COMPUTER SCIENCE

UNIT E WEEK 2, TUESDAY JAN 30TH + THURSDAY FEB 1ST

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THIS WEEK IS CS AND STEM

- Clones and bones: twin monkeys born from the same method as Dolly the sheep and a 200,000 year old jaw bone found in Israel.
  - https://www.theguardian.com/science/2018/jan/26/lab-notes-bones-and-clones-made-this-weeks-science-headlines

ASSIGNMENT 11

- CCC 2017 problem 3 (S3: Nailed it!). Output and input should be the same as asked in the problem. Include comments and docstrings where necessary.
- Include a secondary version of the working assignment that includes:
  - Generalized I/O: use argparse to get input and output file names and write the output information to the output file. Assume the input file has some straight-forward structure.
  - More detailed output: instead of numbers, add some short explanation (ex. "Tudor can make a fence of length x at height y).
- Due ~~Tuesday Jan 30~~, Feb 4th by 11:59pm via email to woodford@cita.utoronto.ca

EXAM CORRECTIONS?

- Did y'all forget?????
- Please get these into me by Thursday so I can recalibrate the marks and give the solution!

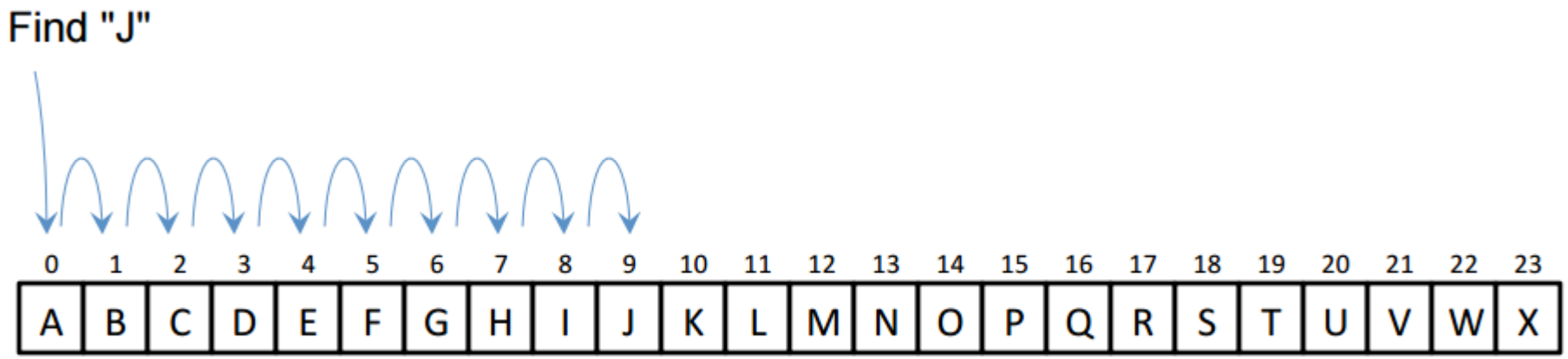
LET'S COMPARE

- We'll refresh our memory on multidimension lists and their manipulation while learning about the capabilities of the NumPy package.
  - Lecture32_33_nDarrays.ipynb

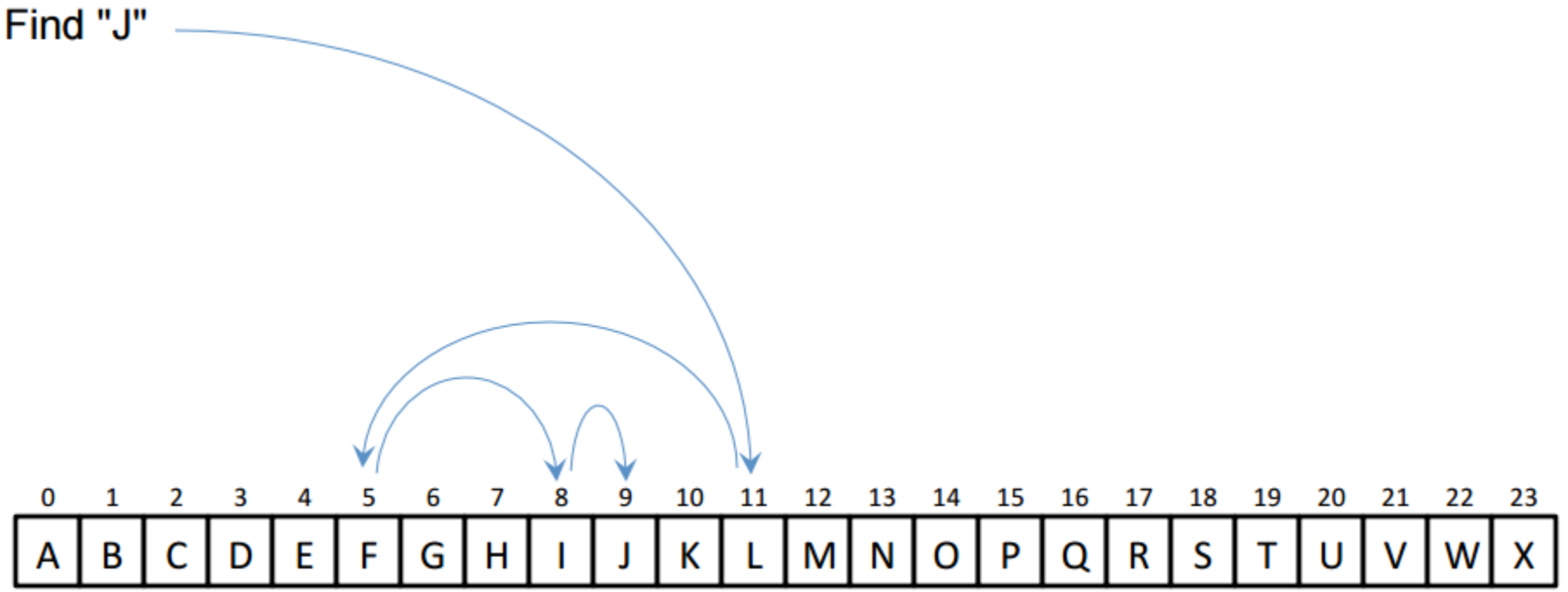
LINEAR AND BINARY SEARCHES

- We've done linear searches already – where we start at one end of a list and look for an element.
- Binary searches require that the list is already sorted, and starts in the middle of the list. This means that if the middle element isn't what you're looking for, it's easy to determine which half of the list you need to search to find it.

- Linear Search



- Binary Search



LET'S PRACTICE:

- Open Lecutre32_33_searches.ipynb for some practice with linear and binary searches

GROUP PRACTICE

- CCC 2017 Problems 1 and 2– S1: Sum game, S2: High Tide, Low Tide

REFERENCES

- http://www.physics.nyu.edu/pine/pymanual/html/chap3/chap3_arrays.html
- http://www.numpy.org/
- https://www.geeksforgeeks.org/linear-search-vs-binary-search/