```
#reverse string
def reverse_string(x):
    if len(x)<=1:
        return x
    else:
        return reverse_string(x[1:])+x[0]
x=input("Enter the string: ")
print(reverse_string(x))


#palindrome
def check_palindrome(string):
    reversed_string=string[::-1]
    if string==reversed_string:
        print("It is palindrome. And the reversed string is ",reversed_string)
    else:
        print ("It is not palindrome")

string=input("Enter the string: ")
check_palindrome(string)


#3
def power(x, n):
    if n == 0:
        return 1
    return x * power(x, n - 1)
x = float(input("Enter the base (x): "))
n = int(input("Enter the exponent (n): "))
result = power(x, n)
print(f"{x}^{n} = {result}")



#4
def sum_of_digits(n):#1234
    if n == 0:
        return 0
    return n % 10 + sum_of_digits(n // 10)#4+(1+2+3)#call the sum_of_digits function recursively

number = int(input("Enter a number to find the sum of its digits: "))
result = sum_of_digits(number)
print(f"The sum of digits of {number} is {result}.")
```

```
#5
def sum_of_2d_array(arr):
    total_sum = 0
    for row in arr:  # Iterate through each row
        for elem in row:  # Iterate through each element in the row
            total_sum += elem  # Add the element to the total sum
    return total_sum


arr = [
    [1, 2, 3],
    [4, 5, 6],
    [7, 8, 9]
]


result = sum_of_2d_array(arr)
print("The sum of all elements in the 2D array is:", result)
```