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"""1. Print a Pyramid Pattern of Stars:
Write a program to print a pyramid pattern using stars (*).

Input: An integer n representing the number of rows.
Output: Print the following pyramid pattern:

    *
   ***
  *****
 *******
*********  """

def print_pyramid(n):

  for i in range(n):
    # Print leading spaces
    print(" " * (n - i - 1), end="")
    # Print stars
    print("*" * (2 * i + 1))

# Get input from the user
n = int(input("Enter the number of rows: "))

# Print the pyramid
print_pyramid(n)
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Enter the number of rows: 10
         *
        ***
       *****
      *******
     *********
    ***********
   *************
  ***************
 *****************
*******************
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""" 2. Count Even and Odd Numbers
Write a program to count the even and odd numbers in a list.
Input: A list of integers.
Output: Print the count of even and odd numbers.

Input: [1, 2, 3, 4, 5, 6]
Output: Even numbers: 3, Odd numbers: 3 """

def count_even_odd(numbers):
  """Counts the even and odd numbers in a list.

  Args:
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    numbers: A list of integers.

  Returns:
    A tuple containing the count of even numbers and odd numbers.
  """
  even_count = 0
  odd_count = 0
  for number in numbers:
    if number % 2 == 0:
      even_count += 1
    else:
      odd_count += 1
  return even_count, odd_count

# Get input from the user
numbers_str = input("Enter a list of numbers separated by spaces: ")
numbers = [int(x) for x in numbers_str.split()]

# Count even and odd numbers
even_count, odd_count = count_even_odd(numbers)

# Print the results
print("Even numbers:", even_count)
print("Odd numbers:", odd_count)
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Enter a list of numbers separated by spaces: 1 3 4 5 6 7 8 9 0
Even numbers: 4
Odd numbers: 5
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"""3. Calculate the Sum of Even Numbers
Write a program to calculate the sum of all even numbers in a given
range.
Input: Two integers start and end.
Output: The sum of even numbers in the range [start, end].

Input: start = 1, end = 10
Output: 30 (2 + 4 + 6 + 8 + 10) """


def sum_of_even_numbers(start, end):

  total = 0
  for number in range(start, end + 1):
    if number % 2 == 0:
      total += number
  return total

# Get input from the user
start = int(input("Enter the starting number: "))
end = int(input("Enter the ending number: "))
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# Calculate the sum of even numbers
sum_even = sum_of_even_numbers(start, end)

# Print the result
print("Sum of even numbers:", sum_even)
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Enter the starting number: 4
Enter the ending number: 10
Sum of even numbers: 28
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