

EECS 2032

LAB 6 Winter 2020

The code will be checked for plagiarism.

Problem 1

Write a program to check if a string S1 is a substring of another string S2

Consider the following example

S1=ABCF

S2=lkopiABCFlkj

Then S1 is a substring of S2

For this part, do not use any string functions. Any use of a standard string function in <string.h> is an automatic zero for the entire lab.

Specifications

- S1 and S2 are entered on two different lines
- There is no white space characters in the strings
- S1 is on the first line followed by S2
- The output is either YES or NO followed by a new line

Submit as l6a.c to LAB6

Problem 2

Write a program to show the maximum overlap between two strings. The maximum overlap is the maximum suffix of the first string that is the same as a prefix of the second string

Consider the two strings S1="ABRKLSL" and S2="LSLPR", what is the maximum overlap between them

```
ABRKLSL
  LSLPR      Overlap of 0 (trivial case) no overlap (shift 1)
ABRKLSL
  LSLPR      Overlap of 1 (shift 1)
ABRKLSL
  LSLPR      No overlap (shift 1)
ABRKLSL
  LSLPR      Overlap of 3 (shift 1)
ABRKLSL
  LSLPR      No overlap (shift 1)
ABRKLSL
  LSLPR      No overlap (shift 1)
```

Then the maximum overlap is 3

Then, you have to repeat the same thing by exchanging these two strings (S1 and S2) and get the maximum of the 2 maximums

```
LSLPR
  ABRKLSL    over lap of 0 (shift by 1)
LSLPR
  ABRKLSL    No overlap
LSLPR
  ABRKLSL    No overlap
LSLPR
  ABRKLSL    No overlap
LSLPR
  ABRKLSL    No overlap
LSLPR
  ABRKLSL    No overlap
```

The maximum overlap is 3

Specifications

- S1 and S2 on two lines (stdio)
- The output is an integer followed by a new line

Submit as l6b.c