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Python Programming - 2101CS405

Lab - 10 ¶

Modules

A

01) WAP to create Calculator module which defines functions like add, sub,mul and div. create another file that uses the Calculator module.

In [1]:
```
import calc
calc.add(5,2)
calc.sub(5,2)
calc.mul(5,2)
calc.div(5,2)
```

```
7
3
10
2.5
```

02) WAP to Pick a random character from a given String.

In [3]:
```
import random
name = "abcdef"
print(random.choice(name))
```

```
b
```

03) WAP to Pick a random element from a given list.

In [4]:
```
l1 = [1,2,3,4,55]
print(random.choice(l1))
```

```
4
```

04) WAP to demonstrate the use of the math module.

In [1]:
```
import math
print("PI:",math.pi)
print("E:",math.e)
print("TAU:",math.tau)
print("ceil:",math.ceil(3.2))
print("floor:",math.floor(3.2))
print("Factorial:",math.factorial(5))
print("GCD:",math.gcd(30,15))
print("LCM:",math.lcm(30,15))
print("Absolute(fbas):",math.fabs(-8))
print("Exponatial:",math.exp(2))
print("POWER:",math.pow(2,3))
print("log2:",math.log2(4))
print("LOg10:",math.log10(100))
print("Log:",math.log(4))
print("Radians:",math.radians(90))
print("Deggres:",math.degrees(1.5707963267948966))
print("GAAMA(n-1factorial):",math.gamma(5))
```

```
PI: 3.141592653589793
E: 2.718281828459045
TAU: 6.283185307179586
ceil: 4
floor: 3
Factorial: 120
GCD: 15
LCM: 30
Absolute(fbas): 8.0
Exponatial: 7.38905609893065
POWER: 8.0
log2: 2.0
LOg10: 2.0
Log: 1.3862943611198906
Radians: 1.5707963267948966
Deggres: 90.0
GAAMA(n-1factorial): 24.0
```

05) WAP to demonstrate the use of date time module.

In [3]:
```
import datetime
d = datetime.date(2023,2,4)
print(d)

today = datetime.date.today()
print("Date",today)
print("Year",today.year)
print("Month",today.month)
print("Day",today.day)


t = datetime.time(10,13,5,1)
print("Time:",t)
print("Hour:",t.hour)
print("MNIUt:",t.minute)
print("Sec:",t.second)
print("MIcro:",t.microsecond)


dt = datetime.datetime(2003,12,31,8,15,20,2)
print("Date Time:",dt)
print("NOw:",datetime.datetime.now())

now = datetime.datetime.now()
newNow = now+datetime.timedelta(days=2)
print(newNow)
print(now.strftime("%A,%a,%m,%M,%Y,%y"))
```

```
2023-02-04
Date 2023-02-15
Year 2023
Month 2
Day 15
Time: 10:13:05.000001
Hour: 10
MNIUt: 13
Sec: 5
MIcro: 1
Date Time: 2003-12-31 08:15:20.000002
NOw: 2023-02-15 10:00:45.899245
2023-02-17 10:00:45.899245
Wednesday,Wed,02,00,2023,23
```

B

01) WAP to Roll dice in such a way that every time you get the same number.

In [21]:
```
import random
random.seed(1)
print(random.randint(1,6))
```

```
2
```

02) WAP to generate 3 random integers between 100 and 999 which is divisible by 5.

In [40]:
```
for i in range (0,3):
    print(random.randrange(100,999,5))
```

```
380
685
470
```

03) WAP to generate 100 random lottery tickets and pick two lucky tickets from it as a winner.

In [53]:
```
l1 = []
for i in range (0,101):
    l1.append(random.randrange(1,1563252563255))
# print(l1)
print(random.choice(l1))
print(random.choice(l1))
```

```
800899822249
1421952268549
```

04) WAP to print current date and time in Python.

In [56]:
```
import datetime
print(datetime.datetime.now())
```

```
2023-02-15 10:15:42.925690
```

05) Subtract a week (7 days) from a given date in Python.

In [63]:
```
now = datetime.datetime.now()
newNow = now-datetime.timedelta(days=7)
print(newNow)
```

```
2023-02-08 10:17:23.222965
```

06) WAP to Calculate number of days between two given dates.

In [69]:
```
dt1 = datetime.datetime(2003,12,31,8,15,20,2)
dt2 = datetime.datetime.now()
print(dt2 - dt1)
```

```
6986 days, 2:05:16.017769
```

07) WAP to Find the day of the week of a given date.

In [76]:
```
dt3 = datetime.datetime(2003,12,16)
print(dt3.strftime("%A"))
```

```
Tuesday
```

In [ ]:
```

```