

* Implement Str Str

- can use normal naive approach

$O(n \times m)$ pattern length
 string length

- Using Knuth Morris Pratt (KMP)

pattern \rightarrow a c a c a b a c a c a b a c a c a c
 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17
 0 0 1 2 3 0 1 2 3 4 5 6 7 8 9 10 11 12

In given string there's not going back

gsg wadsgz
 0 1 2 3 4 5 6 7 8
 0 0

gsg wadsgz
 0 1 2 3 4 5 6 7 8
 0 0 0

gsg wadsgz
 0 1 2 3 4 5 6 7 8
 0 0 0 0

gsg wadsgz
 0 1 2 3 4 5 6 7 8
 0 0 0 0 0

gsg wadsgz
 0 1 2 3 4 5 6 7 8
 0 0 0 0 0 0 (OH)

Date _____

↓ S 9 w a ↓ S 9 2

0 1 2 3 4 5 6 7 8

0 0 0 0 0 1 2 (2+1)

(index + 1). If one is matching, put that value.

$$\begin{array}{cccccccc} a & b & a & b & c & a & a & b & c \\ 0 & 0 & 1 & 2 & 0 & 1 & 1 & 2 & 0 \end{array}$$