

Below are behavioral contract for the case that when a player places tiles during a game.

Operation: isFirstMove()  
Precondition: -The player made a move.  
Postcondition: -If true,the GameSystem validated that there is no valid Move for the hole game so far and should continue for other checks.  
-If fails,the GameSystem validated that this is other valid Move(s) for the hole game and should continue for other checks.

Operation : checkStar(Move m)  
Precondition: -There is no valid Move for the hole game so far  
-The player made a Move.  
Postcondition: -If true,the first played word must be at least two letters long, and covered H8 (the center square).  
-If false,the player failed to play this move.

Operation : checkValidWord(Move m)  
Preconditions: -The player made a Move.  
Postconditions: -If true,the board validated it's a valid word and the board is going to do other checking.  
-If false,the player failed to play this move.

Operation: checkMatchBoard(Move m)  
Precondition: -The player made a Move.  
-The Move represents a valid word.  
Postcondition: -If true,the board validated that the placement is not out bound of the board,and the placement had no overlap with existing Char on board,and the player has such tiles in his inventory(Rack),and he only place one SP in this Move.  
-If false,the player failed to play this move.

Operation: checkJoin(Move m)  
Precondition: -The player made a Move.  
-There exist some other valid Move before on the Board.  
-The board has validate the word,and the position of placement.  
Postcondition: -If true,the Move did has collaboration with other Char on the board and the board validated this is a valid action.

~~~~~  
Operation : addChar()  
Preconditions: -The player's Move has been validated.  
Postconditions: -Char Tiles had been added to the Board.

Operation : addSP()  
Preconditions: -The player's Move has been validated.  
Postconditions: -The SP Tile had been put to the corresponding locations.  
-The SP Tile can only been visible be to who place it.

Operation : activateSP(int log,GameSystem s)  
Preconditions: -The player's Move has been validated.  
Postconditions: -If there are more than one SP Tiles in one Square,they will be activated in a FIFO order.  
-The Board might has been modified.  
-The player's supposed score might change in the future.  
-The Game System's oder-controls might has been modified.

---

Operation : replenishTiles(List<Char>,PlayerAccount p)  
Preconditions: -The player's Move has been validated.  
-The player's Char Tile Rack has less than 7 Chars.  
-The player's Char Inventory contains all the CharTiles that going to do the replenishment.  
Postconditions: -The player got his Char Tile Rack full of 7 chars'  
-The corresponding chars are removed from the inventory.

---

(in my design,we don't calculate score until the challenge procedure ends.)

Operation : updateScore(int score,PlayerAccount p)  
Preconditions: -The player's Move has been validated.  
-The SP Tiles had been activated.  
-The challenge procedure has been finished.  
Postconditions: -The final score added to the PlayerAccount.

---