

Welcome!

To run this grassfire algorithm, begin by compiling and running "GrassFire.java" using the following commands:

```
[jonsteele@Jons-MacBook-Pro GrassFire % javac GrassFire.java  
[jonsteele@Jons-MacBook-Pro GrassFire % java GrassFire.java
```

Once running, you will be prompted for 4 separate inputs to generate a map:

Map Size

```
What size of map would you like? format: "x y". Please enter values between 8 and 15 only.  
10 12
```

The percentage chance of a wall being at any x, y.

```
Please enter the desired percentage of walls (between 10 and 20)  
15
```

The location on the first row that you want the starting node to be

```
Please enter a number inbetween 1 and 10 to initialize the starting node.  
6
```

The location of the finish node

```
Please enter coordinates for the finish node in the format "x y".  
!! X must be greater than 7 and less than 10 !!  
!! Y must be greater than 6 and less than 12 !!  
10 10
```

After all your inputs have been entered, the algorithm will generate a map, and then output the shortest possible path:

Here is your randomly generated map:

```

  X           S  X
      X
  X      X
      X  X  X  X
              X  X  X
      X
              X
          X
      X      X  X      F
  X              X  X
              X  X

```

Here is the optimal solution:

```

  X           S  X
      *
      X  *  *
  X  *  *  *  X
      *  X  X  X  X
      *      X  X  X  X
      *  X
      *  *  *  *  X
          X  *  *  *
      X      X  X  *  *  F
  X              X  X
              X  X

```