

playGame

```

+ int screen
+ PImage img
+ BoardTile[][] board
+ Player player1
+ Player player2
+ Player currentPlayer
+ Tile adding
+ int numBackground
+ Tile dictionary
+ ArrayList<Tile> letters
+ void setup()
+ void draw()
+ void startScreen()
+ void gameScreen()
+ void gameOverScreen()
+ void mousePressed()
+ void startGame()
  
```

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OK

```

+ boolean active
+ int okxCor
+ int okyCor
+ final color activeButton
+ final color inactiveButton
+ string word
+ void initOKButton()
+ boolean valid (int,int,int,
                  int)
+ boolean containsword (string)
+ boolean overOK()
+ void ok()

```

option

```

+ int optionswidth
+ int optionsheight
+ int optionsx
+ int optionsy
+ void initoptions()
+ boolean overoptions()
+ void optionsPage()

```

Player

```

+ string name
+ ArrayList<Tile> hand
+ ArrayList<Tile> current
+ int firstX, firstY, lastX,
+ int score lastY
+ Player()
+ Player (string)
+ void give (Tile)
+ void addCurrent (Tile)
+ ArrayList<Tile> getHand()
+ ArrayList<Tile> getCurrent()
+ void addToscore (int)
+ int currentsum()
+ string getScore()
+ string getName()
+ void remove()
+ void setup()
+ void string()

```

Tile

```

+ string letter
- int pointVal
- boolean endofword
+ int fill
+ Tile()
+ Tile (string)
+ string getLetter()
+ int getValue()
+ boolean isThisTheEnd()
+ void setEnd (boolean)
+ void display (int,int)

```

trie

```

- Node root
+ final char[] alphabet
+ Trie()
+ Trie (ArrayList<string>)
+ void addword (string)
+ void addword (char[])
+ boolean containsPrefix
  (string)
+ boolean containsword (string)
+ Node getword (string)
+ Node getPrefix (string)
+ boolean contains (char[],
  boolean)
- Node getNode (char[])
+ string toString()
+ int sizeOf()
+ int sizeOf (char[], Node)

```

words

```

+ Trie createDictionary()

```


BoardTile

```

+      int      multVal
+      boolean   filled
+      string    letter
+      string    type
+      int       xpos
+      int       ypos
+      boolean   clicked
+ final color   PINK
+ final color   DEFAULT
+ final color   DARK_BLUE
+ final color   LIGHT_BLUE
+ final color   RED
+ BoardTile(string, int, int)
+ void full()
+ void tempfill()
+ int  getX()
+ int  getY()
+ void setLetter(Tile)
+ void remove()
+ int  getMult()
+ boolean isFull()
+ string getLetter()
+ void display()
+ void draw()
    
```

Node

```

- character letter
- string    value
- ArrayList<Node> children
- boolean isEnd
+ boolean Node()
+ Node(char, string)
+ boolean addChild
  (character, string)
+ char getLetter()
+ string getValue()
+ Node getChild(char)
    
```

InitGrid

```

+ void initGrid()
    
```

InitLetters

```

+ void initLetters()
    
```

Instruction

```

+ int instructionwidth
+ int instructionheight
+ int instructionX
+ int instructionY
+ boolean overInstructions()
+ void initInstructionButton()
+ void initInstructionsPage()
    
```

MovingTiles

```

+ int[][] tileLocations
+ int boardX()
+ void addTiles()
+ int boardY()
+ boolean over1()
+ boolean over2()
+ boolean over3()
+ boolean over4()
+ boolean over5()
+ boolean over6()
+ boolean over7()
    
```

Node (continued)

```

+ boolean containsChild
  (char)
+ boolean equals(Node,
  char[])
+ boolean isWord()
+ void setIsWord(boolean)
+ string toString()
+ ArrayList<Node>
  getChildren()
    
```