

CSE116 - t030 - Stage 1: Technical Guide

Basic design for our game Scrabble:

Classes:

Main Class - simply runs the program. We will work on this on later stages.

Board Class - The Board class holds the format of the board (20 x 20) totaling up to 400 tiles. It does not include the GUI but only the inner data for the board.

Properties of a toroidal board will be held here that allows top and bottom edges to connect as well as the left and right edges. It holds (and will hold) several methods such as placing tiles, removing tiles, and so on.

Player Class - The Player class holds the representation of a player. A player should be able to have a name, an accumulated score throughout the game, and a tile rack. A player number is also assigned an int for each player in the game and it allows us which actions of the movement of the tiles belongs to which player. This class also holds a method that calculates the score of the word and returns the score. Several tests were made to pass.

Tile Class - The Tile class is used for the construction of a single Tile object. The basic constructor shows the representation of the tile with its letter and its point value. A method setValue sets the value of each letter (char) of the word (String) entered by player.

TileInventory Class - The TileInventory class holds all 400 tile objects. The class also contains a method that for every assigned number of tiles there are for each letter, the char letter and the point value are both assigned to the tile object using a for loop. Also contains a method that shuffles these tile pieces before drawn.

TileRack Class - The TileRack class holds the TileRack object that each player possesses. It is represented by an array of size 7. There are also methods in this class that allow us to add/remove tiles from the player's rack.