

Vacuum cleaner problem

"Left" if $j > 0$ else "stay"

Lecture 12

```
def print_floor(floor, row, col, direction):
    """ A function to print the GRID(row,
    col) represent the current vacuum
    cleaner position """
```

```
    print(f"The floor matrix is a below:")
    for r in range(len(floor)):
        for c in range(len(floor[r])):
            if r == row and c == col:
                print(f">{floor[r][c]}<",
                      end=" ")
            else:
                print(f"{floor[r][c]} ",
                      end=" ")
        print(end="\n")
    print(f"Direction: ")
    print(end="\n")
```

```
def main():
    floor = []
    m = int(input("Enter the number of rows:"))
    n = int(input("Enter the number of columns:"))
    print("Enter clean status for each cell
    (1-dirty, 0-clean)")
    for i in range(m):
        f = list(map(int, input(" ").split(" ")))
        floor.append(f)
    print()
    clean(floor)
```

~~main()~~

Output for two rooms

Enter the no of rows : 1

Enter the no of columns : 2

Enter clean status for each cell -
(1 - dirty, 0 - clean)

1 1

The floor matrix is as follows:

> 1 < 1
clean

The floor matrix is as follows:

> 0 < 1
Right

The floor matrix is as follows:

> 0 < 1
clean

The floor matrix is as follows:

> 0 < 1
stay

Output for three rooms

Enter the no of rows : 2

Enter the no of columns : 2

Enter the no of rows (1 - dirty, 0 - clean)

1 0

1 0

The floor matrix is as below:

$$\begin{matrix} > 1 < & 0 \\ 1 & 0 \end{matrix}$$

clean

The floor matrix is as below:

$$\begin{matrix} > 0 < & 0 \\ 1 & 0 \end{matrix}$$

right

The floor matrix is as below:

$$\begin{matrix} 0 & & > 0 < \\ 1 & & 0 \end{matrix}$$

stay

The floor matrix is as below:

$$\begin{matrix} 0 & & 0 \\ 1 & & > 0 < \end{matrix}$$

down

The floor matrix is as below:

$$\begin{matrix} 0 & & 0 \\ > 1 < & 0 \end{matrix}$$

clean

The floor matrix is as below:

$$\begin{matrix} 0 & & 0 \\ > 0 < & 0 \end{matrix}$$

stay.

[Signature]
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