ECS 129
Assignment: Option1 (Programming)
Genes and Proteins

Due: Friday, February 26th, 2016

Writing a GeneFinder program

A. Write a program (your choice for the programming language) that will:
   - Read a DNA sequence, given from 5’ to 3’,
   - Generate the sequence of the complementary strand,
   - Find the longest possible “gene” (or open reading frame) for that DNA;
     Remember, there are 6 possibilities.
   - Transcribe this “gene” into mRNA,
   - Translate this mRNA into an amino acid sequence, using the one letter code for
     amino acid name

B. Test this program on the sequence:
   5’ TCAATGTAACCGCTACCCGGAGCTCTGGGCCC
     AAATTTCATCCACT 3’

You should provide:
   - A small report that shows the output of your program for the test case B
   - The source code of the program itself