

## Challenge 1: Staircase pattern

*# Quiz*

```
for i in range(1, 6):  
    print(i, end=' ')
```

1 2 3 4 5

*# start: 1*

*# end: 6*

*# \* \* \**

```
for i in range(3):  
    print(i)
```

0

1

2

```
for i in range(3):  
    print("*", end=" ")
```

\* \* \*

```
for i in range(1, 4):  
    print(i)
```

1

2

3

```
for i in range(1, 4):  
    print("*", end=" ")
```

\* \* \*

*# Final Code*

```
n = int(input())
```

*# outer loop for no of rows*

```
for i in range(1, n+1):  
    # no of cols for every row  
    for j in range(1, i+1):  
        # what do you want to print  
        print("*", end=" ")
```

```

        # Move to next row
        print()

5

*
* *
* * *
* * * *
* * * * *
```

```

# Quiz

i = 5
list(range(i + 1))
[0, 1, 2, 3, 4, 5]
list(range(0, i - 1))
[0, 1, 2, 3]
list(range(1, i))
[1, 2, 3, 4]
list(range(1, i + 1))
[1, 2, 3, 4, 5]
```

### Challenge 2: Staircase with numbers

```

n = int(input())

for i in range(1, n+1):
    for j in range(1, i+1):
        # print * when j == odd
        if j % 2 == 1:
            print("*", end=" ")
        # print j if j == even
        if j % 2 == 0:
```

```

        print(j, end=" ")

    # move to next row
    print()

5

*
* 2
* 2 *
* 2 * 4
* 2 * 4 *

```

```

n = int(input())

for i in range(1, n+1):
    for j in range(1, i+1):
        # print * when j == odd
        if j % 2 == 1:
            print(j, end=" ")
        # print j if j == even
        if j % 2 == 0:
            print(j, end=" ")

    # move to next row
    print()

5

1
1 2
1 2 3
1 2 3 4
1 2 3 4 5

```

```

# Quiz

N = 1

for i in range(1, N + 1):
    for j in range(i):

```

```

        print('*', end='')
    print()

*

for i in range(1, N):
    for j in range(i):
        print('*', end='')
    print()

N = int(input())
for i in range(1, N + 1):
    for j in range(1, i + 1):
        if j % 2 == 0:
            print('*', end='')
        else:
            print(j, end='')
    print()

5

1
1*
1*3
1*3*
1*3*5

```

### Challenge 3: Reverse staircase

```

n = int(input())

# no of row
for i in range(1, n+1):
    # columns
    for j in range(n + 1 - i):
        print("*", end=" ")
    print()

5

```

```

* * * * *
* * * *
* * *
* *
*

```

#### Challenge 4: Pattern with space

```

n = int(input())

# outer loop
for i in range(1, n + 1):
    # run the inner loop constant times
    for j in range(1, 5):
        # print stars
        if j == 1 or j == 4:
            print("*", end=" ")

        # print space
        else:
            print("_", end=" ")
    print()

```

5

```

*   _   _   *
* _ _ _ _ *
* _ _ _ _ *
* _ _ _ _ *
* _ _ _ _ *
* _ _ _ _ *

```

#### Challenge 5: Pattern with variable space

```

n = int(input())

# no of rows
for i in range(1, n+1):
    # columns for every row
    for j in range(1, n + 2):
        # print stars
        if j == 1 or j == n+1:
            print("*", end=" ")

```

```
        # print space
    else:
        print("_", end=" ")
print()
```

3

```
*   *
* _ _ *
* _ _ *
* _ _ *
```

*# Doubts*