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Data Structures and Algorithms II

Project 5

User's Manual

Setup and Compilation

1. Download and unzip the submission from eLearning on a Linux box in the multi-platform lab.
2. The submission includes:
   - main.c
   - part1.c
   - part2.c
   - functions.c
   - main.h
   - part1.h
   - part2.h
   - functions.h
   - multipleSequences.txt
   - twoSequences.txt
   - FunctionalDecomposition.txt
   - makefile
   - Users Manual for Project5.docx (This document)
3. Environment: This program was designed and tested on Eclipse. It has also been tested in in the Linux lab and does work as expected.
4. This program includes a Makefile. At the command line in Linux, type make. The program produces an executable entitled "Project5".

Running the program

Be sure the following files are in the same directory as the executable: "multipleSequences.txt" and "twoSequences.txt". While in the Linux Lab, navigate to the folder containing all of the files associated with Project4 and issue the command "make" followed by "./project5". No user input is required as both parts 1 and 2 will execute automatically.   Notice that I adjusted the LCS algorithm in part 1 and part 2 to run for x/y[0...n-1] instead of [1...n]. In the input text files, do not include throwaway character, ie. If you want string "dog" string must loaded as "dog" from text file.

Output: All output goes to the console. Output will be similar to this:

```
-    -    -    -    -    -    D    D    D    D
16   -    -    -    -    -    -    -    -    -    -
-    -    -    -    -    -    H    D    D    -    -
17   -    -    -    -    -    -    -    -    -    -
-    -    -    -    -    -    -    D    D    -    -
18   -    -    -    -    -    -    -    -    -    -
-    -    -    -    -    -    -    -    L    -    -
19   -    -    -    -    -    -    -    -    -    -
[bml42@cs-ssh project5]$ ./Project5

Part1


C ARRAY
     a    d    d    b
  0  0    0    0    0
d 0  0    1    1    1
c 0  0    1    1    1
a 0  1    1    1    1
b 0  1    1    1    2

String 1: dcab
String 2: addb
LCS of dcab and addb: db

Part2

      1    2    3    4    5    6    7    8    9    10   11   12   13   14   15   16   17   18   19
1     -    H    M    D    D    D    D    L    D    D    D    D    D    D    D    D    D    D    D
2     -    -    L    D    D    D    D    L    D    D    D    D    D    D    D    D    D    D    D
3     -    -    -    D    D    D    D    D    D    D    D    D    D    L    D    L    L    D    D
4     -    -    -    -    D    D    D    D    D    D    D    D    D    D    D    D    D    D    D
5     -    -    -    -    -    L    L    D    D    L    D    M    D    D    D    D    D    D    D
6     -    -    -    -    -    -    H    D    D    D    D    D    D    D    D    D    D    D    D
7     -    -    -    -    -    -    -    D    D    L    D    D    D    D    D    D    D    D    D
8     -    -    -    -    -    -    -    -    D    D    D    D    D    D    L    D    D    D    D
9     -    -    -    -    -    -    -    -    -    D    D    D    D    D    D    D    D    D    D
10    -    -    -    -    -    -    -    -    -    -    M    D    D    D    D    D    D    D    D
11    -    -    -    -    -    -    -    -    -    -    -    D    D    D    D    D    D    D    D
12    -    -    -    -    -    -    -    -    -    -    -    -    D    D    D    D    D    D    D
13    -    -    -    -    -    -    -    -    -    -    -    -    -    D    D    D    D    D    D
14    -    -    -    -    -    -    -    -    -    -    -    -    -    -    H    D    D    D    D
15    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    D    D    D    D
16    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    H    D    D
17    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    D    D
18    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    L
19    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -
[bml42@cs-ssh project5]$
```