

Output for **robot-server.c**, **task_1b.py** and **test_task_1b.py**

Output for **robot-server.c**

```
[DEBUG] Self IP = 0.0.0.0
[DEBUG] Socket created
[DEBUG] Socket bound, port 3333
[DEBUG] Socket listening
[DEBUG] Socket accepted

[DEBUG] Received 172 bytes from 0.0.0.0:
[DEBUG] Data Received = #[(0, 0), (0, 1), (0, 2), (0, 3), (1, 3), (1, 4), (1, 5), (0, 5),
(0, 6), (1, 6), (2, 6), (2, 7), (3, 7), (4, 7), (5, 7), (5, 8), (6, 8), (6, 9), (7, 9), (8, 9), (9,
9)]#
[DEBUG] Transmitted 7 bytes: @(4,7)@

[DEBUG] Received 140 bytes from 0.0.0.0:
[DEBUG] Data Received = #[(3, 7), (2, 7), (2, 6), (1, 6), (0, 6), (0, 7), (0, 8), (1, 8),
(2, 8), (3, 8), (3, 9), (4, 9), (5, 9), (6, 9), (7, 9), (8, 9), (9, 9)]#
[DEBUG] Transmitted 7 bytes: @(1,8)@

[DEBUG] Received 284 bytes from 0.0.0.0:
[DEBUG] Data Received = #[(0, 8), (0, 7), (0, 6), (0, 5), (1, 5), (1, 4), (1, 3), (0, 3),
(0, 2), (0, 1), (0, 0), (1, 0), (2, 0), (3, 0), (4, 0), (5, 0), (6, 0), (7, 0), (7, 1), (8, 1), (8, 2),
(8, 3), (9, 3), (9, 4), (8, 4), (7, 4), (7, 5), (8, 5), (8, 6), (9, 6), (9, 7), (8, 7), (8, 8), (8, 9),
(9, 9)]#
[DEBUG] Transmitted 3 bytes: @$@

[DEBUG] Received 172 bytes from 0.0.0.0:
[DEBUG] Data Received = #[(0, 0), (0, 1), (0, 2), (0, 3), (1, 3), (1, 4), (1, 5), (0, 5),
(0, 6), (1, 6), (2, 6), (2, 7), (3, 7), (4, 7), (5, 7), (5, 8), (6, 8), (6, 9), (7, 9), (8, 9), (9,
9)]#
[DEBUG] Transmitted 7 bytes: @(4,7)@

[DEBUG] Received 140 bytes from 0.0.0.0:
[DEBUG] Data Received = #[(3, 7), (2, 7), (2, 6), (1, 6), (0, 6), (0, 7), (0, 8), (1, 8),
(2, 8), (3, 8), (3, 9), (4, 9), (5, 9), (6, 9), (7, 9), (8, 9), (9, 9)]#
[DEBUG] Transmitted 7 bytes: @(1,8)@

[DEBUG] Received 284 bytes from 0.0.0.0:
[DEBUG] Data Received = #[(0, 8), (0, 7), (0, 6), (0, 5), (1, 5), (1, 4), (1, 3), (0, 3),
(0, 2), (0, 1), (0, 0), (1, 0), (2, 0), (3, 0), (4, 0), (5, 0), (6, 0), (7, 0), (7, 1), (8, 1), (8, 2),
(8, 3), (9, 3), (9, 4), (8, 4), (7, 4), (7, 5), (8, 5), (8, 6), (9, 6), (9, 7), (8, 7), (8, 8), (8, 9),
(9, 9)]#
[DEBUG] Transmitted 3 bytes: @$@

[DEBUG] Received 220 bytes from 0.0.0.0:
[DEBUG] Data Received = #[(0, 0), (0, 1), (1, 1), (1, 0), (2, 0), (3, 0), (3, 1), (3, 2),
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(4, 2), (5, 2), (6, 2), (6, 3), (7, 3), (7, 4), (7, 5), (8, 5), (9, 5), (9, 6), (8, 6), (8, 7), (9, 7),
(9, 8), (8, 8), (7, 8), (7, 9), (8, 9), (9, 9)]#
[DEBUG] Transmitted 3 bytes: @\$@

[DEBUG] Received 220 bytes from 0.0.0.0:
[DEBUG] Data Received = #[(0, 0), (1, 0), (1, 1), (0, 1), (0, 2), (0, 3), (0, 4), (0, 5),
(0, 6), (0, 7), (1, 7), (2, 7), (2, 6), (2, 5), (2, 4), (3, 4), (4, 4), (4, 5), (5, 5), (6, 5), (7, 5),
(8, 5), (8, 6), (8, 7), (9, 7), (9, 8), (9, 9)]#
[DEBUG] Transmitted 7 bytes: @(4,5)@

[DEBUG] Received 268 bytes from 0.0.0.0:
[DEBUG] Data Received = #[(4, 4), (4, 3), (5, 3), (5, 2), (4, 2), (4, 1), (3, 1), (3, 2),
(3, 3), (2, 3), (2, 2), (2, 1), (2, 0), (3, 0), (4, 0), (5, 0), (6, 0), (7, 0), (7, 1), (7, 2), (7, 3),
(8, 3), (8, 2), (8, 1), (9, 1), (9, 2), (9, 3), (9, 4), (9, 5), (9, 6), (9, 7), (9, 8), (9, 9)]#
[DEBUG] Transmitted 3 bytes: @\$@

[DEBUG] Received 450 bytes from 0.0.0.0:
[DEBUG] Data Received = #[(0, 0), (0, 1), (1, 1), (1, 2), (0, 2), (0, 3), (0, 4), (0, 5),
(1, 5), (2, 5), (3, 5), (4, 5), (5, 5), (6, 5), (7, 5), (8, 5), (9, 5), (10, 5), (11, 5), (12, 5),
(12, 6), (13, 6), (13, 7), (14, 7), (14, 8), (14, 9), (13, 9), (13, 10), (12, 10), (12, 11), (13,
11), (13, 12), (13, 13), (13, 14), (12, 14), (12, 15), (12, 16), (11, 16), (11, 17), (12, 17),
(12, 18), (12, 19), (13, 19), (14, 19), (15, 19), (16, 19), (17, 19), (18, 19), (19, 19)]#
[DEBUG] Transmitted 7 bytes: @(8,5)@

[DEBUG] Received 371 bytes from 0.0.0.0:
[DEBUG] Data Received = #[(7, 5), (7, 4), (8, 4), (8, 3), (9, 3), (9, 4), (10, 4), (10, 5),
(11, 5), (12, 5), (12, 6), (13, 6), (13, 7), (14, 7), (14, 8), (14, 9), (13, 9), (13, 10), (12,
10), (12, 11), (13, 11), (13, 12), (13, 13), (13, 14), (12, 14), (12, 15), (12, 16), (11, 16),
(11, 17), (12, 17), (12, 18), (12, 19), (13, 19), (14, 19), (15, 19), (16, 19), (17, 19), (18,
19), (19, 19)]#
[DEBUG] Transmitted 8 bytes: @(14,7)@

[DEBUG] Received 639 bytes from 0.0.0.0:
[DEBUG] Data Received = #[(13, 7), (13, 6), (12, 6), (12, 5), (11, 5), (10, 5), (10, 4),
(11, 4), (11, 3), (11, 2), (11, 1), (12, 1), (12, 0), (13, 0), (14, 0), (15, 0), (16, 0), (16, 1),
(17, 1), (17, 2), (16, 2), (16, 3), (17, 3), (17, 4), (17, 5), (17, 6), (18, 6), (18, 7), (17, 7),
(17, 8), (17, 9), (18, 9), (18, 8), (19, 8), (19, 9), (19, 10), (18, 10), (18, 11), (18, 12),
(17, 12), (17, 11), (17, 10), (16, 10), (16, 11), (15, 11), (15, 10), (14, 10), (14, 11), (14,
12), (14, 13), (14, 14), (13, 14), (12, 14), (12, 15), (12, 16), (11, 16), (11, 17), (12, 17),
(12, 18), (12, 19), (13, 19), (14, 19), (15, 19), (16, 19), (17, 19), (18, 19), (19, 19)]#
[DEBUG] Transmitted 9 bytes: @(15,19)@

[DEBUG] Received 224 bytes from 0.0.0.0:
[DEBUG] Data Received = #[(14, 19), (14, 18), (14, 17), (15, 17), (15, 16), (15, 15),
(16, 15), (16, 14), (17, 14), (18, 14), (18, 15), (17, 15), (17, 16), (17, 17), (18, 17), (18,
16), (19, 16), (19, 17), (19, 18), (18, 18), (18, 19), (19, 19)]#
[DEBUG] Transmitted 3 bytes: @\$@

[DEBUG] Received 451 bytes from 0.0.0.0:
[DEBUG] Data Received = #[(0, 0), (1, 0), (2, 0), (2, 1), (3, 1), (3, 2), (2, 2), (2, 3), (1, 3), (1, 4), (1, 5), (1, 6), (1, 7), (2, 7), (2, 8), (2, 9), (2, 10), (2, 11), (3, 11), (4, 11), (4, 12), (5, 12), (6, 12), (7, 12), (7, 11), (8, 11), (9, 11), (10, 11), (11, 11), (11, 10), (12, 10), (13, 10), (14, 10), (15, 10), (16, 10), (17, 10), (17, 11), (17, 12), (18, 12), (18, 13), (19, 13), (19, 14), (19, 15), (18, 15), (18, 16), (19, 16), (19, 17), (19, 18), (19, 19)]#
[DEBUG] Transmitted 9 bytes: @(13,10)@

[DEBUG] Received 352 bytes from 0.0.0.0:
[DEBUG] Data Received = #[(12, 10), (12, 9), (12, 8), (12, 7), (12, 6), (12, 5), (12, 4), (12, 3), (13, 3), (13, 2), (14, 2), (15, 2), (15, 3), (15, 4), (16, 4), (16, 5), (16, 6), (16, 7), (17, 7), (18, 7), (18, 8), (19, 8), (19, 9), (19, 10), (19, 11), (18, 11), (18, 12), (18, 13), (19, 13), (19, 14), (19, 15), (18, 15), (18, 16), (19, 16), (19, 17), (19, 18), (19, 19)]#
[DEBUG] Transmitted 3 bytes: @\$@

[DEBUG] Connection closed
[DEBUG] Shutting down socket and restarting...
[DEBUG] Self IP = 0.0.0.0
[DEBUG] Socket created
[DEBUG] Socket bound, port 3333
[DEBUG] Socket listening

Output for task_1b.py

For maze00.jpg

Connecting to 127.0.0.1 Port 3333

Shortest Path = [(0, 0), (0, 1), (0, 2), (0, 3), (1, 3), (1, 4), (1, 5), (0, 5), (0, 6), (1, 6), (2, 6), (2, 7), (3, 7), (4, 7), (5, 7), (5, 8), (6, 8), (6, 9), (7, 9), (8, 9), (9, 9)]

Length of Path = 21

Sending 172 bytes of data to server = #[(0, 0), (0, 1), (0, 2), (0, 3), (1, 3), (1, 4), (1, 5), (0, 5), (0, 6), (1, 6), (2, 6), (2, 7), (3, 7), (4, 7), (5, 7), (5, 8), (6, 8), (6, 9), (7, 9), (8, 9), (9, 9)]#

Received 8 bytes of data from server = @(4,7)@

Dynamic Obstacle found at = (4,7)

New Shortest Path = [(3, 7), (2, 7), (2, 6), (1, 6), (0, 6), (0, 7), (0, 8), (1, 8), (2, 8), (3, 8), (3, 9), (4, 9), (5, 9), (6, 9), (7, 9), (8, 9), (9, 9)]

Length of new Path = 17

Sending 140 bytes of data to server = #[(3, 7), (2, 7), (2, 6), (1, 6), (0, 6), (0, 7), (0, 8), (1, 8), (2, 8), (3, 8), (3, 9), (4, 9), (5, 9), (6, 9), (7, 9), (8, 9), (9, 9)]#

Received 8 bytes of data from server = @(1,8)@

Dynamic Obstacle found at = (1,8)

New Shortest Path = [(0, 8), (0, 7), (0, 6), (0, 5), (1, 5), (1, 4), (1, 3), (0, 3), (0, 2), (0, 1), (0, 0), (1, 0), (2, 0), (3, 0), (4, 0), (5, 0), (6, 0), (7, 0), (7, 1), (8, 1), (8, 2), (8, 3), (9, 3), (9, 4), (8, 4), (7, 4), (7, 5), (8, 5), (8, 6), (9, 6), (9, 7), (8, 7), (8, 8), (8, 9), (9, 9)]

Length of new Path = 35

Sending 284 bytes of data to server = #[(0, 8), (0, 7), (0, 6), (0, 5), (1, 5), (1, 4), (1, 3), (0, 3), (0, 2), (0, 1), (0, 0), (1, 0), (2, 0), (3, 0), (4, 0), (5, 0), (6, 0), (7, 0), (7, 1), (8, 1), (8, 2), (8, 3), (9, 3), (9, 4), (8, 4), (7, 4), (7, 5), (8, 5), (8, 6), (9, 6), (9, 7), (8, 7), (8, 8), (8, 9), (9, 9)]#

Received 4 bytes of data from server = @\$@

No more Dynamic Obstacle for the image

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Want to run your script on all maze images ? ==>> "y" or "n": y

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For maze00.jpg

Shortest Path = [(0, 0), (0, 1), (0, 2), (0, 3), (1, 3), (1, 4), (1, 5), (0, 5), (0, 6), (1, 6), (2, 6), (2, 7), (3, 7), (4, 7), (5, 7), (5, 8), (6, 8), (6, 9), (7, 9), (8, 9), (9, 9)]

Length of Path = 21

Sending 172 bytes of data to server = #[(0, 0), (0, 1), (0, 2), (0, 3), (1, 3), (1, 4), (1, 5), (0, 5), (0, 6), (1, 6), (2, 6), (2, 7), (3, 7), (4, 7), (5, 7), (5, 8), (6, 8), (6, 9), (7, 9), (8, 9), (9, 9)]#

Received 8 bytes of data from server = @(4,7)@

Dynamic Obstacle found at = (4,7)

New Shortest Path = [(3, 7), (2, 7), (2, 6), (1, 6), (0, 6), (0, 7), (0, 8), (1, 8), (2, 8), (3, 8), (3, 9), (4, 9), (5, 9), (6, 9), (7, 9), (8, 9), (9, 9)]

Length of new Path = 17

Sending 140 bytes of data to server = #[(3, 7), (2, 7), (2, 6), (1, 6), (0, 6), (0, 7), (0, 8), (1, 8), (2, 8), (3, 8), (3, 9), (4, 9), (5, 9), (6, 9), (7, 9), (8, 9), (9, 9)]#

Received 8 bytes of data from server = @(1,8)@

Dynamic Obstacle found at = (1,8)

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New Shortest Path = [(0, 8), (0, 7), (0, 6), (0, 5), (1, 5), (1, 4), (1, 3), (0, 3), (0, 2), (0, 1), (0, 0), (1, 0), (2, 0), (3, 0), (4, 0), (5, 0), (6, 0), (7, 0), (7, 1), (8, 1), (8, 2), (8, 3), (9, 3), (9, 4), (8, 4), (7, 4), (7, 5), (8, 5), (8, 6), (9, 6), (9, 7), (8, 7), (8, 8), (8, 9), (9, 9)]

Length of new Path = 35

Sending 284 bytes of data to server = #[(0, 8), (0, 7), (0, 6), (0, 5), (1, 5), (1, 4), (1, 3), (0, 3), (0, 2), (0, 1), (0, 0), (1, 0), (2, 0), (3, 0), (4, 0), (5, 0), (6, 0), (7, 0), (7, 1), (8, 1), (8, 2), (8, 3), (9, 3), (9, 4), (8, 4), (7, 4), (7, 5), (8, 5), (8, 6), (9, 6), (9, 7), (8, 7), (8, 8), (8, 9), (9, 9)]#

Received 4 bytes of data from server = @\$@

No more Dynamic Obstacle for the image

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For maze01.jpg

Shortest Path = [(0, 0), (0, 1), (1, 1), (1, 0), (2, 0), (3, 0), (3, 1), (3, 2), (4, 2), (5, 2), (6, 2), (6, 3), (7, 3), (7, 4), (7, 5), (8, 5), (9, 5), (9, 6), (8, 6), (8, 7), (9, 7), (9, 8), (8, 8), (7, 8), (7, 9), (8, 9), (9, 9)]

Length of Path = 27

Sending 220 bytes of data to server = #[(0, 0), (0, 1), (1, 1), (1, 0), (2, 0), (3, 0), (3, 1), (3, 2), (4, 2), (5, 2), (6, 2), (6, 3), (7, 3), (7, 4), (7, 5), (8, 5), (9, 5), (9, 6), (8, 6), (8, 7), (9, 7), (9, 8), (8, 8), (7, 8), (7, 9), (8, 9), (9, 9)]#

Received 4 bytes of data from server = @\$@

No Dynamic Obstacle for the image

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For maze02.jpg

Shortest Path = [(0, 0), (1, 0), (1, 1), (0, 1), (0, 2), (0, 3), (0, 4), (0, 5), (0, 6), (0, 7), (1, 7), (2, 7), (2, 6), (2, 5), (2, 4), (3, 4), (4, 4), (4, 5), (5, 5), (6, 5), (7, 5), (8, 5), (8, 6), (8, 7), (9, 7), (9, 8), (9, 9)]

Length of Path = 27

Sending 220 bytes of data to server = #[(0, 0), (1, 0), (1, 1), (0, 1), (0, 2), (0, 3), (0, 4), (0, 5), (0, 6), (0, 7), (1, 7), (2, 7), (2, 6), (2, 5), (2, 4), (3, 4), (4, 4), (4, 5), (5, 5), (6, 5), (7, 5), (8, 5), (8, 6), (8, 7), (9, 7), (9, 8), (9, 9)]#

Received 8 bytes of data from server = @(4,5)@

Dynamic Obstacle found at = (4,5)

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New Shortest Path = [(4, 4), (4, 3), (5, 3), (5, 2), (4, 2), (4, 1), (3, 1), (3, 2), (3, 3), (2, 3), (2, 2), (2, 1), (2, 0), (3, 0), (4, 0), (5, 0), (6, 0), (7, 0), (7, 1), (7, 2), (7, 3), (8, 3), (8, 2), (8, 1), (9, 1), (9, 2), (9, 3), (9, 4), (9, 5), (9, 6), (9, 7), (9, 8), (9, 9)]

Length of new Path = 33

Sending 268 bytes of data to server = #[(4, 4), (4, 3), (5, 3), (5, 2), (4, 2), (4, 1), (3, 1), (3, 2), (3, 3), (2, 3), (2, 2), (2, 1), (2, 0), (3, 0), (4, 0), (5, 0), (6, 0), (7, 0), (7, 1), (7, 2), (7, 3), (8, 3), (8, 2), (8, 1), (9, 1), (9, 2), (9, 3), (9, 4), (9, 5), (9, 6), (9, 7), (9, 8), (9, 9)]#

Received 4 bytes of data from server = @\$@

No more Dynamic Obstacle for the image

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For maze03.jpg

Shortest Path = [(0, 0), (0, 1), (1, 1), (1, 2), (0, 2), (0, 3), (0, 4), (0, 5), (1, 5), (2, 5), (3, 5), (4, 5), (5, 5), (6, 5), (7, 5), (8, 5), (9, 5), (10, 5), (11, 5), (12, 5), (12, 6), (13, 6), (13, 7), (14, 7), (14, 8), (14, 9), (13, 9), (13, 10), (12, 10), (12, 11), (13, 11), (13, 12), (13, 13), (13, 14), (12, 14), (12, 15), (12, 16), (11, 16), (11, 17), (12, 17), (12, 18), (12, 19), (13, 19), (14, 19), (15, 19), (16, 19), (17, 19), (18, 19), (19, 19)]

Length of Path = 49

Sending 450 bytes of data to server = #[(0, 0), (0, 1), (1, 1), (1, 2), (0, 2), (0, 3), (0, 4), (0, 5), (1, 5), (2, 5), (3, 5), (4, 5), (5, 5), (6, 5), (7, 5), (8, 5), (9, 5), (10, 5), (11, 5), (12, 5), (12, 6), (13, 6), (13, 7), (14, 7), (14, 8), (14, 9), (13, 9), (13, 10), (12, 10), (12, 11), (13, 11), (13, 12), (13, 13), (13, 14), (12, 14), (12, 15), (12, 16), (11, 16), (11, 17), (12, 17), (12, 18), (12, 19), (13, 19), (14, 19), (15, 19), (16, 19), (17, 19), (18, 19), (19, 19)]#

Received 8 bytes of data from server = @(8,5)@

Dynamic Obstacle found at = (8,5)

New Shortest Path = [(7, 5), (7, 4), (8, 4), (8, 3), (9, 3), (9, 4), (10, 4), (10, 5), (11, 5), (12, 5), (12, 6), (13, 6), (13, 7), (14, 7), (14, 8), (14, 9), (13, 9), (13, 10), (12, 10), (12, 11), (13, 11), (13, 12), (13, 13), (13, 14), (12, 14), (12, 15), (12, 16), (11, 16), (11, 17), (12, 17), (12, 18), (12, 19), (13, 19), (14, 19), (15, 19), (16, 19), (17, 19), (18, 19), (19, 19)]

Length of new Path = 39

Sending 371 bytes of data to server = #[(7, 5), (7, 4), (8, 4), (8, 3), (9, 3), (9, 4), (10, 4), (10, 5), (11, 5), (12, 5), (12, 6), (13, 6), (13, 7), (14, 7), (14, 8), (14, 9), (13, 9), (13, 10), (12, 10), (12, 11), (13, 11), (13, 12), (13, 13), (13, 14), (12, 14), (12, 15), (12, 16), (11, 16), (11, 17), (12, 17), (12, 18), (12, 19), (13, 19), (14, 19), (15, 19), (16, 19), (17, 19), (18, 19), (19, 19)]#

Received 9 bytes of data from server = @(14,7)@

Dynamic Obstacle found at = (14,7)

New Shortest Path = [(13, 7), (13, 6), (12, 6), (12, 5), (11, 5), (10, 5), (10, 4), (11, 4), (11, 3), (11, 2), (11, 1), (12, 1), (12, 0), (13, 0), (14, 0), (15, 0), (16, 0), (16, 1), (17, 1), (17, 2), (16, 2), (16, 3), (17, 3), (17, 4), (17, 5), (17, 6), (18, 6), (18, 7), (17, 7), (17, 8), (17, 9), (18, 9), (18, 8), (19, 8), (19, 9), (19, 10), (18, 10), (18, 11), (18, 12), (17, 12), (17, 11), (17, 10), (16, 10), (16, 11), (15, 11), (15, 10), (14, 10), (14, 11), (14, 12), (14, 13), (14, 14), (13, 14), (12, 14), (12, 15), (12, 16), (11, 16), (11, 17), (12, 17), (12, 18), (12, 19), (13, 19), (14, 19), (15, 19), (16, 19), (17, 19), (18, 19), (19, 19)]

Length of new Path = 67

Sending 639 bytes of data to server = #[(13, 7), (13, 6), (12, 6), (12, 5), (11, 5), (10, 5), (10, 4), (11, 4), (11, 3), (11, 2), (11, 1), (12, 1), (12, 0), (13, 0), (14, 0), (15, 0), (16, 0), (16, 1), (17, 1), (17, 2), (16, 2), (16, 3), (17, 3), (17, 4), (17, 5), (17, 6), (18, 6), (18, 7), (17, 7), (17, 8), (17, 9), (18, 9), (18, 8), (19, 8), (19, 9), (19, 10), (18, 10), (18, 11), (18, 12), (17, 12), (17, 11), (17, 10), (16, 10), (16, 11), (15, 11), (15, 10), (14, 10), (14, 11), (14, 12), (14, 13), (14, 14), (13, 14), (12, 14), (12, 15), (12, 16), (11, 16), (11, 17), (12, 17), (12, 18), (12, 19), (13, 19), (14, 19), (15, 19), (16, 19), (17, 19), (18, 19), (19, 19)]#

Received 10 bytes of data from server = @(15,19)@

Dynamic Obstacle found at = (15,19)

New Shortest Path = [(14, 19), (14, 18), (14, 17), (15, 17), (15, 16), (15, 15), (16, 15), (16, 14), (17, 14), (18, 14), (18, 15), (17, 15), (17, 16), (17, 17), (18, 17), (18, 16), (19, 16), (19, 17), (19, 18), (18, 18), (18, 19), (19, 19)]

Length of new Path = 22

Sending 224 bytes of data to server = #[(14, 19), (14, 18), (14, 17), (15, 17), (15, 16), (15, 15), (16, 15), (16, 14), (17, 14), (18, 14), (18, 15), (17, 15), (17, 16), (17, 17), (18, 17), (18, 16), (19, 16), (19, 17),

(19, 18), (18, 18), (18, 19), (19, 19)]#

Received 4 bytes of data from server = @\$@

No more Dynamic Obstacle for the image

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For maze04.jpg

Shortest Path = [(0, 0), (1, 0), (2, 0), (2, 1), (3, 1), (3, 2), (2, 2), (2, 3), (1, 3), (1, 4), (1, 5), (1, 6), (1, 7), (2, 7), (2, 8), (2, 9), (2, 10), (2, 11), (3, 11), (4, 11), (4, 12), (5, 12), (6, 12), (7, 12), (7, 11), (8, 11), (9, 11), (10, 11), (11, 11), (11, 10), (12, 10), (13, 10), (14, 10), (15, 10), (16, 10), (17, 10), (17, 11), (17, 12), (18, 12), (18, 13), (19, 13), (19, 14), (19, 15), (18, 15), (18, 16), (19, 16), (19, 17), (19, 18), (19, 19)]

Length of Path = 49

Sending 451 bytes of data to server = #[(0, 0), (1, 0), (2, 0), (2, 1), (3, 1), (3, 2), (2, 2), (2, 3), (1, 3), (1, 4), (1, 5), (1, 6), (1, 7), (2, 7), (2, 8), (2, 9), (2, 10), (2, 11), (3, 11), (4, 11), (4, 12), (5, 12), (6, 12), (7, 12), (7, 11), (8, 11), (9, 11), (10, 11), (11, 11), (11, 10), (12, 10), (13, 10), (14, 10), (15, 10), (16, 10), (17, 10), (17, 11), (17, 12), (18, 12), (18, 13), (19, 13), (19, 14), (19, 15), (18, 15), (18, 16), (19, 16), (19, 17), (19, 18), (19, 19)]#

Received 10 bytes of data from server = @(13,10)@

Dynamic Obstacle found at = (13,10)

New Shortest Path = [(12, 10), (12, 9), (12, 8), (12, 7), (12, 6), (12, 5), (12, 4), (12, 3), (13, 3), (13, 2), (14, 2), (15, 2), (15, 3), (15, 4), (16, 4), (16, 5), (16, 6), (16, 7), (17, 7), (18, 7), (18, 8), (19, 8), (19, 9), (19, 10), (19, 11), (18, 11), (18, 12), (18, 13), (19, 13), (19, 14), (19, 15), (18, 15), (18, 16), (19, 16), (19, 17), (19, 18), (19, 19)]

Length of new Path = 37

Sending 352 bytes of data to server = #[(12, 10), (12, 9), (12, 8), (12, 7), (12, 6), (12, 5), (12, 4), (12, 3), (13, 3), (13, 2), (14, 2), (15, 2), (15, 3), (15, 4), (16, 4), (16, 5), (16, 6), (16, 7), (17, 7), (18, 7), (18, 8), (19, 8), (19, 9), (19, 10), (19, 11), (18, 11), (18, 12), (18, 13), (19, 13), (19, 14), (19, 15), (18, 15), (18, 16), (19, 16), (19, 17), (19, 18), (19, 19)]#

Received 4 bytes of data from server = @\$@

No more Dynamic Obstacle for the image

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Closing Socket

Output for test_task_1b.py

```
kalind-erts@erts:~/Desktop/RR Task 1B$ sudo python3 test_task_1b.py
-----
21:36:37 [PC to BOT] [127.0.0.1] to [127.0.0.1] > 0|#[(0, 0), (0, 1), (0, 2), (0, 3), (1, 3), (1, 4), (1, 5), (0, 5), (0, 6), (1, 6), (2, 6), (2, 7), (3, 7), (4, 7), (5, 7), (5, 8), (6, 8), (6, 9), (7, 9), (8, 9), (9, 9)]#
-----
21:36:37 [PC to BOT] [127.0.0.1] to [127.0.0.1] > 0|#[(0, 0), (0, 1), (0, 2), (0, 3), (1, 3), (1, 4), (1, 5), (0, 5), (0, 6), (1, 6), (2, 6), (2, 7), (3, 7), (4, 7), (5, 7), (5, 8), (6, 8), (6, 9), (7, 9), (8, 9), (9, 9)]#
-----
21:36:37 [BOT to PC] [127.0.0.1] to [127.0.0.1] > @ (4,7)@
-----
21:36:37 [BOT to PC] [127.0.0.1] to [127.0.0.1] > @ (4,7)@
-----
21:36:38 [PC to BOT] [127.0.0.1] to [127.0.0.1] > 0|#[(3, 7), (2, 7), (2, 6), (1, 6), (0, 6), (0, 7), (0, 8), (1, 8), (2, 8), (3, 8), (3, 9), (4, 9), (5, 9), (6, 9), (7, 9), (8, 9), (9, 9)]#
-----
21:36:38 [PC to BOT] [127.0.0.1] to [127.0.0.1] > 0|#[(3, 7), (2, 7), (2, 6), (1, 6), (0, 6), (0, 7), (0, 8), (1, 8), (2, 8), (3, 8), (3, 9), (4, 9), (5, 9), (6, 9), (7, 9), (8, 9), (9, 9)]#
-----
21:36:38 [BOT to PC] [127.0.0.1] to [127.0.0.1] > @ (1,8)@
-----
21:36:38 [BOT to PC] [127.0.0.1] to [127.0.0.1] > @ (1,8)@
-----
21:36:38 [PC to BOT] [127.0.0.1] to [127.0.0.1] > 0|#[(0, 8), (0, 7), (0, 6), (0, 5), (1, 5), (1, 4), (1, 3), (0, 3), (0, 2), (0, 1), (0, 0), (1, 0), (2, 0), (3, 0), (4, 0), (5, 0), (6, 0), (7, 0), (7, 1), (8, 1), (8, 2), (8, 3), (9, 3), (9, 4), (8, 4), (7, 4), (7, 5), (8, 5), (8, 6), (9, 6), (9, 7), (8, 7), (8, 8), (8, 9), (9, 9)]#
-----
21:36:38 [PC to BOT] [127.0.0.1] to [127.0.0.1] > 0|#[(0, 8), (0, 7), (0, 6), (0, 5), (1, 5), (1, 4), (1, 3), (0, 3), (0, 2), (0, 1), (0, 0), (1, 0), (2, 0), (3, 0), (4, 0), (5, 0), (6, 0), (7, 0), (7, 1), (8, 1), (8, 2), (8, 3), (9, 3), (9, 4), (8, 4), (7, 4), (7, 5), (8, 5), (8, 6), (9, 6), (9, 7), (8, 7), (8, 8), (8, 9), (9, 9)]#
-----
21:36:38 [BOT to PC] [127.0.0.1] to [127.0.0.1] > @$@
-----
21:36:38 [BOT to PC] [127.0.0.1] to [127.0.0.1] > @$@
^C
See ya !
kalind-erts@erts:~/Desktop/RR Task 1B$
```