**Intro to Python: Cheat Sheet**

If you get stuck while coding in Python, feel free to use this document to look up some of the functions and other things that we learned about.

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**Strings**

What are strings? In Python, strings are just a fancy way of describing data that is *text*. You can tell that something is a string when it is wrapped in “quotation marks”. Some examples of strings are:

“Hello, World!”

“I love Code Ninjas”

“123abc”

With a string, you can use the print function. The print function allows us to print text onto our screen.

*Example*:

>> print(“Hello, World!”)

Hello, World!

You can connect two strings together by putting a plus sign (+) between the two strings. When you’re connecting two strings, make sure that you include a space in one of your strings! If you don’t, the words in your strings will be stuck together!

*Examples:*

>> “Hello, ” + “World!”

‘Hello, World!’

>> “no” + “space”

‘nospace’

You can use a print statement to print two strings that are connected together.

*Example*:

>> print(“Super ” + “Mario”)

Super Mario

**Integers**

What are integers? In Python, integers are just whole numbers, like 1, 10, -25, or 123456. With these integers, Python can do basic math, like adding (+), subtracting (-), multiplying (\*), and dividing (/).

*Examples:*

>> 3 + 4

7

>> 0 – 5

-5

>> 2 \* 2

4  
>> 12 / 3

4.0

You can find the largest number in a set of numbers by using the max function, or the smallest number in a set of numbers by using the min function.

*Examples:*

>> max(9, 12, 0, 2)

12

>> min(12, 7, 11, 19, 10, 8, 4)

4

You can print an integer using the print function. We can also connect a string and an integer together, but first, we need to convert the integer into a string. To do this, we need to use the str function. If we forget to use the str function, we will get an error!

*Examples:*

>> print(10)

10

>> print(“McDavid wears number ” + str(97))

McDavid wears number 97

**Variables**

Variables are used to store data and give them a name so that you can use them later in your code. To create a variable and **assign** a value to it, you need to use the equal sign (=) and the following format:

variable = value

*Examples:*

>> x = 10

>> x

10

>> name = “Tristin”

>> name

‘Tristin’

There are many ways to use variables, but the three most common ways to use them are to **perform a computation**, **compute a new variable**, and to **update variables**.

*Examples:*

>> num = 11

>> print(num + 16)

27

>> new\_num = num + 12

>> new\_num

23

>> num = num + 10

>> num

21

>>

>> message = “of”

>> print(message + “ten”)

often

>> new\_message = message + “fer”

>> new\_message

offer

>> message = message + “ course”

>> message

‘of course’

**Inputs**

To get user input that you can use in your program, you can use the input function. Inside of the input function, type the question or prompt that you want to give the user inside of a string, and this question or prompt will be given to the user to answer when they run the program. Remember to include a space at the end of your prompt!

As well, to use this user input somewhere else in your program, remember to store it inside of a variable!

*Example*:

>> name = input(“What is your name? ”)

What is your name? Tristin

>> print(“Hello, ” + name + “!”)

Hello, Tristin!

You can also ask the user for integer inputs, but you need to convert the input from a string to an integer first. To do this, you can use the int function.

*Example*:

>> year = input(“What year were you born? ”)

What year were you born? 2002

>> year = int(year)

>> age = 2025 – year

>> print(“I think you’re ” + age + “ years old.”)

I think you’re 23 years old.