# SNS COLLEGE OF ENGINEERING Coimbatore-107



# COURSE NAME: ANALYSIS OF ALGORITHM II YEAR/ IV SEMESTER UNIT – IV STRING MATCHING ALGORITHM

**Topic** 

**Naive String Matching Algorithm** 



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Marie otrona Matchina
Naive String Matching Bota
Unit 4 Naive String Matching Date Page Page
It is the complest mother
to ford pattern (Substaine)
It is the Simplest method to find pattern (Substring) in a text.
On o'don'
Consider.
1) = lext of Length
i). T = Text of Length in 2). P = Pattern of Length in.
) Search from beginning of the
feset.
=) For each position 'i' from
o to n-m:
#. Compare the substring
7 [i. i+m-1] with p.
the position.
Example e
Example:  01 234567891011 12 15 14151675  Text: ABABABCABABABCABAB
pattern: "ABABC"
Step to:
Compare pattern with position
of no match.
alen 2: At position 2's
Compared & matched (9-6)
Step 3: At position (9-5)  Compared & matched (9-13)
Compared & matched (9-13)



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, with ma	
plgonthm:	144)
plgonthir.	
tain it	-+)
for Cj=0; å < m; j+	
and the same of th	7
13 (T[i+j]!=Pl	207)
:2 (TLIT): - Pl	
break;	
6200	-
2	
(iram)	
(j = m)	1 1 2 1 2 2
print (" patter for	and at indext i);
P.O.	
2	
Analysis	
finally of a	
> Time Complexity :	
In worst case, it	compares.
m worst see	6 / 60000000000000000000000000000000000
all m' characters.	for each positions
* Almost 'm com	panisons at
W. 111103C	To be
each n-m+1 position	leads on
	Art Control of the Co
Q(n *m)	
In Best case : Algo	within companies
In Best case: Algo Only the first cho Position & fails look	- sterr at each
only the first cho	Back of cas
Rosition de Joila land	to 'n' companson
the fact of	
OCh)	
In Average case: p	atterm of text
Therage case: p	21100112
are randomly distrib	ted & don't match
and only distrib	U. C.
lead to o(n)	



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	Dote Page
	Space Complexity:  It uses few Variables (i)
	Et No extra desay or Data Structure needed.
And the second second	Structure needed.
	S(n) = O(1) Constant
1	