**Project Report – Boggle Solver**

**Problem Statement:** Boggle is a word game designed by Allan Turoff and distributed by Hasbro. It involves a board made up of 16 cubic dice, where each die has a letter printed on each of its 6 sides. At the beginning of the game, the 16 dice are shaken and randomly distributed into a 4-by-4 tray, with only the top sides of the dice visible. The players compete to accumulate points by building valid words from the dice, according to these rules:

**Related Concepts:**

* Two dimensional arrays.
* TST (Ternary Symbol Table)
* Set
* Programming Language – Java

**Code:**

**public class BoggleSolver**

**{**

// Initializes the data structure using the given array of strings as the dictionary.

// (You can assume each word in the dictionary contains only the uppercase letters A through Z.)

//time complexity O(n)

//space complexity O(n)

**public BoggleSolver (String[] dictionary)**

// Returns the set of all valid words in the given Boggle board, as an Iterable.

//time complexity O ()

//space complexity O ()

**public Iterable<String> getAllValidWords (BoggleBoard board)**

// Returns the score of the given word if it is in the dictionary, zero otherwise.

// (You can assume the word contains only the uppercase letters A through Z.)

//time complexity O (1)

//space complexity O (1)

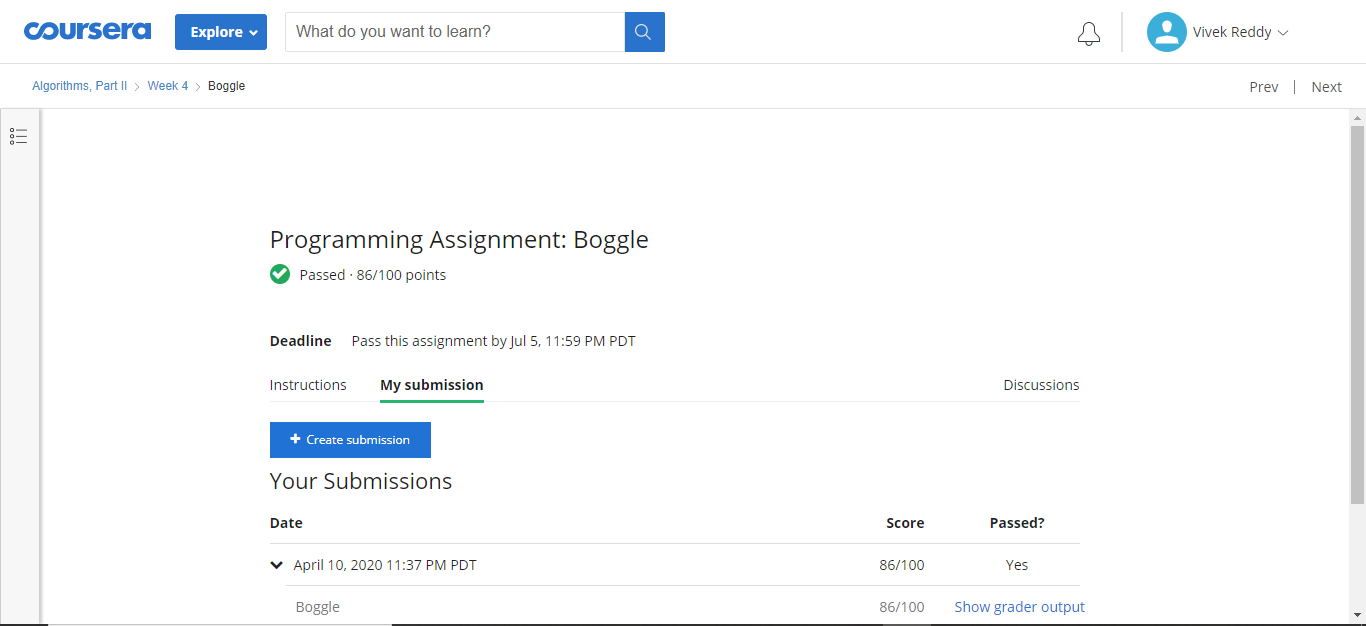
**public int scoreOf (String word)**

**}**

**Difficulties Faced:**

* Logic creation is difficult to obtain considering the memory and time constraint.
* TrieST won’t work as the space allocation is more when compared to project requirements.

**Score:**

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