START OF QUIZ
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Question 1

Topic: Lecture 3
Source: Lecture 3

Why do we not care about the extra space required to create a reverse index? (2 reasons) (1)

Question 2

Would you expect a higher or lower frequency of passive voice constructions in legal documents compared to casual conversation? Briefly explain your reasoning. (Remember that passive voice is a structure like "the tree was cut down", inverting the subject and object). (1)

Question 3

Topic: Lecture 2
Source: Lecture 2

If a language has a highly synthetic morphology (many affixes), would you expect it to have a higher or lower Type-Token Ratio (TTR) than a language with less rich morphological structure? Briefly explain why. (1)

Question 4

How does Zipf's law help explain the distribution of word frequencies in a corpus? What impacts does that have on our algorithms? (1)

Question 5

Topic: Lecture 3
Source: Lecture 3

When we nest deep structures in dictionaries, we lose their O(1) benefits. Can you think of a better way to represent complex data sets? (1)

Question 6

Topic: Lecture 1
Source: Lecture 1

Write a function that capitalizes the first letter of each word in a string, without using the .title() method or any external libraries. What are some assumptions that you are making? (2)

Question 7

Topic: Lecture 1
Source: Lecture 1

You are given a sentence. Write a function to count how many words in the sentence start with a vowel, without using loops or list comprehensions. (2)

Question 8

In French, negation is often indicated by "ne ... pas" (ie, "je ne parle pas" - "I am not speaking"; "tu ne conduis pas" - "You are not driving", etc.). However, in speech, one of the two is often dropped: "je ne parle." or "tu conduis pas.". Using this information, how would you determine whether a corpus was composed of written or spoken French? You don't need to write the code, but explain the logic that you would use to come to this conclusion. (2)

Question 9

Topic: Long
Source: Lecture 1

Write a function that validates if a string matches a phone number format, such as (123) 456-7890. What types of invalid inputs should the function check for? Are there edge cases we would be willing to accept? How would we handle those? Write 3 test cases - 2 that should pass, and one that should fail. (3)

END OF QUIZ