

## Quiz 8. FM-index

Below you have a (non-extended) FM-index for string *banana*.

$S=banana\$$

<i>b</i>	<i>a</i>	<i>n</i>	<i>a</i>	<i>n</i>	<i>a</i>	<i>\$</i>
0	1	2	3	4	5	6

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### FM-index: column *L* and LF mapping table

BWT with ranks

<i>Row</i>	<i>SA</i>	<i>suffix</i>	<i>F</i>	<i>L</i>
0	6	<i>\$</i>	<i>\$</i>	a1
1	5	a <i>\$</i>	a	n1
2	3	ana <i>\$</i>	a	n1
3	1	anana <i>\$</i>	a	b1
4	0	banana <i>\$</i>	b	<i>\$</i> 1
5	4	na <i>\$</i>	n	a1
6	2	nana <i>\$</i>	n	a1

LF mapping

<i>Letter</i>	<i>SA interval</i>
<i>\$</i>	[0-0]
a	[1-3]
b	[4-4]
n	[5-6]

Explain every step of the backward search for query strings *an* and *nun*.