Jeremy Scheuerman

COSC 220

Dr. Wang

25 May 2021

<center>Project 3 writeup</center>

Testing Plan

I plan to test every single maze and make sure it either finds a solution or says no solution.

Through this I found out of bounds errors (which I fixed) and an error where it would delete the s

and replace it with an X (which I fixed)

Build project in linux environment

Display Maze and read in from file (for maze 0)

Solved Maze (maze 0)

Do testing for all 16 mazes

```
 Please enter the number of the maze that you would like to solve (0-16):
 1
 1 0 0 1 0 1
 1 1 S 1 0 1
 1 1 0 1 1 0
 1 0 1 1 0 0
 0 0 0 0 F 0
 1 0 1 0 0 1

 Maze 101 has no solution.
```

```
Please enter the number of the maze that you would like to solve (0-16):
2
1 0 0 1 0 1
1 1 S 1 0 1
1 1 0 1 1 0
1 0 1 1 0 0
0 0 0 0 F 0
1 0 1 0 0 1

Maze 102 has no solution.
```

```
root@DESKTOP-Q5H0GRD:/mnt/d/Documents/School/Year 3 Semester 2/Cosc 220 com
Please enter the number of the maze that you would like to solve (0-16):
3
1 1 1 1 1 1
1 S 1 1 1 1
1 1 1 1 1 1
1 1 1 1 1 1
1 1 1 1 1 1
1 1 1 F 1 1

1 1 1 1 1 1
1 S X X X X
1 1 1 X X X
1 1 1 X X X
1 1 1 X X X
1 1 1 F X X
```

```
root@DESKTOP-Q5H0GRD:/mnt/d/Documents/School/Year 3 Semester 2/Cosc 220 co
Please enter the number of the maze that you would like to solve (0-16):
4
S 0 0 0 0 0
0 1 0 0 0 0
0 0 1 0 0 0
0 0 0 1 0 0
0 0 0 0 1 0
0 0 0 0 0 F

Maze 104 has no solution.
```

Please enter the number of the maze that you would like to solve (0-16):
5
```
S 0 0 0 0 0
0 1 0 0 0 0
0 0 1 0 0 0
0 0 0 1 0 0
0 0 0 0 1 0
F 0 0 0 0 1
```

Maze 105 has no solution.

Please enter the number of the maze that you would like to solve (0-16):
6
```
0 1 1 1 1 0
0 S 0 1 1 0
1 1 0 0 1 0
0 1 1 1 1 0
1 1 0 0 1 0
F 1 0 0 0 1
```

```
0 1 1 1 1 0
0 S 0 1 1 0
1 X 0 0 1 0
0 X 1 1 1 0
1 X 0 0 1 0
F X 0 0 0 1
```

Please enter the number of the maze that you would like to solve (0-16):
7
```
1 1 1 1 1 S
1 1 1 1 1 1
1 1 1 1 1 1
1 1 1 1 1 1
1 1 1 1 1 1
F 1 1 1 1 1
```

```
1 X X X X S
1 X X X X X
1 X X X X X
1 X X X X X
1 X X X X X
F X X X X X
```

```
Please enter the number of the maze that you would like to solve (0-16):
8
1 1 1 1 1 S
1 0 1 1 1 1
1 1 1 1 1 1
1 0 1 0 0 1
1 1 1 1 1 1
F 1 1 1 1 1

X X X X X S
X 0 X X X X
X 1 X X X X
X 0 X 0 0 X
X X X X X X
F X X X X X
```

```
Please enter the number of the maze that you would like to solve (0-16):
9
1 0 0 0 1 S
1 0 1 1 1 1
1 1 1 1 1 1
1 0 1 0 0 1
1 0 1 0 1 1
F 1 1 1 1 1

1 0 0 0 1 S
1 0 1 1 1 X
X X X 1 1 X
X 0 X 0 0 X
X 0 X 0 1 X
F 1 X X X X
```

```
Please enter the number of the maze that you would like to solve (0-16):
10
1 0 1 1 0 1
S F 0 1 1 1
1 0 1 1 1 0
0 0 1 1 0 0
0 0 0 0 0 0
1 0 1 0 1 0

1 0 1 1 0 1
S F 0 1 1 1
1 0 1 1 1 0
0 0 1 1 0 0
0 0 0 0 0 0
1 0 1 0 1 0
```

Please enter the number of the maze that you would like to solve (0-16):
11
1 1 1 1 0 1
S F 0 1 1 1
1 1 1 1 1 0
0 0 1 1 0 0
0 0 0 0 0 0
1 0 1 0 1 0

1 1 1 1 0 1
S F 0 1 1 1
1 1 1 1 1 0
0 0 1 1 0 0
0 0 0 0 0 0
1 0 1 0 1 0

Please enter the number of the maze that you would like to solve (0-16):
12
1 1 1 1 0 1
1 1 0 1 S F
1 1 1 1 1 0
0 0 1 1 0 0
0 0 0 0 0 0
1 0 1 0 1 0

1 1 1 1 0 1
1 1 0 1 S F
1 1 1 1 1 0
0 0 1 1 0 0
0 0 0 0 0 0
1 0 1 0 1 0

Please enter the number of the maze that you would like to solve (0-16):
13
1 1 1 1 0 1
1 1 0 1 F S
1 1 1 1 1 0
0 0 1 1 0 0
0 0 0 0 0 0
1 0 1 0 1 0

1 1 1 1 0 1
1 1 0 1 F S
1 1 1 1 1 0
0 0 1 1 0 0
0 0 0 0 0 0
1 0 1 0 1 0

```
Please enter the number of the maze that you would like to solve (0-16):
14
1 1 1 1 0 F
1 1 0 1 1 S
1 1 1 1 1 0
0 0 1 1 0 0
0 0 0 0 0 0
1 0 1 0 1 0


1 1 1 1 0 F
1 1 0 1 1 S
1 1 1 1 1 0
0 0 1 1 0 0
0 0 0 0 0 0
1 0 1 0 1 0
```

```
Please enter the number of the maze that you would like to solve (0-16):
15
1 1 1 1 0 0
1 1 0 1 1 1
1 1 1 1 1 1
0 0 1 1 0 0
0 0 0 0 0 F
1 0 1 0 1 S


1 1 1 1 0 0
1 1 0 1 1 1
1 1 1 1 1 1
0 0 1 1 0 0
0 0 0 0 0 F
1 0 1 0 1 S
```

```
Please enter the number of the maze that you would like to solve (0-16):
16
1 1 1 1 0 0
1 1 0 1 1 1
1 1 1 1 1 1
0 0 1 1 0 0
0 0 0 0 0 1
F S 1 0 1 0


1 1 1 1 0 0
1 1 0 1 1 1
1 1 1 1 1 1
0 0 1 1 0 0
0 0 0 0 0 1
F S 1 0 1 0
```
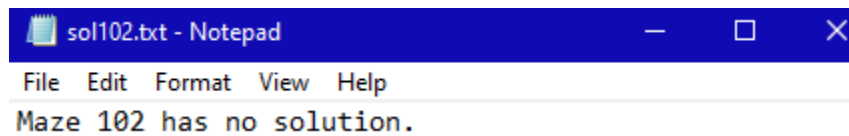
Files Created

project_5_writeup.docx	4/25/2021 7:03 PM	Microsoft Word D...	289 KB
sol100.txt	4/25/2021 6:58 PM	Text Document	1 KB
sol101.txt	4/25/2021 6:59 PM	Text Document	1 KB
sol102.txt	4/25/2021 6:59 PM	Text Document	1 KB
sol103.txt	4/25/2021 7:00 PM	Text Document	1 KB
sol104.txt	4/25/2021 7:00 PM	Text Document	1 KB
sol105.txt	4/25/2021 7:00 PM	Text Document	1 KB
sol106.txt	4/25/2021 7:00 PM	Text Document	1 KB
sol107.txt	4/25/2021 7:00 PM	Text Document	1 KB
sol108.txt	4/25/2021 7:01 PM	Text Document	1 KB
sol109.txt	4/25/2021 7:01 PM	Text Document	1 KB
sol110.txt	4/25/2021 7:01 PM	Text Document	1 KB
sol111.txt	4/25/2021 7:02 PM	Text Document	1 KB
sol112.txt	4/25/2021 7:02 PM	Text Document	1 KB
sol113.txt	4/25/2021 7:02 PM	Text Document	1 KB
sol114.txt	4/25/2021 7:02 PM	Text Document	1 KB
sol115.txt	4/25/2021 7:02 PM	Text Document	1 KB
sol116.txt	4/25/2021 7:03 PM	Text Document	1 KB

Mazes without solution say

sol102.txt - Notepad

File   Edit   Format   View   Help

Maze 102 has no solution.

Mazes with solution have path

sol100.txt - Notepad

File   Edit   Format   Vie

```
1 0 1 1 0 1
S X 0 1 X F
1 X X X X 0
1 0 1 1 0 0
0 0 0 0 0 0
1 0 1 0 1 0
```