

## Elyas ~~Adi~~ Algorithms

7.1) for number #5 Radix Sort.

Finding max Length  $\rightarrow O(n)$

Bucket Sort from right to left  
 $O(n+1)$

iterates  $n$  times.

Time complexity =  $O(n)$

Space Complexity

storing in array =  $O(n)$

tree for bucket =  $O(n)$

worst case  $O(n)$

Sorted best case =  $O(n)$

Space =  $O(n)$

#6 Word Pattern

delimiter is splitting string

Splitting = Constant  $O(1)$

Checking pattern & word match =  $O(1)$

iterating =  $O(n)$

Hashing  $O(1)$

and Set  $O(1)$

Time =  $O(1)$

Space: Words in array =  $O(n)$

Storing in map =  $O(n)$

Space =  $O(n)$