Problem – 2 : **Pascal's Triangle**

```
def pascals_triangle_element(r, c):
    if c == 1 or c == r:
        return 1
    else:
        return pascals_triangle_element(r - 1, c - 1) + pascals_triangle_element(r - 1, c)

def pascals_triangle_row(n):
    row = []
    for i in range(1, n + 1):
        row.append(pascals_triangle_element(n, i))
    return row

def pascals_triangle(n):
    triangle = []
    for i in range(1, n + 1):
        triangle.append(pascals_triangle_row(i))
    return triangle

# Variation 1: Print the element at position (r, c) in Pascal's triangle
r = 5
c = 3
element = pascals_triangle_element(r, c)
print("Result (Variation 1):", element)

# Variation 2: Print the n-th row of Pascal's triangle
n = 5
row = pascals_triangle_row(n)
print("Result (Variation 2):", ' '.join(str(x) for x in row))
```

```
# Variation 3: Print the first n rows of Pascal's triangle
n = 5
triangle = pascals_triangle(n)
print("Result (Variation 3):")
for row in triangle:
    print(' '.join(str(x) for x in row))
```