

Python Concatenation - Study Sheet

Q: What is concatenation in Python?

A: Concatenation means joining strings together using the + operator.

Code:

```
a = "Hello"
b = "World"

print(a + " " + b)
```

Output:

Hello World

Q: Can you concatenate strings and numbers directly?

A: No. Convert the number to a string first.

Code:

```
age = 25

print("I am " + str(age))
```

Output:

I am 25

Q: Can you use variables in concatenation?

A: Yes! You can concatenate string variables.

Code:

```
first = "Python"
second = "Rocks"

print(first + " " + second)
```

Output:

Python Rocks

Q: How to concatenate strings with newline?

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A: Use \n for a new line.

Code:

```
a = "Line 1"

b = "Line 2"

print(a + "\n" + b)
```

Output:

Line 1

Line 2

Q: Can you repeat strings using concatenation?

A: Yes, use * to repeat a string.

Code:

```
word = "Hi "

print(word * 3)
```

Output:

Hi Hi Hi

Q: Can you concatenate lists in Python?

A: Yes! Use + to join two lists.

Code:

```
list1 = [1, 2, 3]

list2 = [4, 5]

print(list1 + list2)
```

Output:

[1, 2, 3, 4, 5]

Q: Can you concatenate tuples in Python?

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A: Yes! Tuples can be joined using +.

Code:

```
t1 = (10, 20)
```

```
t2 = (30, 40)
```

```
print(t1 + t2)
```

Output:

```
(10, 20, 30, 40)
```

Q: Can you mix data types when concatenating (like list + tuple)?

A: No. The types must match. You cannot add a list and a tuple.

Code:

```
[1, 2] + (3, 4)
```

Output:

TypeError

Q: Can you repeat lists or tuples?

A: Yes. Use * to repeat lists or tuples.

Code:

```
[1, 2] * 2 = [1, 2, 1, 2]
```

```
(5, 6) * 3 = (5, 6, 5, 6, 5, 6)
```