START OF QUIZ
Student ID:
22039382,Amal,Cenith

Question 1

Topic: Lecture 6
Source: Lecture 6

What kinds of tags might be useful in the following text (describe at least two): ”But you liked Rashomon!” ”That’s not how I remember it!” (1)

Question 2

Topic: Lecture 8
Source: Lecture 8

Why should you get into the habit of using ”with open()”? Are there any downsides? (1)

Question 3

Topic: Lecture 8
Source: Lecture 8

Why do Python programmers like working with (t/c)sv files? When are they appropriate, and what advantages do they provide over .txt files? (1)

Question 4

Topic: Lecture 5
Source: Lecture 5

Write a regex pattern that matches any valid email address (i.e., with basic rules like user@domain.com). What challenges might you face in accurately matching all possible email formats? (1)

Question 5

Topic: Lecture 7
Source: Lecture 7

What is the difference between a stem and a lemma? What impacts does that have on our algorithms? (1)

Question 6

Topic: Lecture 5
Source: Lecture 5

Imagine we have a spell-checker that can identify common misspellings of words by replacing certain letters with a capture group that contains letters that are nearby on the keyboard. How aggressive of a regex would we want to write for this (ie, how many letters in the word would we want to replace with a group)? Explain. (2)

Question 7

Topic: Lecture 7
Source: Lecture 7

Do you think that we could do lemmatization before machine translation? Provide 1 argument that for why it might help, and one for why it might make things more complicated. List any assumptions that might make your answer more complicated. (2)

Question 8

Topic: Lecture 6
Source: Lecture 6

Consider using XML to represent a machine learning model's architecture. What XML tags might be useful for representing layers, activation functions, and connections between layers (you don't need to describe a deep-learning architecture - describe one you're familiar with)? If this doesn't seem possible, explain why not. (2)

Question 9

Topic: Long
Source: Lecture 6

You've been hired by a company that is working with their own version of XML that they call "NQAXML" (Not-Quite-As-eXtensible Markup Language). It provides stronger restrictions on tag names (they must be all uppercase, and no longer than 10 characters long), and it doesn't allow nested spans with identically-named tags. Like HTML, it also has a set of tags that must appear in every document. Describe your process for creating a data validator that takes an XML file, and ensures that it satisties the rules of NQAXML. (3)

END OF QUIZ