

Programming & Data Structure Laboratory (CS112)

Lab Exercise 08

Indian Institute of Technology, Patna

June 09, 2022

Submission Deadline: **5:00 pm 09/06/2022**

Instructions:

- Proper indentation is mandatory.
- You should comment the statements whenever necessary, to make the code understandable.
- Answers files: **8_1.c, 8_2.c**

Total Marks: 50

Do not use String.h or any other built in string function

Q1: Implement the following string manipulation methods using non-recursive functions (7+8+10):

- a) String comparison: C Function to compare two strings s1 and s2. They should return < 0 if s1 < s2, 0 if s1 = s2, or > 0 if s1 > s2.
- b) String prefix: C Function to test whether a pattern string is a prefix of another text string.
- c) Substring matching: C Function that tests whether a pattern string is a substring of a text string. The function returns -1 if the pattern is not a substring, otherwise it returns the index of the starting position (first occurrence) of the pattern in the text.

Your C program should give above three choices to the user and then according to the choice of the user take two input strings and print suitable output.

Q2: Implement the same three methods of Q1 using only recursive functions. (7+8+10)