

Thursday, October 22, 2020 | **Class #6**

Multidimensional arrays, dictionaries, and datetime

OCEAN 215 | Autumn 2020

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Activity: multidimensional arrays

Color in the given slices in the
array_empty object

[2:8,0] [8,4:8]
[2:8,11] [7,5:7]
[0,2] [6,5:7]
[0,9] [7:9,1]
[1,1] [7:9,10]
[1,3] [9,1:4]
[1,8] [9,8:11]
[1,10] [10,3:9]
[4,3:5] [11,5:7]
[4,7:9]

array_empty =

	0	1	2	3	4	5	6	7	8	9	10	11
0												
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												

Datetime activity

```
# Use this string for the following questions:  
datestring = 'October 22, 2020'
```

1) Change datestring into a datetime object

2) Get the datetime object for 71 days later than datestring

3) Create a new string for this future date with the format Year-month-day (use the datetime formatting table in the activity notebook)

4) Create an array of datetimes starting on datestring up to (and including) 71 days in the future with a frequency of 1 day

String datetime formatting

Directive	Meaning
%a	Weekday as locale's abbreviated name.
%A	Weekday as locale's full name.
%w	Weekday as a decimal number, where 0 is Sunday and 6 is Saturday.
%d	Day of the month as a zero-padded decimal number.
%b	Month as locale's abbreviated name.
%B	Month as locale's full name.
%m	Month as a zero-padded decimal number.
%y	Year without century as a zero-padded decimal number.
%Y	Year with century as a decimal number.
%H	Hour (24-hour clock) as a zero-padded decimal number.
%I	Hour (12-hour clock) as a zero-padded decimal number.
%p	Locale's equivalent of either AM or PM.
%M	Minute as a zero-padded decimal number.
%S	Second as a zero-padded decimal number.
%f	Microsecond as a decimal number, zero-padded on the left.
%z	UTC offset in the form +HHMM or -HHMM (empty string if the the object is naive).
%Z	Time zone name (empty string if the object is naive).
%j	Day of the year as a zero-padded decimal number.
%U	Week number of the year (Sunday as the first day of the week) as a zero padded decimal number. All days in a new year preceding the first Sunday are considered to be in week 0.
%W	Week number of the year (Monday as the first day of the week) as a decimal number. All days in a new year preceding the first Monday are considered to be in week 0.
%c	Locale's appropriate date and time representation.
%x	Locale's appropriate date representation.
%X	Locale's appropriate time representation.
%%	A literal '%' character.

Datetime activity #2

1) Make your birthday (or another day of significance) into a datetime object

2) Use today's date and subtract your birthday to find the timedelta object representing how long you've been alive.

3) Find out approximately how many seconds you have been alive

