Python has a module named datetime to work with dates and times.

Commonly used classes in the datetime module are: date Class,time Class,datetime Class and timedelta Class

In [ ]:

```
#date class
import datetime
print(datetime.date(2022, 4, 13))
```

```
2022-04-13
```

In [ ]:

```
#today method of date class
print( datetime.date.today())
today=datetime.date.today()
print(today)
print(today.year)
print(today.month)
print(today.day)
```

```
2022-08-05
2022-08-05
2022
8
5
```

In [ ]:

```
#calculate difference between 2 days
from datetime import date
d1 = date(year = 2018, month = 7, day = 12)
d2 = date(year = 2020, month = 12, day = 23)
print(d2-d1)
```

```
895 days, 0:00:00
```

In [ ]:

```
#time class
```

In [ ]:

```
#time(hour, minute and second)
from datetime  import time
print(time(5, 18, 22))
print(time(hour = 11, minute = 34, second = 56))
# time(hour, minute, second, microsecond)
print(time(5, 18, 22,100))
```

```
05:18:22
11:34:56
05:18:22.000100
```

In [ ]:

```
a = time(11, 34, 56)
print("hour =", a.hour)
print("minute =", a.minute)
print("second =", a.second)
print("microsecond =", a.microsecond)
```

```
hour = 11
minute = 34
second = 56
microsecond = 0
```

In [ ]:

```
from datetime import datetime
dt=datetime(2020,11,18)
print(dt)
dt=datetime(2020, 9, 11, 23, 55, 59, 342380)
```

```
2020-11-18 00:00:00
```

In [ ]:

```
from datetime import datetime
a = datetime(2020, 9, 11, 23, 55, 59, 342380)
print("year =", a.year)
print("month =", a.month)
print("day=",a.day)
print("hour =", a.hour)
print("minute =", a.minute)
print("second =", a.second)
print("timestamp =", a.timestamp())
```

```
year = 2020
month = 9
day= 11
hour = 23
minute = 55
second = 59
timestamp = 1599868559.34238
```

In [ ]:

```
#difference between 2 years and time
d1 = datetime(year = 2018, month = 7, day = 12, hour = 7, minute = 9, second = 33)
d2 = datetime(year = 2020, month = 6, day = 10, hour = 5, minute = 55, second = 13)
print(d2-d1)
```

```
698 days, 22:45:40
```

In [ ]:

```
#timedelta class
 from datetime import timedelta
 t1 = timedelta(weeks = 1, days=2,hours = 1, seconds = 30)
 t2 = timedelta(days = 3, hours = 12, minutes = 4, seconds = 55)
 print(t1-t2)
```

```
5 days, 12:55:35
```

In [ ]:

```
#total seconds
from datetime import timedelta
t = timedelta(days = 4, hours = 2, seconds = 34, microseconds = 235673)
t.total_seconds()
```

Out[ ]:

```
352834.235673
```

In [ ]:

```
#strftime() method is defined under classes date, datetime and time.
#The method creates a formatted string from a given date, datetime or time object.
from datetime import datetime
dt=datetime.now()
print(dt)
print("____________________")
print(dt.strftime("%H:%M:%S"))
print("____________________")
print(dt.strftime("%m/%d/%Y, %H:%M:%S"))
print("____________________")
print(dt.strftime("%d/%m/%Y, %H:%M:%S"))
```

```
2022-08-05 18:15:02.758366
____________________
18:15:02
____________________
08/05/2022, 18:15:02
____________________
05/08/2022, 18:15:02
```

In [ ]:

```
from datetime import timedelta
t1=timedelta(seconds=53)
t2=timedelta(seconds=55)
print(t1-t2)
```

```
-1 day, 23:59:58
```

In [ ]:

```
#You can get the total number of seconds in a timedelta object using total_seconds() me
thod.
from datetime import timedelta
t = timedelta(days = 4, hours = 2, seconds = 34, microseconds = 235673)
print(t.total_seconds())
print(t/2)
print(t*2)
```

```
352834.235673
2 days, 1:00:17.117836
8 days, 4:01:08.471346
```

In [ ]:

```
#The strftime() method is defined under classes date, datetime and time.
#The method creates a formatted string from a given date, datetime or time object.
from datetime import datetime
dt=datetime.now()
print(dt)
print(dt.strftime("%H:%M:%S"))
print(dt.strftime("%m/%d/%Y, %H:%M:%S"))
print(dt.strftime("%d/%m/%Y, %H:%M:%S"))
```

```
2022-08-11 17:44:12.790870
17:44:12
08/11/2022, 17:44:12
11/08/2022, 17:44:12
```

In [ ]:

```
#Get today's date from datetime
from datetime import date
today = date.today()
print("Today's date:", today)
```

```
Today's date: 2022-08-11
```

In [ ]:

```
from datetime import date
today = date.today()
# dd/mm/YY
d1 = today.strftime("%d/%m/%Y")
print("d1 =", d1)
# Textual month, day and year
d2 = today.strftime("%B %d, %Y")
print("d2 =", d2)
# mm/dd/y
d3 = today.strftime("%m/%d/%y")
print("d3 =", d3)
# Month abbreviation, day and year
d4 = today.strftime("%b-%d-%Y")
print("d4 =", d4)
```

```
d1 = 11/08/2022
d2 = August 11, 2022
d3 = 08/11/22
d4 = Aug-11-2022
```

In [ ]:

```
from datetime import datetime
 # datetime object containing current date and time
now = datetime.now()
print("now =", now)
 # dd/mm/YY H:M:S
dt_string = now.strftime("%d/%m/%Y %H:%M:%S")
print("date and time =", dt_string)
```

```
now = 2022-08-11 17:57:45.475721
date and time = 11/08/2022 17:57:45
```