

Outline for November 3, 2025

Reading: §12.1–12.5, 13.1–13.5**Due:** Homework 3, due November 12, 2025

1. *perm* done recursively
2. Reading a URL [*geturl.py*, *geturl2.py*, *geturl3.py*]
 - (a) Opening a URL
 - (b) Reading the page as a string
 - (c) The role of `decode()` [*geturl-nd.py*]
 - (d) SSL/TLS and python [*geturl-ssl.py*]
3. A program to print links in web pages [*urlpat.py*, *urlpat2.py*]
4. JSON [*json-ex.py*]
 - (a) What it is
 - (b) `json.loads`
 - (c) `json.dumps`
5. What is XML?
 - (a) Tree structure
 - (b) Elements, tags, attributes, attribute values
 - (c) Example: *sample1.xml*
6. Python and XML [*basic-xml.py*]
 - (a) `xml.etree.ElementTree`
 - (b) Parsing the tree from file input (`ET.parse()`), from a string (`ET.fromstring()`)
 - (c) Referring to elements
 - (d) Accessing tag names, attributes
 - (e) Finding nodes in the tree
 - (f) Dumping, writing the tree
 - (g) Removing an element and its descendants
 - (h) Changing an element's attribute
 - (i) Setting attributes
7. Prettyprinting XML [*xmlpp.py*, *xmlpp-full.py*]