Factor Oracle for Machine Improvisation

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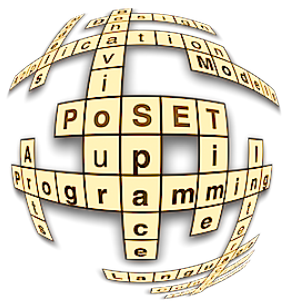

Preliminaries

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Word

A word s is a finite sequence $s = s_1 s_2 \dots s_m$ of length $|s| = m$ on a finite alphabet Σ.

$s =$

a	b	b	c	a	b	c	d	a	b	c

Factor

A word $x \in \Sigma^*$ is a factor of s if and only if s can be written $s = uxv$ with $u, v \in \Sigma^*$. Given integers i, j where $1 \leq i \leq j \leq m$, we denote a *factor* of s as $s[i \dots j] = s_i s_{i+1} \dots s_j$.

$s =$

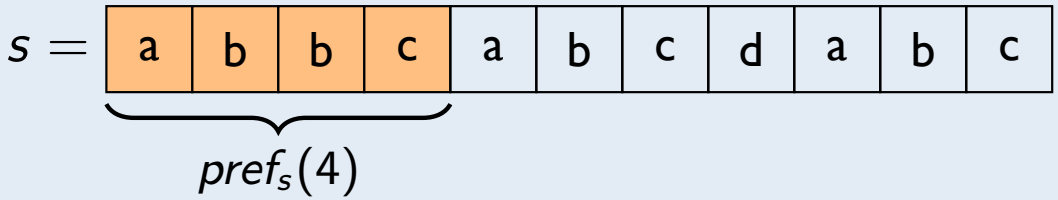
a	b	b	c	a	b	c	d	a	b	c

$s[3, 5]$

Preliminaries

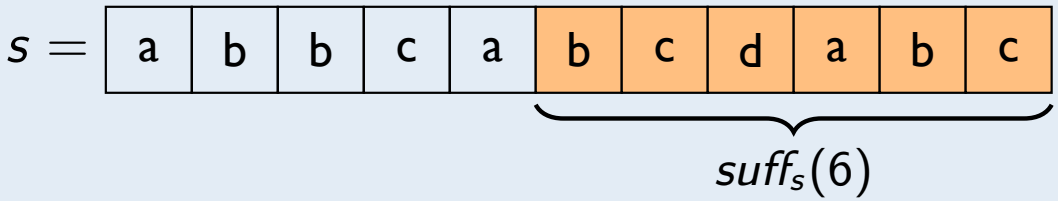
Prefix

A factor x of s is a prefix of s if $s = xu$ with $u \in \Sigma^*$. The ith *prefix* of s, denoted $pref_s(i)$, is the prefix $s[1 \dots i]$.



Suffix

A factor x of s is a suffix of s if $s = ux$ with $u \in \Sigma^*$. The ith *suffix* of s, denoted $suff_s(i)$, is the suffix $s[i \dots m]$.



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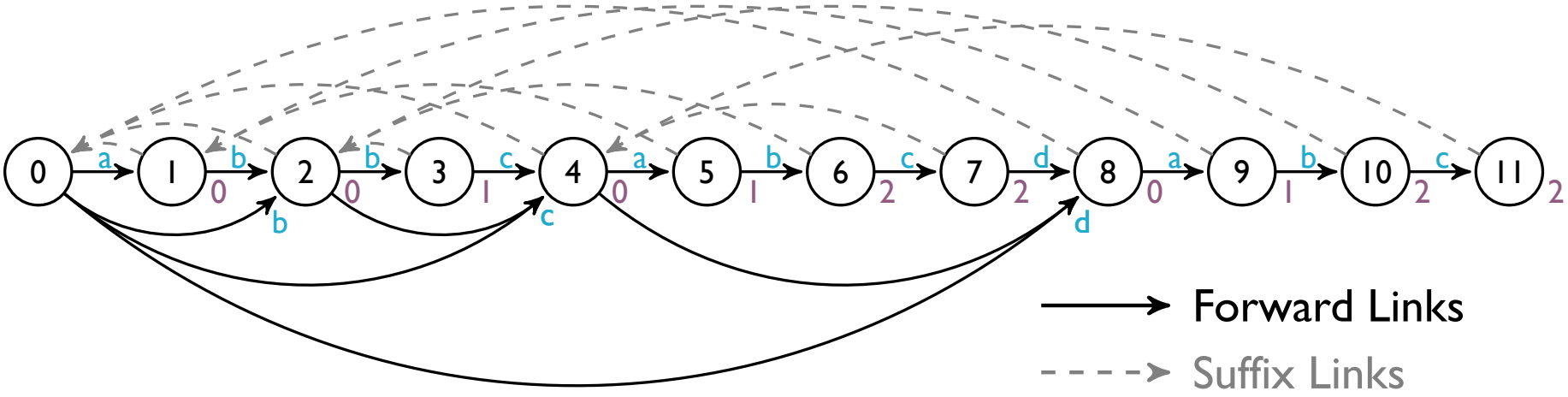

Thank you for your attention! ☺

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