

Path following algorithm in ASCII map

USER GUIDE

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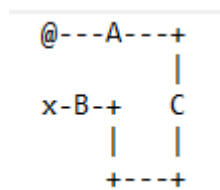
Introduction

Program takes ASCII map as an input, finds the position of start character. Then follows the path and stops when end character is reached.

Program input

Program can be run without any input in this case it will calculate path for default ASCII map where start character is @ and end character is x.

Default ASCII Map



User can pass optional arguments

- -f for ASCII map file path (default value is Default ASCII Map)
- -s for start character (default value @)
- -e for end character (default value x)

If argument is not passed default value is used.

Do not use + as start or end character because it marks change of direction in ASCII map.

Program output

Program will output

- Path as characters
- Collected letters (The letter from the same location will not be collected.)
- Error if something is wrong

Example:

```

Letters: ACB
Path as characters: @---A---+|C|+---+|+-B-x
  
```

Start app

Requirements

- Installed Java 8 or higher
- Maven
- Git

Steps

1. Clone source code from GitHub repository.
2. Run `mvn clean package`.
3. Run `java -jar target/path-find.jar`

How to pass optional arguments

First put argument name (-f , -s or -e) and then argument value.

Example:

```
java -jar target/path-find.jar -f src/test/resources/path/intersections.txt -s @ -e x
```

It loads file from `src/test/resources/path/intersections.txt`, start character is set to `@` and end character is set to `x`.

ASCII map

Create ASCII is very easy. You can use any ASCII character, but two of them have special purpose

- '+' (plus) represents change of direction
- ' ' (space) represents no value

Example

```
@---A---+
      |
&-B-+  C
      |  |
      +---+
```

Example

In the file myMap.txt (/Desktop/myMap.txt) is ASCII map.

```
*
| +-C--+
A |     |
+---B---+
|       |#
|       |
+---D---+
```

Start character is *.

End character is #.

To start application enter:

```
java -jar target/path-find.jar -f Desktop/ myMap.txt -s * -e #
```

Output:

Letters: ABCD

Path: *|A+---B---|+---C-+|-||+---D---|#