

### Day – 3 : Arrays- III

**Problem 1:** Given an m\*n 2D matrix and an integer, write a program to find if the given integer exists in the matrix.

```
def search_matrix(matrix, target):  
    if not matrix or not matrix[0]:  
        return False  
  
    rows = len(matrix)  
    cols = len(matrix[0])  
  
    row = 0  
    col = cols - 1  
  
    while row < rows and col >= 0:  
        if matrix[row][col] == target:  
            return True  
        elif matrix[row][col] > target:  
            col -= 1  
        else:  
            row += 1  
  
    return False  
  
matrix1 = [  
    [1, 3, 5, 7],  
    [10, 11, 16, 20],  
    [23, 30, 34, 60]  
]  
  
target1 = 3  
print(search_matrix(matrix1, target1))
```

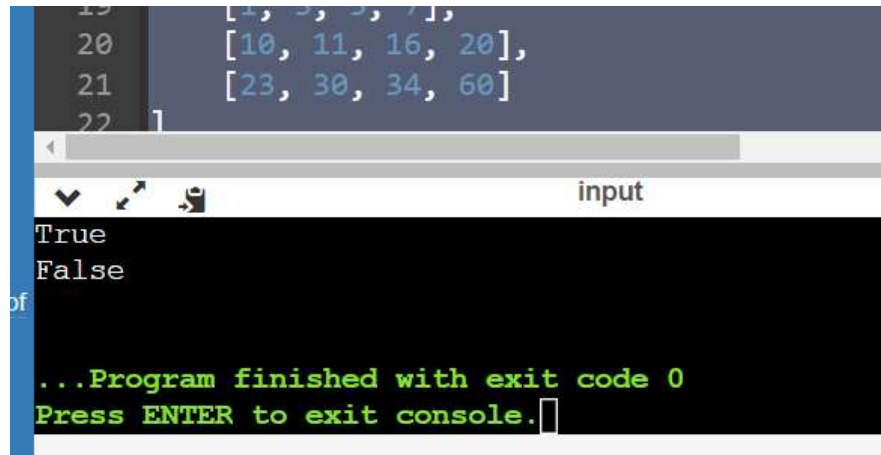
```
matrix2 = [  
    [1, 3, 5, 7],  
    [10, 11, 16, 20],
```

```
[23, 30, 34, 60]
```

```
]
```

```
target2 = 13
```

```
print(search_matrix(matrix2,target2))
```



The screenshot shows a code editor with a dark background. The code is as follows:

```
19 [1, 5, 5, 7],
20 [10, 11, 16, 20],
21 [23, 30, 34, 60]
22 ]
```

Below the code editor is a console window with a black background. It displays the output of the program:

```
True
False
```

At the bottom of the console, there is a green message:

```
...Program finished with exit code 0
Press ENTER to exit console.
```