**Puzzle Generator**

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CSC 325-002

For our assignment we used the Depth First Search (DFS) to create Puzzle Generator. Our implementation of creates an alphanumeric matrix in order to find words from a user input. We used the DFS in order to have the ability to keep a list of the previously visited nodes and checks all of the adjacent options. This is perfect for our implementation structure.

**Goal**

The goal of our implementation is to find the user input as efficiently as possible. We used a split approach in order to break our string down to find the unique characters more effectively.

**Objectives**

The DFS’s objective is to use color in order to keep track of the vertices that have been visited. Once the search reaches a dead end, it back tracks and tries another path. The way this is accomplished is by using a stack.

**Tasks**

Both members contributed to each portion of the assignment. Collectively we came up with the idea for our program and discussed the best way to implement it. Eboni did majority of the writing of the program with input from Carmen. Carmen did most of the write up with contribution from Eboni.