Suman_Mondal_Assignment_2

May 19, 2023

[1]:
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# Q01. Write a program in Python to display the multiplication table of a given integer

num = int (input ("Enter integer number to display table: "))

for i in range (1, 11):
    print (num, 'x', i, '=', num*i)
```

```
Enter integer number to display table: 13
13 x 1 = 13
13 x 2 = 26
13 x 3 = 39
13 x 4 = 52
13 x 5 = 65
13 x 6 = 78
13 x 7 = 91
13 x 8 = 104
13 x 9 = 117
13 x 10 = 130
```

[6]:
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# Q02. Write a Python program to calculate the factorial of a given number

def factorial (num):
    if num == 1:
        return  1
    else:
        return (num * factorial (num - 1))

x = int (input ("Enter integer num to calculate factorial: "))

print ("Factorial of ", x , "is ", factorial(x))
```

```
Enter integer num to calculate factorial: 6
Factorial of  6 is  720
```

[1]:
```
# Q03. Write a Python program to check whether a given number is a perfect number or not
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n = int(input("Enter any number: "))
sum1 = 0
for i in range(1, n):
    if(n % i == 0):
        sum1 = sum1 + i
if (sum1 == n):
    print("The number is a Perfect number!")
else:
    print("The number is not a Perfect number!")
```

```
Enter any number: 6
The number is a Perfect number!
```

[3]:
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# Q04. Write a Python program to check whether a given number is an Armstrong␣
 ↪number or not

num = int(input("Enter any positive number: "))

order = len(str(num))

sum = 0

temp = num
while temp > 0:
   digit = temp % 10
   sum += digit ** order
   temp //= 10

if num == sum:
   print(num,"is an Armstrong number")
else:
   print(num,"is not an Armstrong number")
```

```
Enter any positive number: 1634
1634 is an Armstrong number
```

[4]:
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#Q05. Write a Python program to determine whether a given number is prime or not


num = int(input("Enter any positive number: "))

flag = False

if num == 1:
    print(num, "is not a prime number")
elif num > 1:
    for i in range(2, num):
```

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        if (num % i) == 0:
            flag = True
            break


    if flag:
        print(num, "is not a prime number")
    else:
        print(num, "is a prime number")
```

```
Enter any positive number: 29
29 is a prime number
```

[5]:
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# Q06. Write a program in Python to display the first n terms of Fibonacci series

nterms = int(input("How many terms? "))

n1, n2 = 0, 1
count = 0

if nterms <= 0:
   print("Please enter a positive integer")

elif nterms == 1:
   print("Fibonacci sequence upto",nterms,":")
   print(n1)

else:
   print("Fibonacci sequence:")
   while count < nterms:
       print(n1)
       nth = n1 + n2
       n1 = n2
       n2 = nth
       count += 1
```

```
How many terms? 6
Fibonacci sequence:
0
1
1
2
3
5
```

[7]:
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#Q07. Write a program in Python find the sum of the following series-
# 1+(1+2)+(1+2+3)+(1+2+3+4)+.....

def sumOfSeries(n):
    return (n * (n + 1) * (2 * n + 4)) / 12;

if __name__ == '__main__':
    n = 10
    print(sumOfSeries(n))
```

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220.0
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[8]:
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#Q08. Write a program in Python to check whether a number is a palindrome or not

my_str = 'aIbohPhoBiA'

my_str = my_str.casefold()

rev_str = reversed(my_str)

if list(my_str) == list(rev_str):
   print("The string is a palindrome.")
else:
   print("The string is not a palindrome.")
```

```
The string is a palindrome.
```

[12]:
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#Q09.Write a program in Python to print the following patterns
#  i)    *
#       ***
#      *****

rows = 3

for i in range(1, rows + 1):
    print(" " * (rows - i), end="")
    print("*" * (2 * i - 1))
```

```
  *
 ***
*****
```

[13]:
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#1
#2 3
#4 5 6
#7 8 9 10

rows = 4
```

```
num = 1

for i in range(1, rows + 1):
    for j in range(1, i + 1):
        print(num, end=" ")
        num += 1
    print()
```

```
1
2 3
4 5 6
7 8 9 10
```

[ ]: