Alignment Exercise

CMSC423 Fall 2015

October 27, 2015

Name(s):
UID(s):

Question 1. What is the score of this global alignment for strings `canon` and `gannon` with parameters:
$match = 2$, $mismatch = -1$, $gap = -5$.

```
cano-n
|||| |
gannon
```

Question 2. How would I set parameters *match*, *mismatch* and *gap* to solve the LONGEST COMMON SUBSEQUENCE PROBLEM?

Question 3. Calculate an optimal global alignment for strings `canon` and `gannon` with the same parameters as question 1. Show DP table (don't need to fill scores in completely), indicate path for resulting alignment, and write the final alignment.

Question 4. (a) Would we get the same answer with mismatch penalty -10? (b) Would we get the same answer with mismatch penalty -100? (c) What is the smallest mismatch penalty that gives alignment in (b)?

Question 5. What is the score of this local alignment, with the same parameters:

```
an-on
|| ||
annon
```