

BWT Searching Notes

- Don't have to store the LF mapping. A more complex algorithm (later slides) lets you compute it in $O(1)$ time in **compressed** data on the fly with some extra storage.
- To find the range in the first column corresponding to a character:
 - Pre-compute array $C[c] = \#$ of occurrences in the string of characters lexicographically $< c$.
 - Then start of the "a" range, for example, is: $C["a"] + 1$.
- Running time: $O(|\text{pattern}|)$
 - Finding the range in the first column takes $O(1)$ time using the C array.
 - Updating the range takes $O(1)$ time using the LF mapping.