

## QUIZ 7

COMP9021 PRINCIPLES OF PROGRAMMING

```
for_seed, density, dim = 0, 3, 4
start = 0, 2
end = 0, 2
direction_preferences = '↑→↓←'
seed(for_seed)
grid = [[int(randrange(density) != 0) for _ in range(dim)]
        for _ in range(dim)]
print('Here is the grid that has been generated:')
display_grid()
print()
connect(start, end)
```

Here is the grid that has been generated:

```
-----
| * *   * |
| * * * * |
| * * *   |
| *   *   |
|-----|
```

There is no path joining both points.

```

for_seed, density, dim = 0, 3, 4
start = 1, 2
end = 1, 2
direction_preferences = '↑→↓←'
seed(for_seed)
grid = [[int(randrange(density) != 0) for _ in range(dim)]
        for _ in range(dim)]
print('Here is the grid that has been generated:')
display_grid()
print()
connect(start, end)

```

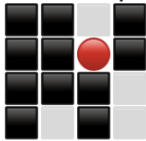
Here is the grid that has been generated:

```

-----
| * * * |
| * * * * |
| * * * |
| * * |
|-----

```

There is a path joining both points, of length 1:



```

for_seed, density, dim = 0, 3, 4
start = 1, 0
end = 0, 3
direction_preferences = '↑→↓←'
seed(for_seed)
grid = [[int(randrange(density) != 0) for _ in range(dim)]
        for _ in range(dim)]
print('Here is the grid that has been generated:')
display_grid()
print()
connect(start, end)

```

Here is the grid that has been generated:

```

-----
| * * * |
| * * * * |
| * * * |
| * * |
|-----

```

There is a path joining both points, of length 7:



```

for_seed, density, dim = 0, 3, 4
start = 1, 0
end = 0, 3
direction_preferences = '↓↑→←'
seed(for_seed)
grid = [[int(randrange(density) != 0) for _ in range(dim)]
        for _ in range(dim)]
print('Here is the grid that has been generated:')
display_grid()
print()
connect(start, end)

```

Here is the grid that has been generated:

```

-----
| * * * |
| * * * * |
| * * * |
| * * |
|-----

```

There is a path joining both points, of length 7:



```

for_seed, density, dim = 0, 3, 4
start = 1, 0
end = 0, 3
direction_preferences = '←→↑↓'
seed(for_seed)
grid = [[int(randrange(density) != 0) for _ in range(dim)]
        for _ in range(dim)]
print('Here is the grid that has been generated:')
display_grid()
print()
connect(start, end)

```

Here is the grid that has been generated:

```

-----
| * * * |
| * * * * |
| * * * |
| * * |
|-----

```

There is a path joining both points, of length 5:



```

for_seed, density, dim = 6, 2, 10
start = 4, 8
end = 6, 3
direction_preferences = '↓↑→←'
seed(for_seed)
grid = [[int(randrange(density) != 0) for _ in range(dim)]
        for _ in range(dim)]
print('Here is the grid that has been generated:')
display_grid()
print()
connect(start, end)

```

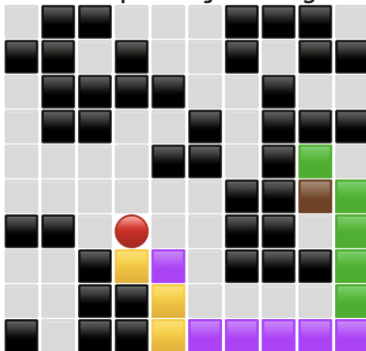
Here is the grid that has been generated:

```

-----
|  * *      * * * |
| * * * * * * * * |
|  * * * * *      |
|  * *      * * * * |
|          * * * * |
|          * * * * |
| * * * * * * * * |
|          * * * * |
|          * * * * |
| * * * * * * * * |
|-----

```

There is a path joining both points, of length 16:



```

for_seed, density, dim = 6, 2, 10
start = 4, 8
end = 6, 3
direction_preferences = '→↑←↓'
seed(for_seed)
grid = [[int(randrange(density) != 0) for _ in range(dim)]
        for _ in range(dim)]
print('Here is the grid that has been generated:')
display_grid()
print()
connect(start, end)

```

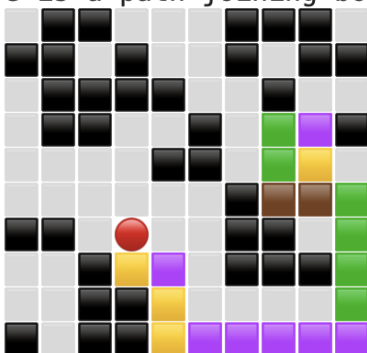
Here is the grid that has been generated:

```

-----
|  * *      * * * |
| * * * * * * * * |
|  * * * * *      |
|  * *      * * * * |
|          * * * * |
| * * * * * * * * |
|          * * * * |
|          * * * * * |
| * * * * * * * * |
|-----

```

There is a path joining both points, of length 20:



```

for_seed, density, dim = 6, 2, 10
start = 4, 8
end = 6, 3
direction_preferences = '→←↓↑'
seed(for_seed)
grid = [[int(randrange(density) != 0) for _ in range(dim)]
        for _ in range(dim)]
print('Here is the grid that has been generated:')
display_grid()
print()
connect(start, end)

```

Here is the grid that has been generated:

```

-----
|  * *      * * * |
| * * * * * * * * |
|  * * * * * * * |
|  * *      * * * * |
|      * * * * * * |
| * * * * * * * * |
|      * * * * * * |
|      * * * * * * |
| * * * * * * * * |
|-----

```

There is a path joining both points, of length 22:

