

Implement a **Scrabble game prototype**, using the following resources:

1. Word Validator:

<http://digital.synergy88studios.com/S88Exams/Word%20Validator%20for%20Word%20Games.unitypackage>

2. Standard English Scrabble letter scores found here:

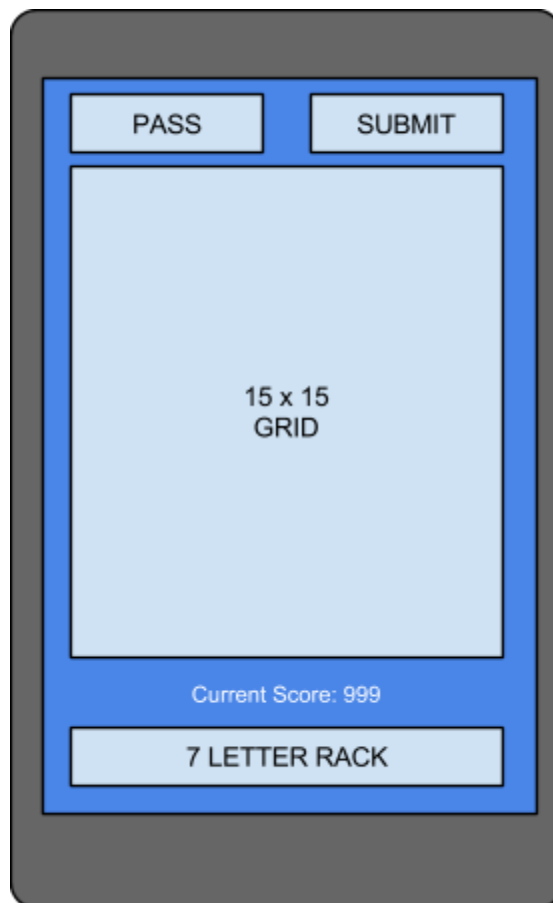
[http://en.wikipedia.org/wiki/Scrabble\\_letter\\_distributions](http://en.wikipedia.org/wiki/Scrabble_letter_distributions)

- 2 blank tiles (scoring 0 points)
- 1 point: E ×12, A ×9, I ×9, O ×8, N ×6, R ×6, T ×6, L ×4, S ×4, U ×4
- 2 points: D ×4, G ×3
- 3 points: B ×2, C ×2, M ×2, P ×2
- 4 points: F ×2, H ×2, V ×2, W ×2, Y ×2
- 5 points: K ×1
- 8 points: J ×1, X ×1
- 10 points: Q ×1, Z ×1

3. You can use any free or available UI framework we have: Unity UI (Unity v4.6), NGUI, 2DToolkit, etc.

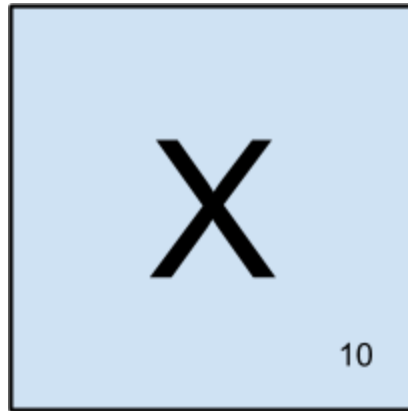
# Prototype Requirements:

1. At the start of the game, a 15x15 grid should be created procedurally in the middle of the screen. (no premade grids)
2. Fill up 7 Letter Slots in a “Letter Rack” at the bottom of the screen with random Letter Tiles.
3. Follow the screen mockup:



- a. The PASS Button - should fill up any empty Letter Slot in the Letter Rack at the bottom of the screen.
- b. The SUBMIT Button - should check the last entered word on the board if it is a valid word or not.
  - i. If the word is valid, compute the word's score and add it to the Current Score.
  - ii. If the word is not valid, return the letters to the Letter Rack

- c. The LETTER RACK - is a 7-slot line that can hold 7 Letter Tiles
4. Use drag-and-drop mechanics to drag tiles from the rack to the board/grid, or within the grid. Letter Tiles should be able to snap to a grid tile.
  5. Each Letter Tile should display the letter and its corresponding score.  
Example:



Upon completion of the project, compress the Unity project folder (make sure you remove unnecessary asset folders) and email the project to [hr@synergy88studios.com](mailto:hr@synergy88studios.com) with the following email Subject:

**Assessment Submission GameDev: <Name>**

**All submissions are due Feb 26, 2015**

Lastly, if you are unfamiliar with Scrabble, please don't be afraid to ask for help about the rules. This will make you a better game developer! :)

## GRADING & CRITERIA

CATEGORY	TEST ITEMS	DESCRIPTION	RATING %
GAME PLAY	<b>Procedural Board Creation</b>	The game should be able to make the board procedurally	
	<b>Input &amp; Interface</b>	Tiles can be dragged from the letter rack to the board, and from within the board. Tiles should also snap to the appropriate tile.	
	<b>Button Behaviour</b>	The Pass Button should refill missing Tiles on the Tile Rack until 7 Tiles are on the Tile Rack. The Submit Button should compute a score from the newly placed tiles on the board.	
FUNCTIONAL	<b>Normal Scoring</b>	The correct score should be computed based on the score for each letter of the valid word that was formed.	
	<b>Suffix/Prefix Scoring</b>	The correct score should be computed from words that were formed by adding a prefix, suffix, or plurality on an existing word on the board.	
	<b>Multiple Words Scoring</b>	The correct score should be computed if multiple words were formed from the newly placed tiles on the board.	
TIME COMPLETED	<b>Objectives</b>	Able to complete the exam within the given time.	