pwz3spkrp

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Python Programming - 2301CS404

Lab - 11

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1 Modules

1.0.1 01) WAP to create Calculator module which defines functions like add, sub,mul and div.

1.0.2 Create another .py file that uses the functions available in Calculator module.

[7]:
```
import ABC as calc

a = int(input("Enter first number: "))
b = int(input("Enter second number: "))
opr = input("Enter operation: ")

match opr:
    case '+': print(calc.add_numbers(a,b))
    case '-': print(calc.subs_numbers(a,b))
    case '*': print(calc.multiply(a,b))
    case '/': print(calc.div_numbers(a,b))
```

```
Enter first number:  1
Enter second number:  2
Enter operation:  /
0.5
```

1.0.3 02) WAP to pick a random character from a given String.

[11]:
```
import random

ran_str = 'asbfksdjbfcef'

char = random.choice(ran_str)
print(char)
```

```
s
```

1.0.4 03) WAP to pick a random element from a given list.

[13]:
```
li = [1,2,3,4,5]

print(random.choice(li))
```

```
3
```

1.0.5 04) WAP to roll a dice in such a way that every time you get the same number.

[43]:
```
dice = [1,2,3,4,5,6]

random.seed(2)
num = random.choice(dice)

print(num)
```

```
1
```

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

[60]:
```
l1 = [random.randrange(100,999,5) for i in range(3)]

print(l1)
```

```
[740, 440, 145]
```

1.0.7 06) WAP to generate 100 random lottery tickets and pick two lucky tickets from it and announce them as Winner and Runner up respectively.

[98]:
```
ticket = [int(random.randrange(1,100)) for i in range(100)]

# print(ticket)
num1 = random.choice(ticket)
num2 = random.choice(ticket)

print(num1, num2)
```

```
96 52
```

1.0.8 07) WAP to print current date and time in Python.

[108]:
```
import datetime
print('current date and time: ',datetime.datetime.now())
```

```
current date and time:  2025-02-10 10:34:50.851965
```

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

[124]:
```
current = datetime.datetime.now()

diff = current - datetime.timedelta(days = 7)
print(diff)
```

```
2025-02-03 10:37:09.419393
```

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

[140]:
```
date1 = input('Enter first date: ')
date2 = input('Enter second date: ')

d1 = datetime.datetime.strptime(date1 , "%Y-%m-%d")
d2 = datetime.datetime.strptime(date2, "%Y-%m-%d")

print(d2 - d1)
```

```
Enter first date:  2005-12-31
Enter second date:  2006-12-31
365 days, 0:00:00
```

1.0.11 10) WAP to Find the day of the week of a given date.(i.e. wether it is sunday/monday/tuesday/etc.)

[158]:
```
today = datetime.datetime.now()
print(today.strftime('%A'))
```

```
Monday
```

1.0.12 11) WAP to demonstrate the use of date time module.

[186]:
```
current = datetime.datetime.now()
print("Month: ",current.month)
print("Year: ",current.year)
print("Hour: ",current.hour)
print("Minute: ",current.minute)
print("Second: ",current.second)
print(datetime.datetime.now().time())
today = datetime.datetime.now()
print(today.strftime('%Y-%m-%d'))
```

```
Month:  2
Year:  2025
Hour:  11
Minute:  7
Second:  34
```

```
11:07:34.208042
2025-02-10
```

1.0.13 12) WAP to demonstrate the use of the math module.

[194]:
```
import math

print("Exp: ",math.e)
print("PI: ",math.pi)
print("Tau: ",math.tau)

print("Power and F loor: ",math.floor(math.pow(2,3)))
print("Factorial: ",math.factorial(5))
print("GCD: ",math.gcd(15,30))
print("Gamma: ",math.gamma(5))
```

```
Exp:  2.718281828459045
PI:  3.141592653589793
Tau:  6.283185307179586
power and floor:  8
Factorial:  120
GCD:  15
Gamma:  24.0
```

[ ]:
```

```