

This Python script processes DNA sequences from a given SARS-CoV-2 sequence file and a codon mapping table file to translate them into protein sequences. The program performs several key operations to analyze both the forward and reverse sequences of the DNA. This script is useful for bioinformatics tasks, such as identifying open reading frames (ORFs) in a DNA sequence and predicting possible protein products from both strands of the DNA. By processing both the forward and reverse complements, the script effectively covers all six reading frames (three in the forward direction and three in the reverse), providing comprehensive coverage for protein translation analysis.