Programs

September 25, 2023

1 count no of digits

[6]:
```
n=int(input("Enter the number "))
count=0
while(n>0):
    count+=1
    n=n//10
print("no of Digits are ",count)
```

```
Enter the number 56
no of Digits are  2
```

2 Leap Year

[25]:
```
year=int(input("Enter a year:")) #3636 3600 1000 1300 4004
if(year % 400==0):
    print("{0} is a leap year".format(year))
elif(year % 4==0) and (year % 100 !=0):
    print("{0} is a leap year".format(year))
else:
    print("{0} is not a leap year".format(year))
```

```
Enter a year:4004
4004 is a leap year
```

3 Fibonacci Series

[4]:
```
n=int(input("Enter a no :"))
a=0;b=1
for i in range(n):
    print(a)
    c=a+b
    a=b
    b=c
```

```
Enter a no :5
0
1
1
2
3
```

4 Greatest Num using Ternary Operator

[15]:
```
a=int(input("Enter a :"))
b=int(input("Enter b :"))
c=int(input("Enter c :"))
d= a if(a>b and a>c) else b if (b>a and b>c) else c
print(d)
```

```
Enter a :10
Enter b :3
Enter c :4
10
```

5 X cross Pattern

[29]:
```
n=int(input("enter the number:"))

for i in range(0,n):
    for j in range(0,n):
        if(i==j or i+j==n-1):
            print("*",end=" ")
        else:
            print(" ",end=" ")
    print()
```

```
enter the number:7
*           *
  *       *
    *   *
      *
    *   *
  *       *
*           *
```

6 Date Time

[41]:
```
import datetime
print(datetime.datetime.now())
print(datetime.date(2020,10,30))
```

```
2023-07-17 09:31:59.458164
2020-10-30
```

[40]:
```
from datetime import date
date=date.today()
print(date)
```

```
2023-07-17
```

7 Calendar of the month and year

[48]:
```
import calendar
yy=int(input("enter year "))
mm=int(input("enter month "))
print(calendar.month(yy,mm))
```

```
enter year 2023
enter month 7
     July 2023
Mo Tu We Th Fr Sa Su
                1  2
 3  4  5  6  7  8  9
10 11 12 13 14 15 16
17 18 19 20 21 22 23
24 25 26 27 28 29 30
31
```

[62]:
```
l=[1,2,3,4,5]
print(l[slice(5)])
print(l[slice(2,5)])
print(l[slice(2)])
print(l[slice(2,4)])
print(l[slice(0,5,2)])
print(l[slice(1,4,2)])
print(l[slice(-1,-6,-2)])
```

```
[1, 2, 3, 4, 5]
[3, 4, 5]
[1, 2]
```

```
[3, 4]
[1, 3, 5]
[2, 4]
[5, 3, 1]
```

8 Check if a list is empty

[66]:
```
a=[]
#using not
if not a:
    print("Empty List")

#using len()
if not len(a):
    print("Empty List")

#comparing with []
if a==[]:
    print("Empty List")
```

```
Empty List
Empty List
Empty List
```

9 Randomly select any one from List

[78]:
```
import random
a=[2,23.32,"anto"]
print(random.choice(a))
```

```
2
```

[85]:
```
import secrets
a=[2,23.32,"anto"]
print(secrets.choice(a))
```

```
23.32
```

10 Quadratic Equation

[3]:
```
import cmath
a=int(input("Enter a "))
b=int(input("Enter b "))
c=int(input("Enter c "))
d=(b**2)-(4*a*c)
s1=(-b)-(cmath.sqrt(d))/(2*a)
s2=(-b)+(cmath.sqrt(d))/(2*a)
print("the Solutions are {0} and {1}".format(s1,s2))
```

```
Enter a 1
Enter b 5
Enter c 6
the Solutions are (-5.5+0j) and (-4.5+0j)
```

11 Count occurences of a Character in a String

[10]:
```
a="Python Programming"
c=0
b=input("Enter a Character:")
for i in a:
    if i==b:
        c+=1
print(c)
```

```
Enter a Character:m
2
```

[15]:
```
a=input("Enter a String:")
c=0
b=input("Enter a Character:")
print(a.count(b))
```

```
Enter a String:Python Programming
Enter a Character:P
2
```

12 Convert 2 Lists into Dict

[19]:
```
a=[1,2,3]
b=['py','c','c++']
c=dict(zip(a,b))
print(c)
```

```
{1: 'py', 2: 'c', 3: 'c++'}
```

13 Capitalize the First Char of a Sting

[25]:
```
a="i love python programming"
a=a[0].upper()+a[1:]
print(a)
```

```
I love python programming
```

[26]:
```
a="i love python programming"
print(a.capitalize())
```

```
I love python programming
```

14 Remove Whitespaces from a String

[ ]:
```
a="  python programming   "
print(a.strip())
```

15 Calculator by using func()

[ ]:
```
def add(x,y):
    return x+y
def sub(x,y):
    return x-y
def mul(x,y):
    return x*y
def div(x,y):
    return x/y


print('''Enter Operation
        1.Add
        2.Sub
        3.Mul
        4.Div''')
while(True):
    choice=int(input("Enter choice 1/2/3/4 "))
    if choice in (1,2,3,4):
        try:
            a=float(input("Enter a first number:"))
```

```
            b=float(input("Enter a second number:"))
        except c:
            print("Invalid code")
            continue
```

```
Enter Operation
        1.Add
        2.Sub
        3.Mul
        4.Div
```

[ ]: