Question and Answer #3

Topics

Lab 4 review and discussion.

Content

1. Understanding the C-Code:



* 1. A string search function that prints the index where an input pattern is encountered in a string.
  2. Requires the strlen function.
  3. Iterates through string (txt) and looks forward from the character indexed by the iterator (i) and checks if a pattern is found.
     1. An n-sized pattern is found if n characters in the string after character at index i match.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| txt | A | T | J | T | I | O |  |
| i=0 | T (j=0) |  |  |  |  |  |  |
| i=1 |  | T (j=0) | I (j=1) |  |  |  |  |
| i=2 |  |  | T (j=0) |  |  |  |  |
| i=3 |  |  |  | T (j=0) | I (j=1) | O (j=2) | Checkbox Checked |

* + 1. Example above would print “Pattern found at index 3 \n”
  1. Example in “main” will find index match at 0, 9, and 13.

1. RISC-V translation:
   1. String length function:



* 1. Print custom procedure:



* 1. String search procedure:



* 1. Main procedure:

