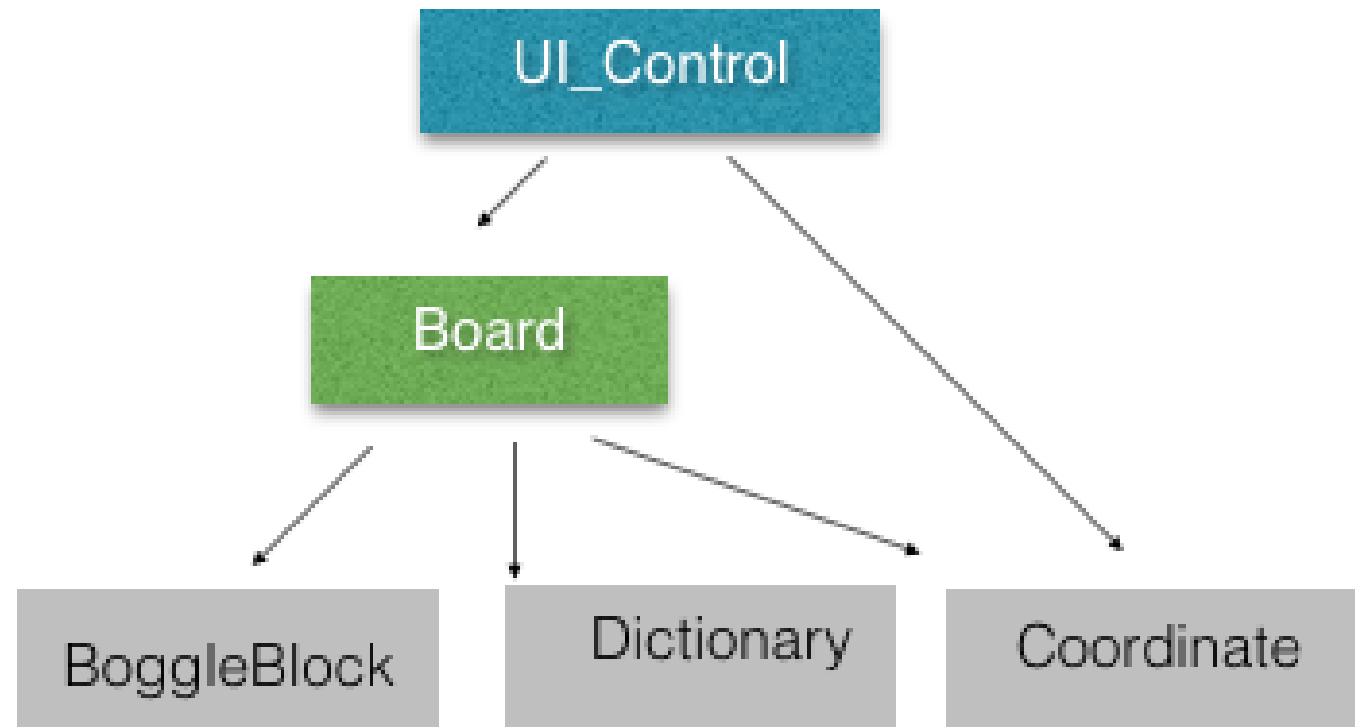


# BOGGLE

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# Design Structure



# BoggleBlock Class

- Constructor: BoggleBlock() runs shuffledConsAndVowels() method
- ReturnChar() : returns either a random vowel or consonant
- BuildVowels() : builds array of vowel characters
- ShuffledConsAndVowels(): creates vowels array and consonants array and shuffles both

# Dictionary Class

- Constructor: Dictionary() calls buildDictionary() method
- BuildDictionary() reads input file and creates array of all words in dictionary
- ReturnDict(): returns dictionary array

# UI\_Control Class

- Contains Main: launch(args) launches UI/ calls start() method
- Start(): Creates opening, main, and ending screens, draws UI
- DoAction() responds to mouse clicked events on the board itself
- Handle() takes care of buttons pushed, assigns them actions
- SetEndGame(): ends a game
- UpdateScore(): changes current score according to length of word played
- UpdateFoundWords() adds played word
- SetGCT() : redraws the board
- BuildTime() outputs the time remaining as a string
- FormatButton() : formats a button to match the theme of the game

# Coordinate Class

- Constructor: `Coordinate()`: sets an x and a y value of the coordinate instance
- `IsValid()`: checks if a certain coordinate is on the board
- `BuildPossibles()` creates an array of all surrounding coordinates
- `SetBS()` sets current board size
- `ToString()` prints coordinate
- `Equals()` checks if equal for map used in board class
- `HashCode()` used for map in board class to avoid collision

# Board Class

- Constructor: Board() sets board size, and generates a board with more than 50 words on it
- ReturnFinalList(): returns the list of all words on the board
- GetC() returns value at key coordinate
- OutputFinalList(): Builds a string of all words in finalList
- Get() returns the value at an x and y coordinate value
- PrintVisited(): used in unit testing, prints visited places on the board
- Set(): sets value at x and y
- BuildFinalList(): checks board for all words in dictionary

# Board Class Continued

- FindWord() searches for first letter of a word, recursively searches around it for rest of the word
- RecurseWord() searches recursively for a word
- SetBoard() : resets the board, checking for validity
- ResetVisited() sets all visited to false
- FindQs() : finds qs on board and runs setU()
- SetU(): randomly sets a u around a found q
- ScanInput() : used in unit testign to search for an input word
- PrintFinalList(): pUsed in unit testing to print the final list to the console