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

Yes, it violates the python’s string immutability.

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

No, it does not violates the string’s immutability as we just concatenating the existing string with a new string. Here, we are not assigning a value to the string as in previous case. We are just concatenating a string with the help of += operator which is quiet normal in python.

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

We usually index a character by square braces []

Q4. What is the relationship between indexing and slicing?

Relationship between indexing and slicing is that slicing is performed on indexes of the string

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

String

The form of slicing generated substring is class

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

A character is simply a single character of type string in python.

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

Operators used are:

1. +
2. +=

Method used is:

Concat()

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?

The benefit is that we can identify that if the words/keywords already exists in target string.

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

Operators that produce simple Boolean results are:

1. AND
2. OR
3. NOT

Method to produce Boolean results are:

1. Bool()