Time Function

Time Function

- Used to return time
- It returns in epoch
- Supports Unix timestamps in seconds, milliseconds, microseconds and nanoseconds.
-

```
>>> import time
>>> seconds = time.time()
>>> seconds
1579249509.240913
```

Local Time

- Used to represent the Local Time → time.ctime()

```
>>> seconds
1579249509.240913
>>> local_time = time.ctime(seconds)
>>> local_time
'Fri Jan 17 13:55:09 2020'
>>>
```

Sleep()

- The sleep() function suspends (delays) execution of the current thread for the given number of seconds.

```
>>> import time
>>> print("printed immediately.")
printed immediately.
>>> time.sleep(2.4)
>>> print("above line printed after 2.4 seconds.")
```

Types of Time

- Local Time
- Gmtime()→ An unrelated but handy function that takes a time tuple such as returned by the gmtime() function in the time module, and returns the corresponding Unix timestamp value, assuming an epoch of 1970, and the POSIX encoding. In fact, time.gmtime() and timegm() are each others' inverse.
- Strftime →.The program below converts a datetime object containing current date and time to different string formats. The string needs to be in a certain format.

Strf Function

```
>>> import datetime
>>> print("to get the current Time")
to get the current Time
>>> now
datetime.datetime(2020, 1, 17, 14, 19, 41, 631128)
>>> print("To get the Year")
To get the Year
>>> now.strftime('%Y')
'2020'
>>> print("To get the Date, Time and Second")
To get the Date, Time and Second
>>> now.strftime("%H:%M:%S")
'14:19:41'
>>> now.strftime("%m/%d/%Y, %H:%M:%S")
'01/17/2020, 14:19:41'
>>>
```

Strp Time (String to Time)

```
from datetime import datetime

datetime_str = '1/12/20 13:55:26'
print(type(datetime_str))
print(datetime_str)
datetime_object = datetime.strptime(datetime_str, '%m/%d/%y %H:%M:%S')

print(type(datetime_object))
print(datetime_object)  # printed in default format
```

```
Python 3.7.3 (v3.7.3:ef4ec6e
4)] on win32
Type "help", "copyright", "c
>>>
========== RESTART:
<class 'str'>
1/12/20 13:55:26
<class 'datetime.datetime'>
2020-01-12 13:55:26
>>>
```

Strp Function

File Edit Format Run Options Window Help

```
from datetime import datetime
date_str = '09-19-2018'

date_object = datetime.strptime(date_str, '%m-%d-%Y').date()
print(type(date_object))
print(date_object)
```

Python 3.7.3 Shell

File Edit Shell Debug Options Window Help

```
Python 3.7.3 (v3.7.3:ef4ec6ed12, Mar 25 2019, 2
4)] on win32
Type "help", "copyright", "credits" or "license
>>>
========== RESTART: C:/Users/USER1/Desk
<class 'datetime.date'>
2018-09-19
>>>
```

Method

- %m →Month
- %d → Day
- %Y → Year
- %H → Hours
- %M → Month
- %S → Seconds

Today Date

```
>>> from datetime import date
>>> x=date.today()
>>> date.today()
datetime.date(2020, 1, 17)
>>> x.today()
datetime.date(2020, 1, 17)
>>> x.day
17
>>> x.month
1
>>> x.year
2020
>>> x.weekday()
4
>>>
```

time delta

- After ‘n’ of days what is the Date

```
>>> from datetime import timedelta
>>> timedelta(days=365,hours=8,minutes=15)
datetime.timedelta(days=365, seconds=29700)
>>> from datetime import datetime
>>> datetime.now()
datetime.datetime(2020, 1, 17, 14, 46, 20, 40210)
>>> datetime.now()+timedelta(days=365)
datetime.datetime(2021, 1, 16, 14, 46, 45, 334516)
>>> datetime.now()+timedelta(weeks=1,days=4)
datetime.datetime(2020, 1, 28, 14, 47, 11, 415720)
>>> datetime.now()+timedelta(weeks=2,days=4)
datetime.datetime(2020, 2, 4, 14, 47, 17, 340763)
>>>
```