

Exercise sheet 6: BLAST

Exercise 1

You are given the text $T = CAGTAGTAGC$

Question 1A Draw the corresponding suffix tree

Solution



Question 1B Describe the steps of a counting query for $P = TAG$

Solution

- start at root node
- locate outgoing edge that starts with T
- match subsequent characters of the pattern
- in the subtree rooted at \overline{TAG} count the number of leaves $\Rightarrow 2$

Question 1C Describe the steps of a reporting query for $P = AG$

Solution

- start at root node
- locate outgoing edge that start with A
- match subsequent characters of the pattern
- in the subtree rooted at \overline{AG} report the labels of all leaves $\Rightarrow \{2, 5, 8\}$