Entities:

|  |  |
| --- | --- |
| **Tile** | |
| * letter * value * getLetter, getValue |  |

|  |  |
| --- | --- |
| **Bag** | |
| * tiles - list of tiles currently in the bag * removeTiles - remove and return some tiles * swapTiles - put some tiles in and remove and return the same amount | * Tile |

|  |  |
| --- | --- |
| **Square** | |
| * tile - the tile on the square, possibly null * modifier - the modifier for the square, e.g. normal, double letter, triple word, etc * setTile, getTile, getModifier | * Tile |

|  |  |
| --- | --- |
| **Board** | |
| * squares - two-dimensional array of Squares representing the board * checkWord - check if a word would fit, given the current tiles on the board * insertWord - insert a word, returns total points of the word * countValue - tally points of a word on the board | * Square |

|  |  |
| --- | --- |
| **Dictionary** | |
| * words - set of valid words * IsValid - check if word is valid |  |

Use case

|  |  |
| --- | --- |
| **Player** | |
| * rack - a list of tiles in their rack * points * name * addPoints * addTile * removeTile * hasTile – check if player has a certain tile | * Tile |

|  |  |
| --- | --- |
| **BoardRenderer** | |
| * renderBoard | * Board |

Controller

|  |  |
| --- | --- |
| **Game** | |
| * player1, player2 * board * bag * dictionary * play - the main game loop. Goes between players and handles I/O, running checks and updating the players, board, and bag as necessary | * Bag * Player * Board * Dictionary |