

Name	ID

No#1: Write the outputs of the following string operations are correct or incorrect. If correct put the \checkmark sign in the result column. For the incorrect output put the \times sign on the result column and write the correct output in the corresponding column.

String Operations with Output	Result	Correct Output
SUBSTRING('Data Manipulation', 6, 11) = 'Manipulation'		
INDEX ('ABCDEFGG', 'ECG') = 5		
INSERT('ECFGS', 0, 'AB') = 'ABCDEF'		
S = 'Data Structure' SUBSTRING(S, 6, 4) // SUBSTRING(S, 10, 5) = 'Structure'		

No#2: Consider the pattern $P = \text{'aacbabb'}$. Now, construct the table and the corresponding labeled directed graph used in the 'fast' or second pattern-matching algorithm.

No#3: Fill in the gaps with the appropriate information:

Algorithm 4.6: (Binary Search) Here DATA is a sorted array with lower bound LB and upper bound UB, and ITEM is a given item of information. The variables BEG, END, and MID denote, respectively, the beginning, end, and middle locations of a segment of elements of DATA. This algorithm finds the location LOC of ITEM in DATA or sets LOC = NULL.

1. [Initialize segment variables.]
Set BEG := END := and MID = INT((BEG +END)/2).
2. Repeat Steps 3 and 4 while and DATA[MID] \neq ITEM.
3. If then:
Set END := MID - 1.
Else:
Set
[End of If structure.]
4. Set MID :=
[End of Step 2 loop.]
5. If DATA[MID] = ITEM, then:
Set LOC := MID.
Else:
Set LOC := NULL.
[End of If structure.]
6. Exit.

No#4: Sort the following numbers using Counting sort.

0	4	2	2	0	1	1	0	1	4	0
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X = W O M E 6 Y = E M P O W E R M E N T

[illegible]