Lesson 11

Python Essentials

Overview

1. Regular Expressions
2. Dates
3. Time Zones
4. Calendar

Regular Expressions (Regex)

- Finding matches based on sophisticated patterns.
- Use **re** module.

Function	Description
findall	Returns a list containing all matches
search	Returns a Match object if there is a match anywhere in the string
split	Returns a list where the string has been split at each match
sub	Replaces one or many matches with a string

Notes: https://docs.python.org/2/library/re.html

Metacharacters

- Characters with a special meaning

Character	Description	Example
[]	A set of characters	“[a-m]”
\	Signals a special sequence (use also to escape special characters)	""
.	Any character (except newline character)	“he..o”
^	Starts with	“^hello”

Character	Description	Example
$	Ends with	“world$”
	Zero or more occurrences	"aix*"
+	One or more occurrences	“aix+”
{}	Exactly the specified number of occurrences	“al{2}”
()	Capture and group	Either or

Notes: https://docs.python.org/2/library/re.html

Special Sequences

- A special sequence is a **** followed by one of the characters in the list below.
- Have special meaning.

Dates

- use the datetime library
- timedelta defines a period of time

```
from datetime import datetime
current_date = datetime.now()
print('Today is: ' + str(current_date))

from datetime import timedelta
one_day = timedelta(days=1)
yesterday = today - one_day
print('Yesterday was: ' + str(yesterday))

birthday_date = datetime.strptime(birthday, '%d/%m/%Y')
print ('Birthday: ' + str(birthday_date))
```

Time Zones

- dateutil includes an interface to the IANA time zone database

```
from dateutil import tz
from datetime import datetime

datetime.now(tz=tz.UTC)
```

Calendar

- Calendar module outputs calendars.
- Provides useful functions.

```
import calendar

yy = 2021
mm = 4

# display the calendar
print(calendar.month(yy, mm))
```