

COMP3506/COMP7505—Algorithms and Data Structures

School of Information Technology and Electrical Engineering

Week 11 Tutorial

Question 1.

Draw a figure illustrating the comparisons done by brute-force pattern matching for the text "aaabaadaabaaa" and pattern "aabaaa".

Question 2.

Draw a figure illustrating the comparisons done by Boyer-Moore pattern matching algorithm for the text "aaabaadaabaaa" and pattern "aabaaa". Also show the last occurrence table.

c			
$L(c)$			

$$i = i + m - \min(j, 1 + L(c))$$

0	1	2	3	4	5	6	7	8	9	10	11	12

Question 3.

For the following unsorted list of $n = 9$ numbers, find the median ($k = 5$) using quick-select:

68, 10, 37, 58, 12, 33, 11, 17, 55.

Always pick the value in the last element as the pivot x .

Show the lists L(ess), E(equal) and G(reater), and track the value of k until the median is found.