CSC 482B Assignment 5
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04/12/19

1) Recursive Comprehension

The time appears to be $O(n^4)$ due to the recursion in internal loop iterating over a portion of the entire sequence (between i and j with r,r') multiple times to check for any potential internal loops, visit almost every base again in total.
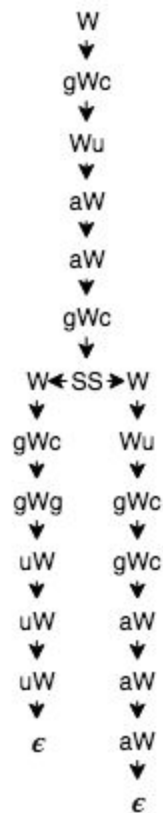
If you restrict the recursion to :
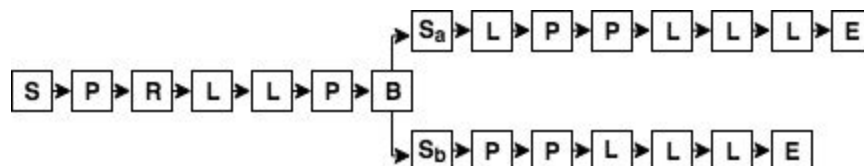
$$\min_{i<r<r'<j} \{ e_{int}(i,r,r',j) + V(r,r') \}$$

...it executes in the upper ballpark of $O(n^3)$ by removing some redundant calculations

2) Covariance Modeling

a) The Parsing Tree for GCCGGGUUUGCGGAAACCUCUC

b) The Covariant Model for GCCGGGUUUGCGGAAACCUCUC

c) It can only excepts sequences of the structure (..(((...))((..)).).) currently

d)