Bennett University Greater Noida
Department of CSE

Subject Lab: Algorithms & Complexity **Lab Duration: 10:40-12:35**
Lab Code: ECSE202L **Max Marks: 10**

Submission Guidelines:

1. The purpose of the course is to learn how to analyse the complexity of the algorithm.
2. You are supposed to do this assignment on your own. While you may discuss the problem with other students, you are not allowed to copy any part of the code from other students or to copy from any other source. Any form of **plagiarism** will not be tolerated. If there is substantial overlap between the codes submitted by two students, both will get reduction in the course grade.
3. The assignment should be **shown to lab instructor** in the lab session and **must be submitted** on LMS by **given date**.

It should also carry the following statement:

"***I have done this assignment on my own. I have not copied any code from another student or any online source. I understand if my code is found similarto somebody else's code, my case can be sent to the Disciplinary committee of the institute for appropriate action.***"

Lab Assignment 10

Q1. Consider the following string and pattern.

S = HACKHACKHACKHACKITHACKEREARTH

P1 = HACKHACKIT

P2 = HACKHACK

Here S is the string and P is the Pattern to be searched in String S :

a) Naïve String Matching Algorithm
b) Rabin Karp Algorithm
c) Knuth Moriss Pratt Algorithm

Expected Output:

a) Match found by Naïve String Matching Algorithm at position 12
b) Match found by Rabin Karp Algorithm at position 12.
c) Match found by Knuth Moriss Pratt Algorithm at position 12.

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Write a Java Code to implement the above three algorithms and store the output of individual algorithm in lab10_output.txt. Also compare the String matching algorithms in following format.

	Naïve String	Rabin Karp Algorithm	KMP Algorithm
Number of Iterations			
Number of Comparisons			
Time Taken by Algorithm			