProfiles()
+ initBoard()
+ initGame()
+ initRack()
+ liveScore()
+ initPouch()
+ startGame()
+ finishGame()
+ winner()

GamePlay

+ whosTurn()
+ calculatePoint()
+ fillRack()
+ getWord()
+ updatePouch()
+ updateBoard()
+ checkWord()

Referee

+ isValidWord()
+ parseWord()
+ checkDictionary()

PlayerProfile

+ name
+ totalScore
+ rack

+ updateRack()
+ move()
+ getWordScore()
+ getPlayersTotalScore()

GameTiles

+ position
+ tileName
+ value
+ score
+ isOnBoard

+ getLetters()
+ getScore()
+ getPosition()