A 10

Due Nov 8, 2021 by 4pm **Points** 100 **Submitting** a text entry box or a file upload **Available** until Nov 8, 2021 at 11:59pm

This assignment was locked Nov 8, 2021 at 11:59pm.

Assignment **Notebook** (https://canvas.harvard.edu/courses/95534/files/13621044/download?download_frd=1) and **PDF** (https://canvas.harvard.edu/courses/95534/files/13621045/download?download_frd=1)

Data

word.txt (https://canvas.harvard.edu/courses/95534/files/12801942/download?download_frd=1)

pACYC184.fasta (https://canvas.harvard.edu/courses/95534/files/13609322/download?download_frd=1) **pKLMF-FX.fasta** (https://canvas.harvard.edu/courses/95534/files/13609320/download?download_frd=1) **ecoli.fasta** (https://canvas.harvard.edu/courses/95534/files/13609323/download?download_frd=1) **Human22.fasta** (https://canvas.harvard.edu/courses/95534/files/13609337/download?download_frd=1)

Overall Grading Rubric: Criteria for deductions per problem

1. Solves problems descriptions
2. Brief Comments appear in appropriate places and meaningful variable names are used.
3. Logic concise, uses Python syntax and Python abilities appropriately
4. Discretionary deductions
5. Delivery: are the appropriate files in the right places

Assignment 10

Criteria	Ratings		Pts
P2: Word Length Write a function wordLengths() that takes a path to a list of words and returns a list with tuples holding the number of words of each word length. Sort your list by length of word.	**20 pts** **Full Marks**	**0 pts** **No Marks**	20 pts
P3: Draw a histogram of the word lengths Use matplotlib to draw a histogram of the word lengths. You may want to peek at the documentation **https://matplotlib.org/3.1.1/gallery/statistics/hist.html (https://matplotlib.org/3.1.1/gallery/statistics/hist.html)** or at this tutorial **https://datatofish.com/plot-histogram-python/ (https://datatofish.com/plot-histogram-python/)** Does the histogram lineup with your results from problem 1?	**20 pts** **Full Marks**	**0 pts** **No Marks**	20 pts
P4: Count Pairs Read in a Fasta file holding a single DNA sequence, and count the number of times each of the 16 possible pairs of bases appear.	**20 pts** **Full Marks**	**0 pts** **No Marks**	20 pts
P5: The Extension School Count the number of links on the Extension School landing page. Classify them as Absolute or Relative. Count the number of links that appear exactly twice. Display all links that appear more than twice, and display their frequency.	**20 pts** **Full Marks**	**0 pts** **No Marks**	20 pts

Criteria	Ratings		Pts
P1: Subslice Write a Boolean function that decides if list A is a subslice of B, so that A = B[x:y]	**20 pts** **Full Marks**	**0 pts** **No Marks**	20 pts
			Total Points: 100