```
#1. Find a factorial of given number.
x = int(input("Enter a number:"))
fac = 1
if x < 0:
  print("Does not exist for neagtive number")
elif x==0:
  print("The factorail of 0 is 1")

else:
  for i in range(1, x+1):
    fac = fac *i
  print(fac)
```

```
Enter a number:5
120
```

```
#2. Find whether the given number is Armstrong number
x = int(input("Enter a Number:"))
sum_cube = sum(int(digit)**len(str(x)) for digit in str(x))
if (sum_cube == x):
  print("Armstrong number")
else:
  print("Not Armstrong Number")
```

```
Enter a Number:153
Armstrong number
```

```
#3. Print Fibonacci series up to given term.
x = int(input("Enter Number of terms:"))
a=0
b=1
for i in range (x):
  print(a, end = " ")

  temp = a + b
  a = b
  b = temp
```

```
Enter Number of terms:8
0 1 1 2 3 5 8 13
```

```
#4. Write a program to find if given number is prime number or not.
# Get input from the user
num = int(input("Enter a number: "))

# Prime numbers must be greater than 1
if num > 1:
    # Check for factors
    for i in range(2, int(num**0.5) + 1):
        if (num % i) == 0:
            print(f"{num} is not a prime number.")
            break
    else:

        print(f"{num} is a prime number")
else:

    print(f"{num} is not a prime number.")
```

```
Enter a number: 7
7 is a prime number
```

```
#5. Check whether given number is palindrome or not.
num = int(input("Enter a number: "))
temp = num
reverse_num = 0

while temp > 0:
    digit = temp % 10
    reverse_num = (reverse_num * 10) + digit
    temp = temp // 10
```

```
if num == reverse_num:
    print(f"{num} is a palindrome.")
else:
    print(f"{num} is not a palindrome.")
```

```
Enter a number: 121
121 is a palindrome.
```

```
#6. Write a program to print sum of digits
sum = 0
x = int(input("Enter a Number:"))

for i  in range(1, x+1, 1):
  sum += i
print("The Total Sum is :",sum)
```

```
Enter a Number:5
The Total Sum is : 15
```

```
#7. Count and print all numbers divisible by 5 or 7 between 1 to 100.
count = 0

print("Numbers divisible by 5 or 7:")
for i in range(1, 101):
    if i % 5 == 0 or i % 7 == 0:
        print(i, end=" ")
        count += 1

print(f"\n\nTotal count: {count}")
```

```
Numbers divisible by 5 or 7:
5 7 10 14 15 20 21 25 28 30 35 40 42 45 49 50 55 56 60 63 65 70 75 77 80 84 85 90 91 95 98 100

Total count: 32
```

```
#8. Convert all lower cases to upper case in a string.
text = input("Enter a string: ")
result = text.upper()
print(f"Uppercase: {result}")
```

```
Enter a string: roushan
Uppercase: ROUSHAN
```

```
#9. Print the table for a given number:
#5 * 1 = 5
#5 * 2 = 10……..
x = int(input("Enter a number: "))

for i in range(1, 11, 1):
    mult = x * i
    print(f"{x} * {i} = {mult}")
```

```
Enter a number: 5
5 * 1 = 5
5 * 2 = 10
5 * 3 = 15
5 * 4 = 20
5 * 5 = 25
5 * 6 = 30
5 * 7 = 35
5 * 8 = 40
5 * 9 = 45
5 * 10 = 50
```

```
#10. Write a program to print the following pattern:
#123454321
#1234 *4321
#123 * * 321
#12 * * * 21
#1 * * * * 1
s = "12345"

for i in range(5, 0, -1):
    # Part 1: Take the first 'i' characters
    left = s[:i]

    # Part 2: Create the stars (Total width is 9)
    stars = "*" * (9 - (2 * i))
```

```
    # Part 3: Take the first 'i' characters and reverse them
    right = left[::-1]
    if i == 5:
        right = left[-2::-1]

    print(left + stars + right)
```

```
123454321
1234*4321
123***321
12*****21
1*******1
```

```
#11.Write a program to print the sum of the following series
# 1+ ½ + 1/3 + ¼ +_.+1/n
n = int(input("Enter n: "))
total_sum = 0

for i in range(1, n + 1):
    total_sum = total_sum + (1 / i)

print("The sum is:", total_sum)
```

```
Enter n: 4
The sum is: 2.083333333333333
```

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GITHUB LINK = https://github.com/vinxtluvvv/python-