

CSE 5311 Design and Analysis of Algorithms

You are required to submit the code, sample data, results, a one page report, and instructions for executing the code to the TA

Write a program to extend the Rabin-Karp method to handle the problem of looking for a given $m \times m$ pattern in an $n \times n$ array of characters. (The pattern may be shifted vertically or horizontally, but it may not be rotated). Use another method, for example, a variation of the KMP algorithm or a method from a research paper, or your own method and compare the results with those of the Rabin-Karp extension.

- a. Set_1 – $n = 64$, $m = 4, 8$ and 16
- b. Set_2 – $n = 256$, $m = 4, 16$, and 64
- c. Set_3 – $n = 1024$, $m = 4, 16$, and 64

PLEASE NOTE THAT your PROGRAMS WILL BE TESTED WITH DIFFERENT DATA SETS AS WELL

Presentation of Results: Measure CPU time, compare results and present using tables or plots.