

Untitled16.ipynb - Colab

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1.Adding of two numbers

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

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

print("The sum is:", a + b)

⌵

Show hidden output

[]

#2.Odd or even

num = int(input("Enter a number: "))

if num % 2 == 0:

print("Even")

else:

print("Odd")

⌵

Enter a number: 12

Even

✓

4s

[2]

#3. Factorial Calculation

import math

n = int(input("Enter a number: "))

print("Factorial is:", math.factorial(n))

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Enter a number: 4

Factorial is: 24

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[4]

#4. Fibonacci Sequence

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[2] #3. Factorial Calculation

import math

n = int(input("Enter a number: "))

print("Factorial is:", math.factorial(n))

Enter a number: 4

Factorial is: 24

3s

▶ #4. Fibonacci Sequence

n = int(input("Enter the number of terms: "))

fibonacci = []

a, b = 0, 1

for _ in range(n):

fibonacci.append(a)

a, b = b, a + b

print("Fibonacci sequence:", fibonacci)

Enter the number of terms: 22

Fibonacci sequence: [0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377, 610, 987, 1597, 2584, 4181, 6765, 10946]

[6] # 5. Reverse a String

string = input("Enter a string: ")

print("Reversed string:", string[::-1])

print("Reversed string:", string[::-1])

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[6]

Enter a string: abc
Reversed string: cba
Reversed string: cba

6. Palindrome Check

string = input("Enter a string: ")

if string == string[::-1]:
 print("True")
else:
 print("False")

if string == string[::-1]:
 print("True")
else:
 print("False")

Enter a string: hello
False
False

#7. Leap Year Check

year = int(input("Enter a year: "))

if (year % 4 == 0 and year % 100 != 0) or (year % 400 == 0):
 print(True)
else:
 print(False)

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[10]

Enter a year: 2025

False

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#8. Armstrong Number

n = int(input("Enter a number: "))

sum_of_powers = sum(int(digit) ** len(str(n)) for digit in str(n))

if sum_of_powers == n:

print("True")

else:

print("False")

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Enter a number: 10

False

▶

#9. Custom Encryption-Decryption System

def encrypt(text, key):

encrypted = ""

for char in text:

if char.isalpha():

shift = key % 26

new_char = chr((ord(char) - ord('a' if char.islower() else 'A') + shift) % 26 + ord('a' if char.islower() else 'A'))

encrypted += new_char

else:

encrypted += char

return encrypted

def decrypt(text, key):

return encrypt(text, -key)

message = input("Enter a message: ")

key = int(input("Enter a key (integer): "))

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```
        encrypted += char
    return encrypted

def decrypt(text, key):
    return encrypt(text, -key)

message = input("Enter a message: ")
key = int(input("Enter a key (integer): "))

encrypted_message = encrypt(message, key)
print("Encrypted message:", encrypted_message)

decrypted_message = decrypt(encrypted_message, key)
print("Decrypted message:", decrypted_message)
```

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```
Enter a message: hello word
Enter a key (integer): 3
Encrypted message: khood zrug
Decrypted message: hello word
```

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