Q1. Does assigning a value to a string's indexed character violate Python's string immutability?

Ans=>no

Q2. Does using the += operator to concatenate strings violate Python's string immutability? Why or why not?

Ans=>yes because it is adding the another string to string

Q3. In Python, how many different ways are there to index a character?

Ans=> str[-1], str[1 : 5 : 2]

Q4. What is the relationship between indexing and slicing?

Ans=>indexing gets a character from specific index and slicing gives as range of characters from given range of indexes

Q5. What is an indexed character's exact data type? What is the data form of a slicing-generated substring?

Ans=>both are string

Q6. What is the relationship between string and character "types" in Python?

Ans=> trings are arrays of bytes representing Unicode characters. However, Python does not have a character data type, a single character is simply a string with a length of Square brackets can be used to access elements of the string

Q7. Identify at least two operators and one method that allow you to combine one or more smaller strings to create a larger string.

Ans=>addition operator

Q8. What is the benefit of first checking the target string with in or not in before using the index method to find a substring?

Ans=> it will not give the error index out of range.

Q9. Which operators and built-in string methods produce simple Boolean (true/false) results?

Ans=> islower()