EXPERIMENT 4(B)

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import sys
# 1.Factorial
num = int(input("Enter a number for factorial: "))
fact = 1

for i in range(1, num + 1):
    fact *= i

print("Factorial:", fact)

#Find weather the given number is armstrong number
num = int(input("Enter a number for armstrong check: "))
order = len(str(num))
sum_digits = 0

for digit in str(num):
    sum_digits += int(digit) ** order

if sum_digits == num:
    print("Armstrong Number")
else:
    print("Not an Armstrong Number")

#Print Fibonacci series up to given term.
limit = int(input("Enter the limit for last fib term: "))

a, b = 0, 1

for x in range(limit):
    if a > limit:
        break
    print(a, end=" ")
    a, b = b, a + b

#Write a program to find if given number is prime number or not.
n = int(input("\nEnter a number for prime: "))
is_prime = 1

if n < 2:
    is_prime = 0

for i in range(2, int(n ** 0.5) + 1):
    if n % i == 0:
        is_prime = 0
        break
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if is_prime == 1:
    print(f"{n} is a prime number.")
else:
    print(f"{n} is not a prime number.")

#Check whether given number is palindrome or not.
n = int(input("Enter a num to check palindrome: "))
temp = n
rev = 0

for i in str(n):
    rev = rev * 10 + int(i)

if temp==rev:
    print(f"{n} is a palindrome.")
else:
    print(f"{n} is not a palindrome.")

#sum of digits
n = int(input("Enter num to find sum of digits: "))
summ = 0

for digi in str(n):
    summ += int(digi)

print(f"Sum of digits of {n} is {summ}.")

#Count and print all numbers divisible by 5 or 7 between 1 to 100.
d5=0
d7=0
for i in range(1,101):
    if i%5==0:
        d5+=1
        print("Divisible by 5: ",i)
    elif i%7==0:
        d7+=1
        print("Divisible by 7: ",i)

print(f"{d5} numbers between 1 and 100 are divisible by 5")
print(f"{d7} numbers between 1 and 100 are divisible by 7")


#Convert all lower cases to upper case in a string.
str=input("Input string to convert lower case to upper case: ")
uc=str.upper()
print(f"{uc}\n")

#Print all prime numbers between 1 and 100.
print("\nAll prime numbers between 1 and 100 are: ")
for n in range(2, 101):
    is_prime = 1
    for i in range(2, int(n ** 0.5) + 1):
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        if n % i == 0:
            is_prime = 0
            break
    if is_prime==1:
        print(n)

#Print the table for a given number
table=int(input("\nEnter number to get a multiplication table: "))
for i in range(1,11):
    print(f"{table} x {i} = {table*i}")
```

Output

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kanishk@Kanishks-MacBook-Pro Python Codes % python3 -u "/Users/kanishk/Desktop/Python Codes/Exp4For.py"
Enter a number for factorial: 4
Factorial: 24
Enter a number for armstrong check: 23
Not an Armstrong Number
Enter the limit for last fib term: 4
0 1 1 2
Enter a number for prime: 121
121 is not a prime number.
Enter a num to check palindrome: 131
131 is a palindrome.
Enter num to find sum of digits: 123
Sum of digits of 123 is 6.
Divisible by 5:  5
Divisible by 7:  7
Divisible by 5:  10
Divisible by 7:  14
Divisible by 5:  15
Divisible by 5:  20
Divisible by 7:  21
Divisible by 5:  25
Divisible by 7:  28
Divisible by 5:  30
Divisible by 5:  35
Divisible by 5:  40
Divisible by 7:  42
Divisible by 5:  45
Divisible by 7:  49
Divisible by 5:  50
Divisible by 5:  55
Divisible by 7:  56
Divisible by 5:  60
Divisible by 7:  63
Divisible by 5:  65
Divisible by 5:  70
Divisible by 5:  75
Divisible by 7:  77
Divisible by 5:  80
Divisible by 7:  84
Divisible by 5:  85
Divisible by 5:  90
Divisible by 7:  91
Divisible by 5:  95
Divisible by 7:  98
Divisible by 5:  100
20 numbers between 1 and 100 are divisible by 5
12 numbers between 1 and 100 are divisible by 7
Input string to convert lower case to upper case: Python
PYTHON
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All prime numbers between 1 and 100 are:
2
3
5
7
11
13
17
19
23
29
31
37
41
43
47
53
59
61
67
71
73
79
83
89
97

Enter number to get a multiplication table: 24
24 x 1 = 24
24 x 2 = 48
24 x 3 = 72
24 x 4 = 96
24 x 5 = 120
24 x 6 = 144
24 x 7 = 168
24 x 8 = 192
24 x 9 = 216
24 x 10 = 240
kanishk@Kanishks-MacBook-Pro Python Codes %
```