

- Source File:

'180101093.pl'

- Folder Test Cases Contains File Test Files, namely:

Mazedata1.pl, Generated Using: `$/genrateMaze 10 10 0.3 1 1 9 9`

Mazedata2.pl, Generated Using: `$/generateMaze 4 4 0.1 1 2 3 3`

Mazedata3.pl, Generated Using: `$/generateMaze 6 6 0.2 2 2 4 5`

Mazedata4.pl, Generated Using: `$/generateMaze 7 7 0.2 1 2 4 5`

- To Execute & Run Code:

Move source and test case file in the same folder.

Open Command Prompt & type following commands

```
- $swipl
?- consult('180101093.pl').
```

Static Input:

For Test Case 1

```
?- consult('Mazedata1.pl').
?- shortest(11,99,Result).
```

For Testcase 2

```
?- consult('Mazedata2.pl').
?- shortest(6,15,Result).
```

Dynamic Input:

"?- fault.": To Make A Node Faulty

"?- valid.": To Make A Node Valid

Test Case 3

```
?- consult('Mazedata3.pl').
?- fault.
Enter node you want to make faulty:
|: 15
|: .
?- valid.
Enter node you want to make valid:
|: 3.
?- shortest_path(14,29,Result).
```

Test Case 4

```
?- consult('Mazedata4.pl').
?- fault.
Enter node you want to make faulty:
|: 10.
?- shortest(9,33,Result).
```

See Image Below For Better Clarity.

```
changoi@changoi:~/Desktop/Main/___Study/PLL/Assignment 6/Submit$ ./generateMaze 6 6 0.2 2 2 4 5
changoi@changoi:~/Desktop/Main/___Study/PLL/Assignment 6/Submit$ swipl
Welcome to SWI-Prolog (threaded, 64 bits, version 7.6.4)
SWI-Prolog comes with ABSOLUTELY NO WARRANTY. This is free software.
Please run ?- license. for legal details.

For online help and background, visit http://www.swi-prolog.org
For built-in help, use ?- help(Topic). or ?- apropos(Word).

?- consult('180101093.pl').
true.

?- consult('Mazedata.pl').
true.

?- shortest_path(14,29,Result).
Processing All Paths, wait for some time:

Length of minimum path: 6

Printing Minimum Path
14 ==> 15 ==> 16 ==> 17 ==> 23 ==> 29
Result = [14, 15, 16, 17, 23, 29] .

?- fault.
Enter node you want to make faulty:
|: 15
|: .

true.

?- valid.
Enter node you want to make valid:
|: 3.

true.

?- shortest_path(14,29,Result).
Processing All Paths, wait for some time:

Length of minimum path: 8

Printing Minimum Path
14 ==> 8 ==> 9 ==> 10 ==> 11 ==> 17 ==> 23 ==> 29
Result = [14, 8, 9, 10, 11, 17, 23, 29] █
```

