

FORMATTING DATE AND TIME

1. Python strftime() – datetime object to string

- Under the classes **date**, **datetime** and **time**.
- Creates a formatted string from a given date, datetime or time object.

Example:

```
#Format date using strftime()
from datetime import datetime
now=datetime.now() #current date and time
t=now.strftime("%H:%M:%S")
print("Time - ",t)

s1=now.strftime("%m/%d/%Y, %H:%M:%S")
print("S1 - ",s1) #mm/dd/yy H:M:S format

s2=now.strftime("%d/%m/%Y, %H:%M:%S")
print("S2 - ",s2) #mm/dd/yy H:M:S format
```

- %y, %m, %d, %H etc. are **format codes**.
- The strftime() method takes one or more format codes and returns a formatted string based on it.

2. Python strptime() – string to datetime

- Creates a datetime object from a given string (representing date and time).

Example:

```
#Format date using strptime()
from datetime import datetime
date_string="21 June 2021"
print("date_string=", date_string)
date_object=datetime.strptime(date_string,"%d %B %Y")
print("date_object = ",date_object)
```

Tzinfo Class

- Abstract base class.

Timezone Class

- Subclass of tzinfo, each instance of which represents a timezone defined by a fixed offset from UTC.

Syntax: `class datetime.timezone(offset, name=None)`

- **Get Current Time in different TimeZone**

- Geographical area throughout which standard time is observed.
- Coordinated Universal Time (UTC)

Pytz python library (pytz module)

- `localtime()`
- `strftime("%H: %M: %S",t)`

Example:

```
from datetime import datetime

import pytz

local=datetime.now()

print("Local:", local.strftime("%m/%d/%Y, %H:%M:%S"))

tz_newyork=pytz.timezone('America/New_York')

datetime_newyork=datetime.now(tz_newyork)

print("New York : ", datetime_newyork.strftime("%m/%d/%Y, %H:%M:%S"))

tz_london=pytz.timezone('Europe/London')

datetime_london=datetime.now(tz_london)

print("London : ", datetime_london.strftime("%m/%d/%Y, %H:%M:%S"))
```

Pytz Python Library

- ✓ **utc**- get the standard UTC time zone.
- ✓ **timezone()**- get the time zone of a particular location.
- ✓ **now()**
- ✓ **astimezone()**- to convert the time of a particular time zone into another time zone.