**Problem Statement:**

Boggle is a game played on a square grid onto which you randomly distribute a set of letter cubes. Letter cubes are 6-sided dice, except that they have a letter on each side rather than a number. The goal is to find words on the board by tracing a path through neighbouring letters. Two letters are neighbours if they are next to each other horizontally, vertically, or diagonally. There are up to eight letters near a cube. Each cube can be used at most once in a word.

**Related Concepts:**

**Depth First Search:**

Depth-first search is an algorithm for traversing or searching tree or graph data structures. The algorithm starts with the initial node of the graph G, and then goes to deeper and deeper until we find the goal node or the node which has no children. The algorithm, then backtracks from the dead end towards the most recent node that is yet to be completely unexplored.

**TrieSET:**

The TrieSET class represents an ordered set of strings over the extended ASCII alphabet. It supports the usual add, contains, and delete methods. It also provides character-based methods for finding the string in the set that is the longest prefix of a given prefix, finding all strings in the set that start with a given prefix, and finding all strings in the set that match a given pattern.

**Code:**

In this project, we have file named as BoggleSolver.java. In this file, we implemented a methods which is getAllValidWords() and scoreOf().

In getAllValidWords(), we use dfs for getting valid words.

In scoreOf(), based on word length calculating the score.

**Test Cases:**

According to course era, compilation, API, spot bugs and pmd are passed, but spot bugs and check style passed with warnings.

Correctness: 12/13 tests passed

Memory: 3/3 tests passed

Timing: 9/9 tests passed

Aggregate score: 95.38%

**Conclusion:**

I did the project and tested my code on course era.

Firstly, I got 0 and we did some modification in code. After trying, finally I got 95 score. But I couldn’t get to know about remaining errors showing in course era which were the reasons not to get 100 score.