Gorilla Report

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Results

Our implementation produces the expected results for all input files.

Implementation details

Our solution follows the pseudo-code described on page 282 of *Algorithm Design* by Kleinberg and Tardos and runs in O(mn) time. Where m is the number of elements in the first sequence and n is the number of elements in the second one. Our solution builds an m x n array and looks for the shortest path between the opposite corners. At worst, we spend constant time on each element of the m x n graph. Our solution is also O(mn) in space, but could be optimized to O(m + n). This could be done by only generating a small part of the array (the previous and current column) to fill a certain entry of the array.

How to run our solution

1) How to test our solution on a single file:
   a) From the terminal, run

   ```
   python3 gorilla.py <path to data folder>/<name of file>.txt <path to data folder>/BLOSUM62.txt
   ```

   b) Output of the test will be in `<path to data folder>/<name of file>-test-out.txt`

2) How to run all tests:
   The testScript is required to be in the data folder where all the input files are.
   a) From the terminal, run the shell script

   ```
   sh scriptExample.sh
   ```