

Test case 1

String str8 = "5 1 2 3 9 6 7 4 13 10 11 8 14 15 12 0";

Initial State

```

5      1      2      3
9      6      7      4
13     10     11     8
14     15     12     0

```

Search Strategy	Memory Usage(Byte)	Running time	Number of expanded nodes	Path to goal node
BFS	11487192	354	8105	LLLUUURRRDDD
DFS	717648	7044	550931	LLLUUURRRDDD
A* Heuristic 1	539744	25	19	LLLUUURRRDDD
A* Heuristic 2	565616	31	33	LLLUUURRRDDD

Test case 2

String str4 = "1 2 3 4 5 7 8 11 10 6 14 12 9 15 13 0";

Initial State

```

1      2      3      4
5      7      8      11
10     6      14     12
9      15     13     0

```

Search Strategy	Memory Usage(Byte)	Running time	Number of expanded nodes	Path to goal node
BFS	294674808	6901	225436	UULLDDRULLDRRURD
DFS	3908240	525061	59466895	UULLDDRULLDRRURD
A* Heuristic 1	1444080	83	512	UULLDDRULLDRRURD
A* Heuristic 2	894936	64	218	UULLDDRULLDRRURD

Test case 3

String str5 = "0 1 2 3 5 6 7 4 9 10 11 8 13 14 15 12";

Initial State

```

0      1      2      3
5      6      7      4
9      10     11     8
13     14     15     12

```

Search Strategy	Memory Usage(Byte)	Running time(ms)	Number of expanded nodes	Path to goal node
BFS	649920	36	99	RRRDDD
DFS	507696	71	552	RRRDDD
A* Heuristic 1	533328	24	15	RRRDDD
A* Heuristic 2	514312	24	6	RRRDDD

/*

Test case 4

String str9 = "1 2 3 4 5 6 7 8 0 9 10 11 13 14 15 12";

Initial State

1	2	3	4
5	6	7	8
0	9	10	11
13	14	15	12

Search Strategy	Memory Usage(Byte)	Running time	Number of expanded nodes	Path to goal node
BFS	635152	17	25	RRRD
DFS	596320	22	87	RRRD
A* Heuristic 1	613128	17	7	RRRD
A* Heuristic 2	624696	15	13	RRRD

*/