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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 [15]:
```
# import calci

# print(calci.add(5,6))
# print(calci.sub(20,10))
# print(calci.multi(5,3))
# print(calci.div(10,3))

from calci import add
from calci import sub
from calci import multi
from calci import div

print(add(5,6))
print(sub(20,10))
print(multi(5,3))
print(div(10,3))
```

```
11
10
15
3.3333333333333335
```

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

In [20]:
```
import random

str = input("Enter a string : ")
l = list(str)
print(random.choice(l))
```

```
Enter a string : dipesh
h
```

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

In [22]:
```
n = int(input("Enter n : "))
list = []
for i in range(1,n+1):
    a = int(input("Enter element : "))
    list.append(a)
print(random.choice(list))
```

```
Enter n : 5
Enter element : 10
Enter element : 23
Enter element : 25
Enter element : 46
Enter element : 20
25
```

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

In [27]:
```
import math
x = int(input("Enter x : "))
y = int(input("Enter y : "))
print(math.pow(x,y))
print(math.sqrt(x))
print(math.floor(5.6))
print(math.ceil(6.3))
print(math.gcd(x,y))
print(math.lcm(x,y))
print(math.factorial(x))
print(math.sin(y))
print(math.cos(x))
print(math.tan(y))
```

```
Enter x : 8
Enter y : 3
512.0
2.8284271247461903
5
7
1
24
40320
0.1411200080598672
-0.14550003380861354
-0.1425465430742778
```

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

In [44]:
```
import datetime
print(datetime.date.today())
print(datetime.date(2010,2,3))
print(datetime.date.today().year)
print(datetime.date.today().month)
print(datetime.date.today().day)
print(datetime.datetime.now())
print(datetime.datetime.now().hour)
print(datetime.datetime.now().minute)
print(datetime.datetime.now().second)
print(datetime.time(10,5,2,6))
```

```
2023-02-17
2010-02-03
2023
2
17
2023-02-17 10:46:40.048236
10
46
40
10:05:02.000006
```

B

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

In [51]:
```
list = [1,2,3,4,5,6]
n = int(input("Enter number which you want on dice : "))
random.seed(n)
random.choice(list)
```

```
Enter number which you want on dice : 4
```

Out[51]:
```
2
```

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

In [55]:
```
for i in range(3) :
    print(random.randrange(100,1000,5))
```

```
800
470
175
```

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

In [59]:
```
list = []

for i in range(1,101) :
    n = random.randint(1,100)
    list.append(n)

print(random.sample(list,2))
```

```
[52, 80]
```

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

In [60]:
```
print(datetime.datetime.now())
```

```
2023-02-17 11:07:44.733143
```

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

In [63]:
```
d1 = datetime.datetime.now()
d2 = d1 + datetime.timedelta(weeks = -1)
print(d2)
```

```
2023-02-10 11:10:38.907906
```

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

In [64]:
```
dt1 = int(input("Enter first date : "))
dt2 = int(input("Enter second date : "))
print("Diff : ",math.fabs(dt1 - dt2))
```

```
Enter first date : 25
Enter second date : 3
Diff :  22.0
```

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

In [67]:
```
date = datetime.date(2004,4,17)
print(date.strftime('%A'))
```

```
Saturday
```

In [ ]:
```

```