

## Outline for November 7, 2023

**Reading:** §14, 12, 13

**Assignments:** Homework 3, due November 9, 2023

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1. Useful abbreviations in patterns
  - (a) `\d` matches any digit; same as `[0-9]`
  - (b) `\s` matches any space character; same as `[\t\n\r\f\v]`
  - (c) `\w` matches any alphanumeric character and underscore; same as `[a-zA-Z0-9_]`
  - (d) `\D` matches any character *except* a digit; inverse of `\d`
  - (e) `\S` matches any character *except* a space character; inverse of `\s`
  - (f) `\W` matches any character *except* an alphanumeric character or underscore; inverse of `\w`
  - (g) `\b` matches a word boundary — a word is a sequence of alphanumeric characters
2. “Raw” string notation: backslash not handled specially; put “r” before string
3. Example of floating imprecision [*roundoff.py*]
4. Character/integer conversions [*chr.py, ord.py*]
  - (a) Cæsar cipher (shift cipher) [*caesarenc.py, caesardec.py*]
5. 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*]
6. A program to print links in web pages [*urlpat.py, urlpat2.py*]