





```
Setting stack size to 64000 bytes...
Welcome to the 8-Puzzle Game!
Please select an option:
1. Play game as a user
2. Finish the game with PC
3. Show the best score
4. Exit
> 1
1 4 3
8 7 2
_ 5 6
Enter your move (number-direction, e.g., 2-R): 8-D
1 4 3
_ 7 2
8 5 6
Enter your move (number-direction, e.g., 2-R): 7-L
1 4 3
7 _ 2
8 5 6
Enter your move (number-direction, e.g., 2-R): 2-L
1 4 3
7 2 _
8 5 6
Enter your move (number-direction, e.g., 2-R): 3-d
1 4 _
7 2 3
8 5 6
```

```
Enter your move (number-direction, e.g., 2-R): 4-R
1 _ 4
7 2 3
8 5 6
Enter your move (number-direction, e.g., 2-R): 2-U
1 2 4
7 _ 3
8 5 6
Enter your move (number-direction, e.g., 2-R): 5-U
1 2 4
7 5 3
8 _ 6
Enter your move (number-direction, e.g., 2-R): 8-R
1 2 4
7 5 3
_ 8 6
Enter your move (number-direction, e.g., 2-R): 7-D
1 2 4
_ 5 3
7 8 6
Enter your move (number-direction, e.g., 2-R): 1-D
_ 2 4
1 5 3
7 8 6
```

```
Enter your move (number-direction, e.g., 2-R): 2-L
2 _ 4
1 5 3
7 8 6
Enter your move (number-direction, e.g., 2-R): 4-L
2 4 _
1 5 3
7 8 6
Enter your move (number-direction, e.g., 2-R): 3-U
2 4 3
1 5
7 8 6
Enter your move (number-direction, e.g., 2-R): 5-R
2 4 3
1 _ 5
7 8 6
Enter your move (number-direction, e.g., 2-R): 4-D
2 _ 3
1 4 5
7 8 6
Enter your move (number-direction, e.g., 2-R): 2-R
_ 2 3
1 4 5
7 8 6
```

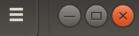
```
Enter your move (number-direction, e.g., 2-R): 1-U
1 2 3
_ 4 5
7 8 6
Enter your move (number-direction, e.g., 2-R): 4-L
1 2 3
4 _ 5
7 8 6
Enter your move (number-direction, e.g., 2-R): 5-L
1 2 3
4 5
7 8 6
Enter your move (number-direction, e.g., 2-R): 6-D
6-D is an illegal move!!! Make legal move!!!
1 2 3
4 5
7 8 6
Enter your move (number-direction, e.g., 2-R): 6-RR
Please enter the move in correct format!
1 2 3
4 5
7 8 6
Enter your move (number-direction, e.g., 2-R): 0-R
O-R is an illegal move!!! Make legal move!!!
1 2 3
4 5
7 8 6
```

```
Enter your move (number-direction, e.g., 2-R): 6-U
1 2 3
4 5 6
7 8 _
Congratulations! You have finished the game.
Total number of moves: 20
Your Score: 800
Welcome to the 8-Puzzle Game!
Please select an option:
1. Play game as a user
2. Finish the game with PC
3. Show the best score
4. Exit
```

```
> 3
The best score is 800...
Welcome to the 8-Puzzle Game!
Please select an option:
1. Play game as a user
2. Finish the game with PC
3. Show the best score
4. Exit
```







Move #0

1 4 3

8 7 2

Move #1

1 4 3

7 2 8 5 6

Move #2

1 4 3

8 5 6

Move #3

1 4 3

8 5 6

Move #4

 $\begin{array}{cccc} 1 & 4 & \\ 7 & 2 & \overline{3} \end{array}$

8 5 6

Move #5

8 5 6

Move #6

1 2 4

Move #7

State file where moves are recorded

```
1 2 4
7 5 3
8 Nove #8
1 2 3 6 #9
1 5 6 Move #10
2 3 6 Move #11
2 5 6 Move #11
2 5 6 Move #12
2 4 1 5 6
7 8 6
Move #13
2 4 3
1 5 _
7 8 6
Move #14
2 4 3
```

```
Computer Move: 3-R
1 5 2
4 _ 3
7 8 6
Computer Move: 5-D
1 _ 2
4 5 3
7 8 6
Computer Move: 2-L
1 2 _
4 5 3
7 8 6
Computer Move: 3-U
1 2 3
4 5 _
7 8 6
Computer Move: 6-U
1 2 3
4 5 6
7 8
Total number of computer moves: 113377
Welcome to the 8-Puzzle Game!
Please select an option:
1. Play game as a user
2. Finish the game with PC
3. Show the best score
4. Exit
> 2
```

```
Move #113371
\begin{array}{cccc} 1 & 5 & \\ 4 & 3 & \overline{2} \end{array}
Move #113372
1 5 2
4 3 <sub>-</sub> 7 8 6
Move #113373
1 5 2
Move #113374
Move #113375
\begin{array}{ccc} 1 & 2 & \\ 4 & 5 & \overline{3} \end{array}
Move #113376
1 2 3
4 5
Move #113377
1 2 3
4 5 6
7 8
```

Play as PC mode records in state.txt file

```
Computer Move: 5-U
1 2 3
4 8 5
7 6 _
Computer Move: 6-R
1 2 3
4 8 5
7 _ 6
Computer Move: 8-D
1 2 3
4 _ 5
7 8 6
Computer Move: 5-L
1 2 3
4 5 _
7 8 6
Computer Move: 6-U
1 2 3
4 5 6
7 8
Total number of computer moves: 316745
Welcome to the 8-Puzzle Game!
Please select an option:
1. Play game as a user
2. Finish the game with PC
3. Show the best score
4. Exit
```

```
Invalid Selection!
Welcome to the 8-Puzzle Game!
Please select an option:
1. Play game as a user
2. Finish the game with PC
3. Show the best score
4. Exit
> 4
Program terminated...
osmancan@osmancan-VirtualBox:~/Desktop/HW-8$
```

> 5







Open ▼

Updated best_score.txt file after player score