Working with Datetime

```
>>> from datetime import datetime
>>> date_type1 = "2021-07-29 23:15:27.251460"
>>> date_obj1 = datetime.strptime(date_type1, "%Y-%m-%d %H:%M:%S.%f")
```

```
%Y  Year with century as a decimal number.
%m  Month as a decimal number [01,12].
%d  Day of the month as a decimal number [01,31].
%H  Hour (24-hour clock) as a decimal number [00,23].
%M  Minute as a decimal number [00,59].
%S  Second as a decimal number [00,60].
%f  Microsecond as a decimal number [0,999999], zero-padded on the left
```

How do you want to display date and time?

```
>>> str(date_obj1)
    '2021-07-29 23:15:27.251460'
>>> date_obj1
    datetime.datetime(2021, 7, 29, 23, 15, 27, 251460)
>>> repr(date_obj1)
    'datetime.datetime(2021, 7, 29, 23, 15, 27, 251460)
```

```
>>> date_type3 = "October 29, 2021, 23:22:21"
>>> date_obj3 = datetime.strptime(date_type3, "%B %d, %Y, %H:%M:%S")
>>> print(date_obj3)
  2021-10-29 23:22:21
>>> date_type4 = "Sun,05/12/21,12:30PM"
>>> date_obj4 = datetime.strptime(date_type4, "%a,%d/%m/%y,%I:%M%p")
```

```
>>> date_type5 = "2021-03-22T23:22:21+0700"
>>> date_obj5 = datetime.strptime(date_type5, "%Y-%m-%dT%H:%M:%S%z")
```

```
T = Literal to separate the date from the time
z = "zero hour offset" also known as "Zulu time" (UTC).
ISO-8601 is a standard to represent date strings, including time offsets.
```

```
>>> date_type6 = "Mon, 22nd March, 2021"
>>> date_obj6 = datetime.strptime(date_type6, "%a, %dnd %B, %Y")
>>> print(date_obj6)
2021-03-22 00:00:0
```

```
>>> from datetime import datetime
>>> date_integer1 = 2021090908070656
>>> date_obj7 = datetime.strptime(str(date_integer1), '%Y%m%d%H%M%S%f')
>>> print(date_obj7)
2021-09-09 08:07:06.560000
>>> date_integer2 = 1628006829
>>> date_obj7 = datetime.fromtimestamp(date_integer2)
>>> print(date_obj7)
2021-08-03 21:37:09
```

```
>>> import pandas as pd
>>> print(pd.to_datetime(date1))
  2021-07-29 23:15:27.251460
>>> print(pd.to_datetime(date2))
  2021-08-16 01:40:00
>>> print(pd.to_datetime(date3))
  2021-10-29 23:22:21
>>> print(pd.to_datetime(date4))
  2021-05-12 12:30:00
>>> print(pd.to_datetime(date5))
  2021-03-22 23:22:21+07:00
>>> print(pd.to_datetime(date6))
  2021-03-22 00:00:00
```

```
date1 = '2021-07-29 23:15:27.251460'
date2 = 'Aug 16 2021 at 01:40AM'
date3 = 'October 29, 2021, 23:22:21'
date4 = 'Sun 05/12/21 12:30PM'
date5 = '2021-03-22T23:22:21+0700'
date6 = 'Mon, 22nd March, 2021'
```

```
>>> import pandas as pd
>>> date_integer1 = 20210909080706
>>> date_obj7 = pd.to_datetime(date_integer1, format='%Y%m%d%H%M%S')
>>> print(date_obj7)
  2021-09-09 08:07:06
>>> date_integer2 = 1628006829
>>> date_obj8 = pd.to_datetime(date_integer2, origin='unix', unit='s')
>>> print(date_obj8)
2021-08-03 21:37:09
```