In [1]:
```python
# WAP to check whether it's a leap year or not

year = int(input("ENTER THE YEAR: "))

if (year % 400 == 0) or (year % 4 == 0 and year % 100 != 0):
    print("It's a leap year")
else:
    print("Not a leap year")
```

```
It's a leap year
```

In [2]:
```python
# WAP to calculate grade

marks = int(input("Enter marks: "))

if marks >= 90:
    grade = "A"
elif marks >= 80:
    grade = "B+"
elif marks >= 70:
    grade = "B"
elif marks >= 60:
    grade = "C+"
elif marks >= 50:
    grade = "C"
elif marks >= 40:
    grade = "D"
else:
    grade = "F"

print(f"Marks: {marks} → Grade: {grade}")
```

```
Marks: 82 → Grade: B+
```

In [8]:
```python
# WAP to find factorial of a number

num = int(input("Enter number: "))
factorial = 1

if num < 0:
    print("Factorial does not exist for negative numbers")
elif num == 0:
    print("Factorial of 0 is 1")
else:
    for i in range(1, num + 1):
        factorial *= i
    print(f"Factorial of {num} is {factorial}")
```

```
Factorial of 5 is 120
```

In [12]:
```python
# WAP to print number pyramid pattern

n = int(input("Enter number of rows: "))

for i in range(1, n + 1):
    # Print spaces
    print(" " * (n - i), end="")

    # Print numbers from 1 to i
    for j in range(1, i + 1):
        print(j, end=" ")

    print()
```

```
     1
    1 2
   1 2 3
  1 2 3 4
 1 2 3 4 5
1 2 3 4 5 6
1 2 3 4 5 6 7
```

In [11]:
```python
# WAP to find GCD of two numbers (using loop)

a = int(input("Enter first number: "))
b = int(input("Enter second number: "))

while b != 0:
    a, b = b, a % b

print("GCD is:", a)
```

```
GCD is: 1
```