[closed] Suffix Trees

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Hello guys,
is there a tutorial for implementation and applications of suffix tree data-structure ?? or some paper or any link that helps you understand ?? I couldn't find much of it !,
And also are suffix array and suffix trees two different things ??
it'd be helpful if anybody can provide details regarding that and also some problems for solving - related to suffix trees/arrays !!

Thank you :) !

data-structure tree suffix-array

edited 23 Jul '13, 21:55
admin ♦♦
10.9k●346●472●486

asked 16 May '13, 11:03
mecodesta
354●15●18●27
accept rate: 0%

The question has been closed for the following reason "The question is answered, right answer was accepted" by bugkiller 27 May '13, 00:20

2 Answers: oldest newest most voted

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-- **Are Suffix Array and Suffix Trees two different thing?**

Yes, they are two different things.Suffix Array is an efficient alternatives to Suffix Tree. Read **More.

-- **Is there any tutorial for suffix Arry data-structure ?**

There are many:

I personally like Suffix arrays: A new method for on-line string searches , by Udi Manber and Gene Myers.

The neat implementation of above paper in C++ can be found at TopCoder Forum.

-- **Is there a tutorial for implementation and applications of suffix tree data-structure ?**

Suffix arrays - a programming contest approach is the best implementation/application tutorials for suffix array across Internet.

C++ implementations of some of the popular suffix Array problems are available at : my blog.

Fastest or linear time implementation of Suffix array construction using DC3 algorithm: Source code in C++ is available at last few pages of this PDF . It helped me to achieve best run-time at SPOJ.

-- **Can you lists few suffix trees/arrays related problems for solving?**

	Problem Name		Online Judge	Year	Contest
1	Glass Beads	Categories	SPOJ		
2	New Distinct Substrings	Categories	SPOJ		
3	Stammering Aliens	Categories	Live Archive	2009 Europe - Southwestern	
4	Distinct Substrings	Categories	SPOJ		
5	Suffix Array	Categories	SPOJ		
6	I Love Strings!!	Categories	UVA		
7	Minimum Rotations	Categories	SPOJ		
8	Longest Common Substring	Categories	SPOJ		
9	GATTACA	Categories	UVA		
10	Glass Beads	Categories	UVA		
11	Lexicographical Substring Search	Categories	SPOJ		
12	Petr#	Categories	Codeforces	Codeforces Beta Round #86 (Div. 1 Only) & Codeforces Beta Round #86 (Div. 2 Only)	
13	String	Categories	Codeforces	Codeforces Beta Round #94 (Div. 1 Only) & Codeforces Beta Round #94 (Div. 2 Only)	
14	Martian Strings	Categories	Codeforces	Codeforces Round #106 (Div. 2)	
15	Deletion of Repeats	Categories	Codeforces	Codeforces Beta Round #19	

16	Genetic engineering	Categories Codeforces	Yandex.Algorithm 2011 Round 2
17	String	Categories Codeforces	Codeforces Beta Round #92 (Div. 1 Only)
18	Little Elephant and Strings	Categories Codeforces	Codeforces Round #129 (Div. 1)
19	Cyclical Quest	Categories Codeforces	Codeforces Round #146 (Div. 1) & Codeforces Round #146 (Div. 2)
20	Fence	Categories Codeforces	Codeforces Round #144 (Div. 1)
21	Life Forms	Categories UVA	
22	Code Theft	Categories UVA	
23	Number of Palindromes	Categories SPOJ	
24	Palindromes	Categories SPOJ	
25	Level Of Difference	Categories CODECHEF	
26	Repeated String	Categories CODECHEF	

link | award points edited 26 May '13, 19:43 answered 16 May '13, 13:53

ritesh_gupta ♦
3.6k●4●25●49
accept rate: 27%

Love you man <3 !! thanks a million, really really helpful !!!

mecodesta (19 May '13, 03:12)

@ritesh_gupta i went through the paper, your blog, and that PDF about "suffix arrays in contest programming" - the PDF kind of follows a different implementation for suffix arrays .. from the one mentioned in your blog/topcoder tutorial ! i just have a doubt about which one is efficient !! the one mentioned in the PDF seems simple but i'm not sure if it'll squeeze through tough time constraints under a java implementation !

mecodesta (23 May '13, 07:05)

PDF one is easy implementation. Mine and TC is bit tough . The fastest implementation is DC3 Algortithm For Suffix Array.The code is given in last pages of this pdf http://algo2.iti.kit.edu/documents/jacm05-revised.pdf

Don't worry about implementation. Just knw how to code - 1. Suffix Array construction. 2. Standard LCP array 3.LCP between any suffixes. With these three things u can solve any suffix array question

ritesh_gupta ♦ (26 May '13, 19:39)

@ritesh_gupta great job man...is there some tutorials,set of questions to practice for dyanamic programming...thanx in advance :)

newton12 (29 May '13, 10:43)

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@mecodesta >> You can try these tutorials idea based, C implementation; and these problems: this, that.

link | award points answered 16 May '13, 11:55

bugkiller
8.5k●19●48●98
accept rate: 9%

@bugkiller , it was helpful ! thanks !!

mecodesta (16 May '13, 13:27)

9 @mecodesta: Please show some love by voting up an answer if it was helpful to you. :)

admin ♦♦ (16 May '13, 16:52)

@admin : sure thing :D

mecodesta (19 May '13, 03:11)

Understanding Trie and its applicatio