

# Programming Assignment 1

## Performance Analysis of Pattern Matching Algorithms

Due date: Oct. 6 Midnight



# Pattern matching algorithms

- `char *strstr(char *s, char *pat)` (slide 1 in lecture 4)
- `nfind()` in slide 3 in lecture 4
- Fast pattern matching in slide 5 in lecture 4



Implement three pattern matching programs which return the number of matched occasions instead of returning the first index of the matched patterns using the three algorithms.

Note that you should modify them to find all the matched patterns.



# Performance measurement

- Target string: 1 MB randomly generated alphabet characters
- Pattern: 10 randomly generated alphabet characters
- Run the three programs with the target and pattern strings, respectively, and measure the running time.



# Submission guideline

- Three programs should be submitted to 구름. TA will announce how to do that.
- You should also submit a report analyzing the performance with various lengths of target and pattern strings.

