Python Basics: Takeaways 🖻

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Syntax

COMMON ARITHMETIC OPERATORS

```
    Parentheses () : (5 / 5) + 5
    Exponent ** : 65 **5
```

• Multiplication * : 5 * 5

• Division / : 5 / 5

• Addition + : 5 + 5

• Subtraction - : 5 - 5

COMMON VARIABLE OPERATIONS

• Assigning a value directly to a variable:

```
integer_val = 5
float_val = 5.0
string_val = "5"
```

• Assigning the result of a calculation to a variable:

```
total = 5 + 5
average = (5 + 5 + 5) / 3
```

DISPLAYING VALUES

• Displaying a value:

```
integer_val = 5
print(5)
print(integer_val)
print(5 + 5 + 5)
```

• Displaying a value's data type:

```
integer_val = 5
print(type(integer_val))
```

LIST OPERATIONS

• Creating an empty list:

```
crime_rates = []
```

• Creating a list with values:

```
crime_rates = [749, 371, 828, 503, 1379]
```

• Appending a value to a list:

```
crime_rates = []
crime_rates.append(749)
crime_rates.append(371)
```

• Accessing individual elements in a list:

```
crime_rates = [749, 371, 828, 503, 1379]
cr_first = crime_rates[0]
cr_third = crime_rates[2]
```

• Working with the length of a list:

```
crime_rates = [749, 371, 828, 503, 1379]
length = len(crime_rates)
last_element = crime_rates[length-1]
```

• Accessing slices of values in a list:

```
crime_rates = [749, 371, 828, 503, 1379]
cr_slice = crime_rates[0:3] # Values at 0, 1, 2
```

Concepts

- When evaluating expressions, Python uses the <u>order of operations</u> rules from mathematics.
- Every value in Python has a data type associated with it. The common data types are:
 - Strings: "6"
 - Integers: 6
 - Floats: **6.0**

Resources

- <u>Documentation on all arithmetic operators</u>
- <u>List of reserved words in Python</u>
- <u>Documentation on lists</u>



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