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CSCI 301-Section 1

#cs301175

Project 3

**Summary**

The program creates an ifstream variable for the file the user will input, two integer variables one to hold the number of the rows of the maze and the other to hold the number of columns of the maze, and a maze two-dimensional array. The program then calls the openFile() function and passes the ifstream variable as its parameters then calls readFile() function and passes the ifstream variable, the maze variable and the two integer variables as its parameters. Next, the program closes the file contains the maze after the readFile() function is done with its work, after that it calls display() function and passes the maze variable and the two integer variables as its parameters. The final step is to assign the dimension of the start position of the maze through the two-dimensional array then to call the pathFinder() function which will find the paths through the maze and print out the maze with the paths found.

The program uses recursion technique to find all the possible paths through a maze. The program also reads a file which contains the maze representation saves it into two-dimensional array and prints it.

The program can be extended in many ways, we can add allow the function to read and find the path through larger mazes which has more than 22 rows and more than 76 columns. We can also add functions to generate random mazes then solve them.