Program Specifications

# Requirement Specification

## Classes:

* WordsArrayList (Instantiable): This models the ArrayList of words picked from an external file.
* WordGenerator (Instantiable): This models a randomly generated word from the WordArrayList.
* BoardGenerator (Instantiable): This models the Board of the word search.
* Display (Instantiable, GUI): This displays the board in a GUI JPanel.
* StartMenu (GUI): This starts the whole game;

# VOPC Diagram

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| *WordGenerator* |
| - listOfWords : Arraylist<string>  - words : WordsArrayList  - random : Random |
| + WordGenerator()  + generate() : String |

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| *WordsArrayList* |
| - words : ArrayList<String> |
| + WordsArrayList()  + load(String) : void  + getWords() : ArrayList<String> |

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| *BoardGenerator* |
| - board: char[][]  - size : int  - listOfWords : ArrayList<String>  - numberOfWords: int  - wordsPlaced: int  - generator : WordGenerator  - random : Random  - view: String |
| + BoardGenerator()  + display : void  - pickWord() : String  - placeword(String) : void  + getBoard() : char[][]  + getWordsPlaced() : int  + getSize() : int  + setSize(int): void  + getListOfWords() : ArrayList<String>  + getNumberofWord() : int  + setNumberOfWords(int) : void  + getView () : String  + setView(String) : void |

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| *Display* |
| - jlabels: JLabel[][]  - board : BoardGenerator  - grid : JPanel  - defaultColour : Color  - word: String  - pickedWord: ArrayList<String>  - coordinates : ArrayList<JLabel> |
| + Display()  + buildGrid() : void  + WordList() : void  + mouseClicked(MouseEvent) : void  + mousePressed(MouseEvent) : void  + mouseReleased(MouseEvent) : void  + mouseEtered(MouseEvent) : void  + mouseExited(MouseEvent) : void  + getJLabels() : JLabel[][]  + setJLabels()(JLabel[][]): void  + getWord() : String |

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| *StartMenu* |
| - startButton: JButton  - player : JLabel  - name : JTextField  - display: Display  - img : Image |
| + StartMenu()  + paintComponent(Graphics) : void  + main(String[] args) : void  + actionPerformed(ActionEvent) : void |