# WordBattle

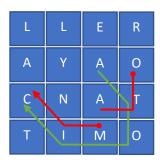
## Object

To find all possible words on a given grid. The fastest solution wins.

### Rules of the Game:

Words consist of any chain of letters that are found in the provided dictionary.

To be a valid chain of letters each letter in a word must be adjacent to the next letter in the word.



For Example:

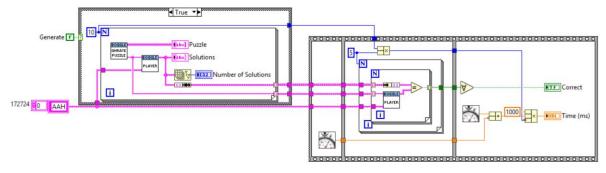
Atomic in the green path would be a valid word, while atomic using the red path would not

For any given word any one instance of a letter may not be used more than once.

To be a valid, a word must contain at least three letters

## How to Play

To play, replace all instances of player with your code that solves the puzzle. You can do this by editing the empty player vi or by making your own vi that implements the same connector pane as the default player.

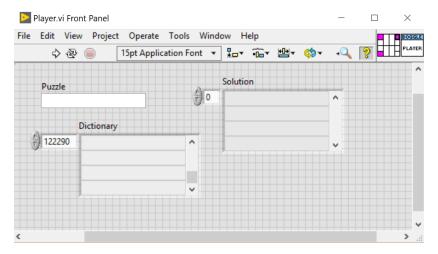


#### Included VIs

#### Player.vi

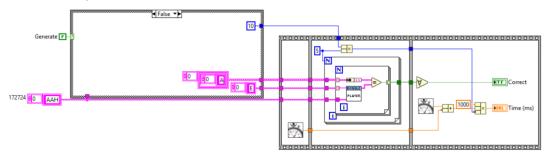
Player.vi has two inputs and one output as follows:

- *Puzzle*: A string of letters representing the puzzle. The board is a 4x4 grid so **Puzzle** will be a 16-character string where the first 4 characters are the top row, the second 4 characters are the second row and so on.
- *Dictionary*: A 1D string array of alphabetically sorted valid words that could be found in the Puzzle. This dictionary is not guaranteed to be the same for every game.
- Solutions: A 1D string array of all the words that you find in the Puzzle.



#### Framework.vi

Leave the Generate Boolean as False to use a pre-generated puzzle. Changing it to True will generate a new random puzzle.



The flat sequence structure provides a framework to test and time your player to help you try to achieve the most efficient solution. In its default configuration the framework will test your player against 10 unique puzzles. Each puzzle is tested 5 times to acquire the average speed of your player.

#### Generate Puzzle.vi

Generate puzzle generates a new random 16 letter puzzle. This puzzle is outputted in string format and represents a 4x4 grid of letters where the first 4 letters are the first row and the second 4 letters are the second row etc.