

Data Structures and Algorithms Lab

10. Substring Search

Subject Code: 19ECSP201

Lab No: 10

Semester: III

Date: 17 Oct 2019

Batch: C

Question: Operating on Substring Search

Objective: Realizing the substring search algorithms and their importance

This is a team activity. Following is the activity detail:

- The class will be divided into teams of four. Each team must comprise of 2 from C1 batch and two from C2 batch
- On the 16th of October, two students of C1 batch will solve a given **subtask 01** from 9.00 am to 11.59 am
- On the 17th of October, **subtask 02** will be floated as a take-home task. The team will solve this task together.
- On the 18th of October, two students of C2 batch will solve **subtask 03** from 1.30 pm to 4.30 pm
- On 18th October, the team together will solve the **subtask 04** from 4.30 pm to 5.45 pm
- Each subtask will be a continuation and an add-on to the previous task

Sub-Task 02:

You have been given with 7 input files. Read the files and perform a brute force string search for the 4 patterns given in Sub Task 1. Make a note of number of comparisons done for each case if the search is successful. In case if the file has pattern occurring more than once, record the first occurrence.

The seven input files can be downloaded from here:

<https://github.com/prakashbh/dsa-2019/tree/master/labs/lab10>

Populate the given table below. (use a spreadsheet application)

Si. No	Pattern	Input file	Brute Force – Number of Comparisons
1	abab	input1.txt	
		input2.txt	
		Input3.txt	
		Input4.txt	
		input5.txt	
		Input6.txt	
		Input7.txt	
2	abbba	input1.txt	
		input2.txt	
		Input3.txt	
		Input4.txt	
		input5.txt	
		Input6.txt	
		Input7.txt	
3	cccc	input1.txt	
		input2.txt	
		Input3.txt	
		Input4.txt	
		input5.txt	
		Input6.txt	
		Input7.txt	
4	xyzxyx	input1.txt	
		input2.txt	
		Input3.txt	
		Input4.txt	
		input5.txt	
		Input6.txt	
		Input7.txt	

**** Happy Coding ****