



Python Datetime

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Python Dates

A date in Python is not a data type of its own, but we can import a module named `datetime` to work with dates as date objects.

Example

Import the datetime module and display the current date:

```
import datetime

x = datetime.datetime.now()
print(x)
```

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Date Output

When we execute the code from the example above the result will be:

`2022-10-22 19:49:24.814952`

The date contains year, month, day, hour, minute, second, and microsecond.

The `datetime` module has many methods to return information about the date object.

Here are a few examples, you will learn more about them later in this chapter:

Example

Return the year and name of weekday:

```
import datetime

x = datetime.datetime.now()

print(x.year)
print(x.strftime("%A"))
```

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Creating Date Objects

To create a date, we can use the `datetime()` class (constructor) of the `datetime` module.

The `datetime()` class requires three parameters to create a date: year, month, day.

Example

Create a date object:

```
import datetime

x = datetime.datetime(2020, 5, 17)

print(x)
```

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The `datetime()` class also takes parameters for time and timezone (hour, minute, second, microsecond, tzzone), but they are optional, and has a default value of `0`, (`None` for timezone).

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The strftime() Method

The `datetime` object has a method for formatting date objects into readable strings.

The method is called `strftime()`, and takes one parameter, `format`, to specify the format of the returned string:

Example

Display the name of the month:

```
import datetime

x = datetime.datetime(2018, 6, 1)

print(x.strftime("%B"))
```

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A reference of all the legal format codes:

Directive	Description	Example	Try it
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%a	Weekday, short version	Wed	Try it »
%A	Weekday, full version	Wednesday	Try it »
%w	Weekday as a number 0-6, 0 is Sunday	3	Try it »
%d	Day of month 01-31	31	Try it »
%b	Month name, short version	Dec	Try it »
%B	Month name, full version	December	Try it »
%m	Month as a number 01-12	12	Try it »
%y	Year, short version, without century	18	Try it »
%Y	Year, full version	2018	Try it »
%H	Hour 00-23	17	Try it »
%I	Hour 00-12	05	Try it »
%p	AM/PM	PM	Try it »
%M	Minute 00-59	41	Try it »
%S	Second 00-59	08	Try it »
%f	Microsecond 000000-999999	548513	Try it »
%z	UTC offset	+0100	
%Z	Timezone	CST	
%j	Day number of year 001-366	365	Try it »
%U	Week number of year, Sunday as the first day of week, 00-53	52	Try it »
%W	Week number of year, Monday as the first day of week, 00-53	52	Try it »

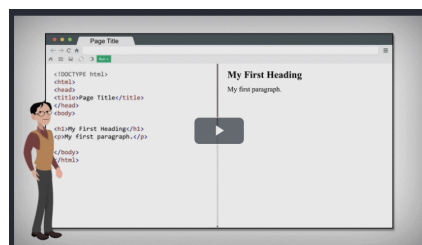
%c	Local version of date and time	Mon Dec 31 17:41:00 2018	Try it »
%C	Century	20	Try it »
%x	Local version of date	12/31/18	Try it »
%X	Local version of time	17:41:00	Try it »
%%	A % character	%	Try it »
%G	ISO 8601 year	2018	Try it »
%u	ISO 8601 weekday (1-7)	1	Try it »
%V	ISO 8601 weeknumber (01-53)	01	Try it »

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