

```
def reverse_string(s):
    if len(s) == 0:
        return s
    return s[-1] + reverse_string(s[:-1])
string = input("Enter a string to reverse: ")
print("Reversed string:", reverse_string(string))
```

```
def is_palindrome(s):
    if len(s) <= 1:
        return True
    if s[0] != s[-1]:
        return False
    return is_palindrome(s[1:-1])
string = input("Enter a string to check for palindrome: ")
print("Is palindrome:", is_palindrome(string))
```

```
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): "))
print(f"{x}^{n} =", power(x, n))
```

```
def sum_of_digits(n):
    if n == 0:
        return 0
    return n % 10 + sum_of_digits(n // 10)
number = int(input("Enter a number: "))
print("Sum of digits:", sum_of_digits(abs(number)))
```

```
def sum_2d_array(matrix):
    total = 0
    for row in matrix:
        total += sum(row)
    return total
rows = int(input("Enter the number of rows: "))
matrix = []
```

```
for i in range(rows):
    row = list(map(int, input(f"Enter row {i + 1} (space-separated):
").split()))
    matrix.append(row)
print("Sum of all elements:", sum_2d_array(matrix))
```

```
def transpose(matrix):
    return [[matrix[j][i] for j in range(len(matrix))] for i in
range(len(matrix[0]))]
rows = int(input("Enter the number of rows: "))
matrix = []
for i in range(rows):
    row = list(map(int, input(f"Enter row {i + 1} (space-separated):
").split()))
    matrix.append(row)
print("Transposed matrix:")
transposed = transpose(matrix)
for row in transposed:
    print(row)
```