```
#Aim: To write Python program for Vacuum Cleaner Problem


def clean(floor):
    i, j, row, col = 0, 0, len(floor), len(floor[0])
    for i in range(row):
        if(i%2 == 0):
            for j in range(col):
                if(floor[i][j] == 1):
                    print_F(floor, i, j)
                    floor[i][j] = 0
                print_F(floor, i, j)
        else:
            for j in range(col-1, -1, -1):
                if(floor[i][j] == 1):
                    print_F(floor, i, j)
                    floor[i][j] = 0
                print_F(floor, i, j)
def print_F(floor, row, col):
    """A function to print the GRID , (row, col) represent the
current vacuum cleaner position"""
    print("The Floor matrix is as 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(end = '\n')
def main():
    floor = []
    m = int(input("Enter the No. of Rows: "))
    n = int(input("Enter the No. 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)2
```

```
# Test 1
   # floor = [[1, 0, 0, 0],
   #          [0, 1, 0, 1],
   #          [1, 0, 1, 1]]
   # clean(floor)
main()


      main()
```

```
The Floor matrix is as below:
  0    0
  0   >1<

The Floor matrix is as below:
  0    0
  0   >0<

The Floor matrix is as below:
  0    0
 >0<   0


Process finished with exit code 0
```