Labyrinth problem

A behavioral lab needs your help simulating mice's movement in a labyrinth. They have studied mice for a long time and generalized their movement to moving 1 tile is seen as 1 action.

1. they want you to check if the provided labyrinth has any solutions.
2. provide the shortest solution possible.
3. check their example for the labyrinths with tiles that contain doors (D) which take 1 additional action to pass through, and provide the solution that requires the less possible actions.

labyrinth Examples

Normal labyrinth:

Input file:

```
#..E..#
#.#.#.#
#...#.#
#.#.#..
#S#...#
```

For this example we can find 2 paths:

1. `x1y4-x1y3-x1y2-x1y1-x1y0-x2y0-x3y0` >> 6 actions needed

2. `x1y4-x1y3-x1y2-x2y2-x3y2-x3y1-x3y0` >> 6 actions needed

3. `x1y4-x1y3-x1y2-x2y2-x3y2-x3y3-x3y4-x4y4-x5y4-x5y3-x5y2-x5y1-x5y0-x4y0-x3y0` >> 14 actions needed

Door labyrinth:

Input file:

```
##DE..#
#D.##.#
.D#.#.#
#D..#.#
#D#.#..
#D#.#.#
#.###.#
#S....#
```

Paths:

1. `x1y7-x1y6-Dx1y5-Dx1y4-Dx1y3-Dx1y2-Dx1y1-x2y1-Dx2y0-x3y0` >> 15 actions needed

2. `x1y7-x2y7-x3y7-x4y7-x5y7-x5y6-x5y5-x5y4-x5y3-x5y2-x5y1-x5y0-x4y0-x3y0` >> 13 actions needed