
CS 105: Introduction to Computer Science

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The function `pump()` inserts (“pumps”) a string `to_add` in the middle of the string `old`. It does this recursively `i` times.

- What is the formula for the amount work for `pump()`?
- Draw the memory state of all variables after each line that is executed when we make the call `pump("hey", "ey", 2)`
- Compare your diagram with what PythonTutor shows

- Write a function `earliest_letter()` to find the alphabetically-earliest letter in a word, without using Python's built-in functions for sorting
- Make sure that the input string only contains alphabet letters
- What is the formula for the amount work for your `earliest_letter()`?
- Draw the memory state of all variables after each line that is executed when we make the call `earliest_letter("cat")`