20 coding questions covering variables, data types, and strings in Python:

- 1. Variable Assignment: Assign the value 10 to a variable x and print its value.
- 2. Data Types: Print the data type of the variable x.

$$x = 10$$

3. String Concatenation: Concatenate two strings "Hello" and "World" and print the result.

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string1 = "Hello"
string2 = "World"
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- 4. String Length: Find and print the length of the string "Python".
- 5. String Indexing: Print the first character of the string "Python".
- 6. String Slicing: Print the first three characters of the string "Python".
- 7. String Reversal: Reverse the string "Python" and print the result.
- 8. String Upper/Lower Case: Convert the string "Hello" to uppercase and print the result.
- 9. String Replacement: Replace the word "World" with "Universe" in the string "Hello World" and print the result.
- 10. String Formatting: Create a string using string formatting to include the values of variables name and age.
- 11. Int to String Conversion: Convert the integer 123 to a string and print the result.
- 12. String to Int Conversion: Convert the string "456" to an integer and print the result.
- 13. Float to Int Conversion: Convert the float 3.14 to an integer and print the result.
- 14. Int to Float Conversion: Convert the integer 42 to a float and print the result.
- 15. Variable Swapping: Swap the values of variables a and b.
- 16. String Splitting: Split the string "Hello, World" by comma and print the result.
- 17. String Joining: Join the list ['apple', 'banana', 'cherry'] into a single string separated by a comma and print the result.
- 18. String Count: Count the occurrences of the letter 'o' in the string "Python Programming".
- 19. String Formatting with f-strings: Use f-strings to create a formatted string with the values of variables name and age.
- 20. String Comparison: Compare the strings "apple" and "banana" and print whether they are equal or not.