Assignment A10a - Design:

Our goal is to create a fun party-game style activity for our users to enjoy, either against themselves, or head-to-head with a friend. Specifically we are designing software implementation of the popular word game "Boggle".

Our application will:

- Provide a GUI for one or two players to play Boggle
- The internal logic necessary for generating a valid board with reasonable letter-distribution
- Score user entries
- Offer a leader-board and game tracker persistent across instances of our application

GameBoard

-Dice[][]: char
-letters[][]: char
isFinished: Boolean

+GameBoard(Player: String)

+GameBoard(Player1: String, Player2: String)

-isAdjacent(row1: int, col1: int, row2: int, col2: int): boolean

-guess(player: player, row: int, col: int)

-resetGame()

+getBoard : GameBoard

Player

+name: String
-score: int
-gamesWon: int
-gamesPLayed: int
-wordsFound: String[]

+Player(name:String)

-changeName(newname:String)

Judge

-winner: String
-scores[]: int[]

-leaderBoard: Player[]

+displayStats

+displayScore(player1: player): int

+displayScore(player1: player, player2: player): int[]

Sample Output

| Bog | ggle! |
|-----------------|-------------|
| Rules explanati | ion |
| ~~~~~~ | -~~~~~ |
| ~~~~~~~ | |
| | |
| Play | Leaderboard |
| | |

| 1P | 2P |
|----------------|------|
| P1 Name: James | |
| P2 Name: | Exit |
| | |

User clicks 'Play' ->

| P R A | | ining 2:59 | Time remai | - | |
|-----------------|--------|------------|------------|---|-------|
| R R L | F | F | D | Α | Е |
| | Υ | Y | Α | R | Р |
| M I U | E | E | L | R | R |
| | S | S | U | | M |
| MILES Words for | found: | Words fou | | | MILES |

User clicks '1P' ->

| Е | Α | D | F |
|---|---|---|--|
| Р | R | А | Υ |
| R | R | L | Е |
| M | I | U | S |
| | | | Words found: -Miles -Pray -Rule -Dear -Drale |

Boggle!

Word: Points:

Miles 6

Pray 6

Rule 6

Dear 6

Drale 0

Play Again

Leaderboard:

Devon: 89
 Margret: 83

3) Alec: 72

Reset