

Explanation of new or modified data structures and their impact on GUI integration.

Game (The model of our MVC)

New methods within the Game were created, and some existing signatures were altered to allow for Model testing/simulation. The *play()* method was altered to no longer output to the console. Input from the GUI is automatically fed to the model through the action listeners to the controller.

Player

DisplayHand() is another output method used in the text-based implementation from milestone 1 that was removed for the GUI implementation. We also added the *setPoints()* method to reset a player's point total for testing purposes.

Board

The *displayBoard()* method used in the second milestone to print the board to the text console was removed as the GUI replaced the need for text interaction.

GameTest

Creates a test model to test the correct Scrabble game behaviors, particularly the word placement/validation and scoring methods. Currently, all tests pass except for multiple word score validation, future implementation will have to consider newly formed *adjacent* words for point totaling as well.

View

This class is responsible for the GUI or view portion of the game. The interface comprises a 15x15 board of custom buttons, as well as the current player's Tile rack as JButtons to allow user interaction and placement of tiles to form the word on the board. All input is handled by the mouse/clicks. Various methods are used to simplify the GUI operations, board is actively disabled and enabled based on where valid placements exist.

Controller

This class creates the instances of Model, View, and Controller which will follow the logic and behavior of our Scrabble game.