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#Program 1 :- To find Armstrong number
num = int(input("Enter a number : "))
ans = 0
temp = num

while temp > 0:
    digit = temp % 10
    ans += digit ** 3
    temp //= 10

if num == ans:
    print("the number is an armstrong number ")
else:
    print("the number is NOT an armstrong number")

# *****OUTPUT*****
# Enter a number : 153
# the number is an armstrong number

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#Program 2 :- To print all the Prime numbers in an given interval
lower = int(input("Enter a starting number"))
upper = int(input("Enter a ending number "))

print("Prime numbers between", lower, "and", upper, "are:")
for num in range(lower, upper + 1):
    if num > 1:
        for i in range(2, num):
            if (num % i) == 0:
                break
        else:
            print(num)

# *****OUTPUT*****
# Enter a starting number100
# Enter a ending number 200
# Prime numbers between 100 and 200 are:
# 101
# 103
# 107
# 109
# 113
# 127
# 131
# 137
# 139
# 149
# 151
# 157
# 163
# 167
# 173
# 179
# 181
# 191
# 193

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# 197
# 199
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#program 3 :- To print if the numbers is prime or not
number = int(input("Enter any number: "))
if number == 1:
    print("1 is neither Prime nor Composite number")
if number > 1:
    for i in range(2, number):
        if (number % i) == 0:
            print(number, "is not a prime number")
            break
    else:
        print(number, "is a prime number")
else:
    print(number, "is not a prime number")

# *****OUTPUT*****
# Enter any number: 10
# 10 is not a prime number
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