Chapter 8, Strings:

- General introduction; string sorting (last week Friday)
- Tries (**Today**)
- Other string topics (Wednesday)
  - Regular expressions
  - ~~Huffman encoding~~
  - ~~Edit distance~~
  - ~~Grammars and parsing~~
- Review for Tests 3 and 4 (next week Friday)

Today:

- Problem statement
- Main idea behind tries
- Code details:
  - Node class
  - Find
  - Insertion
  - Deletion

Coming up (the last):

Catch up on old projects . . .
Do **Perfect Hashing** *project (suggested by Wednesday, Apr 26)*
Do **Trie** *project (by Friday, Apr 28)*

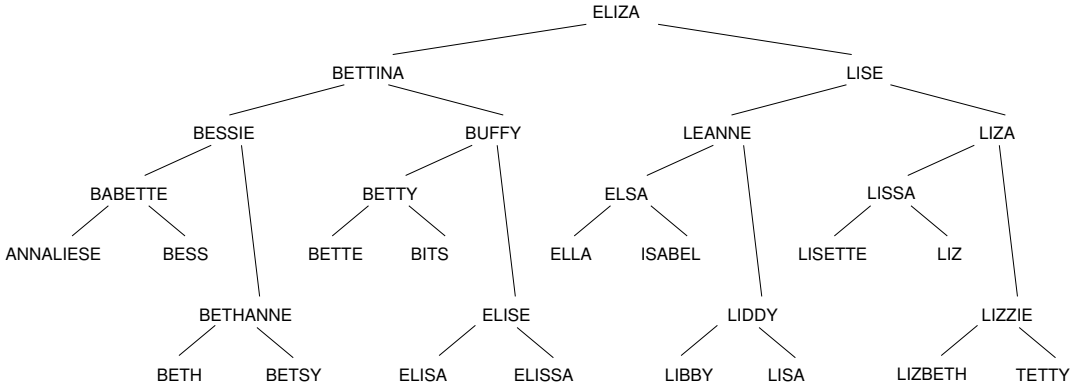
Due **Today, Mon, Apr 24**
Do Exercises 8.(7, 14, 20)
Read Section 8.2

Projects:

- Last regular project score update on Tues, Apr 25
- "Two minute warning" run of scripts on Fri, Apr 28 (*no Schoology update—see report file* `/cslab/class/cs345/(your userid)/(your userid).report`)
- All projects due on the last day of *classes*, **midnight between Fri, Apr 28 and Sat, Apr 29**—*not last day of finals*.

Final exam

- Our final exam block is **Wed, May 3, 10:30am–12:30pm**
- During our final exam block, we will meet in the **CSCI lab**
- Test 3 ("written"/conceptual part) will be like Test 1, but covering the second part (MST and SSSP) of graphs (ch 6), and then BSTs (ch 5) through strings (ch 8)
- Test 4 (programming part) will work the same way as Test 2, covering dynamic programming, hashing, and strings.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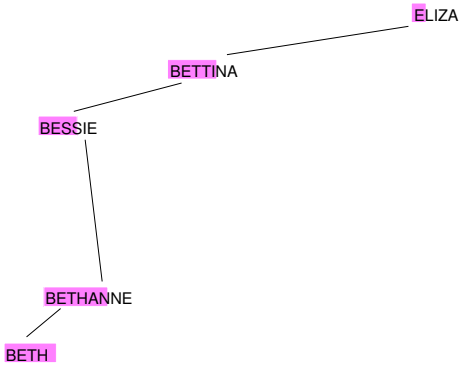
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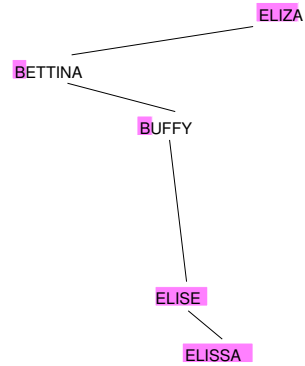
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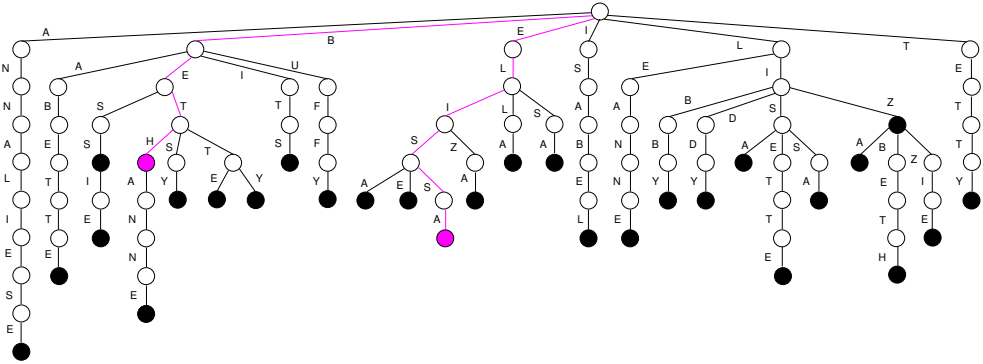
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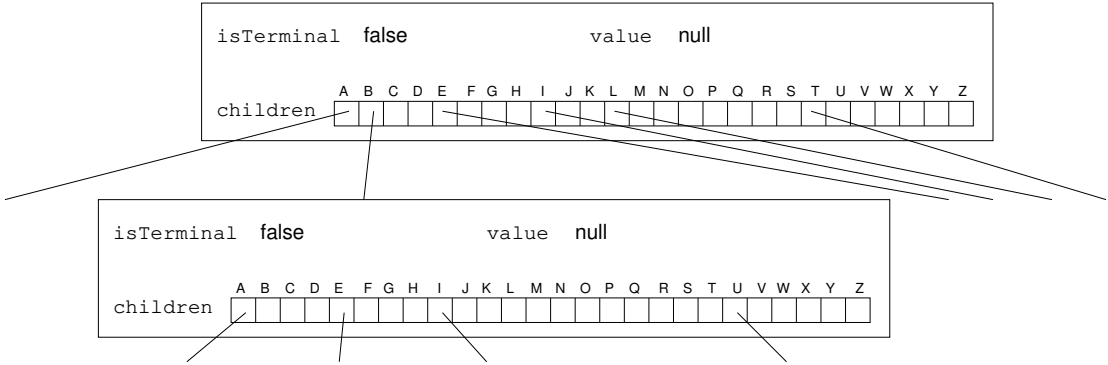
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Invariant 39. [Class invariant of `TrieMap`]

(a) For all nodes, the path to that node is a prefix to at least one key in the map.

(b) For all nodes, the node is terminal iff the path to that node is a key in the map.