CS 301 - Lecture 19

Midterm Exam 2 ① — TODAY!

Review

Error handling
- assert
- try / except

File handling

f = open("file.txt")

file object

f = open("file.txt", "r")

$f1$ = open("file1.txt", "w")

↓ mode

append

$f2$ = open("file2.txt", "a")

↓ append

```
for line in f2:
    print(line)
f2.write("Hello")
```

CS 301

① Basics of programming
variables, if/else, loop, functions

② Data structures
Lists, dicts, tuples, objects/references,
recursion, exceptions, files
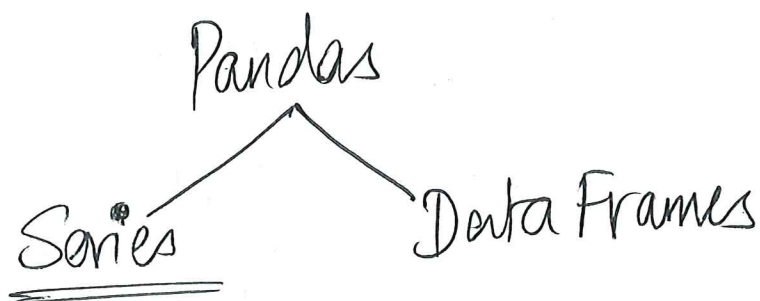
③ Data Science
pandas, ipython notebooks.
...

Modes of writing python

interactive mode
python console
>>>

script mode
.py

Notebook
(ipython
notebooks)
(code + data)

Pandas

Series   Data Frames

NaN — Not A Number.

Fancy Indexing

list: $\begin{bmatrix} \overset{0}{10,} & \overset{1}{20,} & \overset{2}{30} \end{bmatrix}$

Series: Index   Contents.
           2   100
           1   200
           0   300

④

letters		bool_series		result
0	A	0	True	A
1	B	1	True	B
2	C	2	False	✗
3	D	3	False	✗

letters [bool_series]

(A), B, (C), D, E, (F), (G), H

Review

ipython notebooks

pandas — Series vs lists.

Data Frames