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Python Course – Dates in Python

Complications with Time management

- Dealing with changes in time can be a complicated process

- A lot like adding numbers together, 1 + 1, we can do something similar with time

- A convenient method to help is `timedelta`

Adding time

- You can manipulate datetime objects with timedelta quite easily.

- Lets add a few more days to our vacation.

Calendar

calendar module

- This inbuilt module handles operations that are related to the calendar. The calendars are usually defined based on the current Gregorian calendar.

- The calendars have Monday as the first day of the week and Sunday as the last day of the week.

calendar module - usage

```
print(calendar.month(2021
,    ))
```

Is current year a leap one?

- A leap year occurs once every 4 years

- Let's experiment with some of the calendar methods

```
calendar.isleap(2021)
```

Some calendar methods – TextCalendar class

method	Description
`calendar.setfirstweekday()`	This method is used to set the start number of week
`calendar.firstweekday()`	This method is returns the first day of the week. Default value is 0 or Monday.
`calendar.isleap()`	This method returns a boolean (true or false) depending on whether the year supplied to it as an argument is a leap year or not.
`References`	More references can be found in here: https://docs.python.org/3/library/calendar.html

Timestamps

vert epoch to human-readable date and vice ver

| 6854721 | Timestamp to Human date | reset |

rts Unix timestamps in seconds, milliseconds, microseconds and nanoseconds.

| | Mon | Day | Hr | Min | Sec | | |
| 9 | 09 | 26 | 06 | 30 | 00 | GMT ▼ | Human date to Timestamp |

n timestamp: 1569479400
tamp in milliseconds: 1569479400000
and time (GMT): Thursday 26 September 2019 06:30:00
and time (your time zone): jeudi 26 septembre 2019 08:30:00 GMT+02:00

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Timestamps

- A unix timestamp is a way to track time in seconds

- Counting of time starts from January 1st, 1970 at UTC

- The Timestamp is there for the time between January 1970 and the current date you look at

Timestamps

- 1 Hour = 3600 seconds

- 1 Day = 86400 Seconds

- 1 Week = 604800 Seconds

- 1 Month (30.44 days) = 2629743 Seconds

- 1 Year (365.24) = 31556926 Seconds

Time Zones

Some Common time zones

TIME ZONE	Region
GMT	Greenwich Mean Time (UK area as focal point)
CEST	Central European Summer Time (1hr ahead of GMT)
UTC	Coordinated Universal Time - a successor to the GMT time zone.
EST	Eastern Standard Time (New York area for example)
PST	Pacific Standard Time (California or western America regions)

For a detailed list: https://www.timeanddate.com/time/zones/

THANK YOU

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