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Assignment:Inbuilt-strings Assignment Questions

1. What is the purpose of the len() function in Python, and how can it be used with strings?

Ans:

The `len()` function in Python is used to determine the length of an object, such as a string, list, tuple, or other iterable. When used with strings, `len()` returns the number of characters in the string.

Example:

```python
my_string = "Hello, World!"
print(len(my_string))  # Output: 13
```

 2. How can you concatenate two or more strings in Python, and can you provide an example of string concatenation?

Ans:

In Python, you can concatenate (join) two or more strings using the `+` operator or the `join()` method.

Example:

```python
# Using the + operator
str1 = "Hello"
str2 = "World"
result = str1 + ", " + str2 + "!"
print(result)  # Output: Hello, World!

# Using the join() method
str_list = ["Hello", "World"]
result = ", ".join(str_list) + "!"
print(result)  # Output: Hello, World!
```

 3. What is string slicing in Python, and how can you extract a portion of a string using this method?

Ans:

String slicing allows you to extract a portion (substring) of a string by specifying a start and end index. The syntax for slicing is `string[start:end]`, where `start` is the index to begin the slice, and `end` is the index to stop the slice (not inclusive).

Example:

```python
my_string = "Hello, World!"
substring = my_string[7:12]  # Extracts "World"
print(substring)  # Output: World

# Omitting start or end
substring = my_string[:5]  # Extracts "Hello"
print(substring)  # Output: Hello

substring = my_string[7:]  # Extracts "World!"
print(substring)  # Output: World!
```

4. How can you change the case of a string in Python, and can you provide examples of both making a string all uppercase and all lowercase?

Ans:

You can change the case of a string using the `upper()` method (for converting to uppercase) or the `lower()` method (for converting to lowercase).

Examples:

```python
my_string = "Hello, World!"

# Convert to uppercase
uppercase_string = my_string.upper()
print(uppercase_string)  # Output: HELLO, WORLD!

# Convert to lowercase
lowercase_string = my_string.lower()
print(lowercase_string)  # Output: hello, world!
```

5. What does the split() method do in Python, and how can you split a string using a specific delimiter?

Ans:

The `split()` method in Python divides a string into a list of substrings based on a specified delimiter. If no delimiter is provided, it defaults to splitting by whitespace.

Examples:

```python
# Splitting by whitespace (default)
my_string = "Hello World Welcome"
words = my_string.split()
print(words)  # Output: ['Hello', 'World', 'Welcome']

# Splitting by a specific delimiter (comma in this case)
my_string = "Hello,World,Welcome"
words = my_string.split(',')
print(words)  # Output: ['Hello', 'World', 'Welcome']
```