

# Experiment No.: 9

## Solve 8-puzzle problem using Prolog.

### Output:

```
SWI-Prolog (AMD64, Multi-threaded, version 9.2.6)
File Edit Settings Run Debug Help
Welcome to SWI-Prolog (threaded, 64 bits, version 9.2.6)
SWI-Prolog comes with ABSOLUTELY NO WARRANTY. This is free software.
Please run ?- license. for legal details.

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

?-
% c:/Users/nayan/Documents/Btech/3-4 year/7 sem/AI/Lab/Practicals/Practical-9/practical-9.pl compiled 0.00 sec, 31 clauses
?-
| ids.

start
6 1 3
4 * 5
7 2 0

left
6 1 3
* 4 5
7 2 0

up
* 1 3
6 4 5
7 2 0

right
1 * 3
6 4 5
7 2 0

down
1 4 3
6 * 5
7 2 0

right
1 4 3
6 5 *
7 2 0

down
1 4 3
6 5 0
7 2 *

left
1 4 3
6 5 0
7 * 2

up
1 4 3
* 5 0
6 7 2

right
1 4 3
5 * 0
6 7 2

right
1 4 3
5 0 *
6 7 2

down
1 4 3
5 0 2
6 7 *

left
1 4 3
5 0 2
6 * 7

left
1 4 3
5 0 2
* 6 7

up
1 4 3
* 0 2
5 6 7

right
1 4 3
0 * 2
5 6 7

right
1 4 3
0 2 *
5 6 7

up
1 4 *
0 2 3
5 6 7

left
1 * 4
0 2 3
5 6 7

left
* 1 4
0 2 3
5 6 7

down
0 1 4
* 2 3
5 6 7

right
0 1 4
2 * 3
5 6 7

right
0 1 4
2 3 *
5 6 7

up
0 1 *
2 3 4
5 6 7

left
0 * 1
2 3 4
5 6 7

down
0 1 4
* 2 3
5 6 7

right
0 1 4
2 * 3
5 6 7

right
0 1 4
2 3 *
5 6 7

up
0 1 *
2 3 4
5 6 7

left
0 * 1
2 3 4
5 6 7

left
* 0 1
2 3 4
5 6 7

moves = 26
true.
?-
```