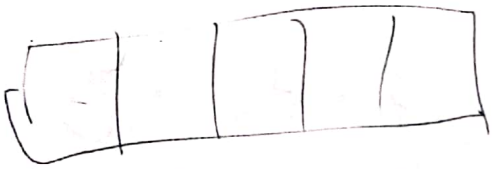
* Turing machine can represent Recursive-17 Enumerable Language

Algo

13.12.22

KMP — substring match
— O(m+n)
— linear search algo

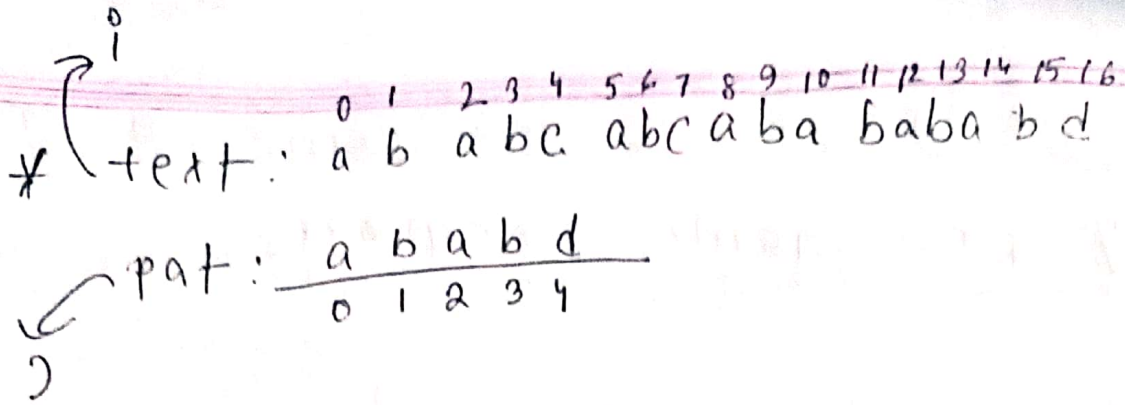
* LPS — longest prefix suffix



* i=0, j=1, lps[0] = 0;

→ pat[i] = pat[j]
lps[j] = i+1
i++, j++;

→ pat[i] ≠ pat[j];
if i=0 lps[j] = 0;
i = lps[i-1]
j++; ~~i++~~



if match i++, j++.

if !match j = lps [pat[j-1]]

* j = 0, j++

Step:

i = 0, j = 0, ✓

i = 1 = j = 1 ✓

2, 3 ---- ✓

i = 4, j = 4 ✓

i = 4, j = 2 ✗

i = 4, j = 0 ✓

i = 5, j = 0 ✓

i = 6, j = 1 ✓

11, 3 ✓

12, 4 ✗

12, 2 ✓

13, 3 ✓

14, 4 ✗

14, 2 ✓

15, 3 ✓

16, 4 ✓

7 2 ✗

7 0 ✓

8 0 ✓

10 2 ✓