

Exp. No: 2

Date: / /

Depth First Search

```
def dfs (maze, x, y, path):
```

```
    if x < 0 or x >= len (maze) or y < 0 or y >= len  
        (maze[0]) or maze [x] [y] == 1;  
        return false
```

```
    if (x, y) == (len (maze) - 1, len (maze[0]) - 1):  
        # check we reach destination
```

```
        path . append ((x, y))
```

```
        return True.
```

```
    maze [x] [y] = 1
```

```
    path . append ((x, y))
```

```
    if (dfs (maze, x+1, y, path) or  
        dfs (maze, x, y+1, path) or  
        dfs (maze, x-1, y, path) or  
        dfs (maze, x, y-1, path)):
```

```
        return True
```

```
    path . pop ()
```

Backtrack.

```
    return False
```

```
def find - path - in - maze (maze):
```

```
    path = []
```

```
    if dfs (maze, 0, 0, path):
```

```
        return path
```

```
    return "No path found"
```

H O i a f e n
1 i s m a n n

```
# find, print
```

2017.03.11

reception

[illegible]

(c) $\frac{1}{2} \log \frac{1}{2}$

28166. *amurensis*

01 1111

Thus the Program was executed

off is water.