PYTHON FOR DATA SCIENCE CHEAT SHEET

Python Basics

Datatypes

- Numbers: a=2(Integer), b=2.0(Float), c=1+2j(Complex)
- List: a=[1,2,3,'Word']
- Tuple: a= (1,2,4)
- String: a="New String"
- Sets: a= {2,3,4,5}
- Dictionary: x= {'a': [1,2],'b': [4,6]}

Operators

Numeric Operator: (Say, a holds 5, b holds 10)

- a + b = 15
- a – b = -5
- a * b = 50
- 7.0//2.0 = 3.0, -11//3 = -4
- b/a = 2
- b % a = 0
- a**b =9765625

Comparison Operator:

- (a == b): not true
- (a!= b): true
- (a > b): not true
- (a > b): not true
- (a >= b): not true
- (a <= b) is true

Boolean Operator:

- a and b
- a or b
- not a

Operations

List Operations

- List=[]: Defines an empty list
- list[i]=a: Stores a at the ith position
- list[i]: Retrieves the character at the ith position
- list[i:j]: Retrieves characters in the range i to j
- list.append(val): Adds item at the end
- list.pop([i]): Removes and returns item at index i

String Operations

- String[i]: Retrieves the character at the ith position
- String[i:j]: Retrieves characters in the range i to j

Dictionary Operations

- dict={} : Defines an empty dictionary
- dict[i]=a: stores "a" to the key "i"
- dict[i]: Retrieves the item with the key "i"
- dict.key: Gives all the key items
- dict.values: Gives all the values

OOPS

Inheritance:

A process of using details from a new class without modifying existing class.

Polymorphism:

A concept of using common operation in different ways for different data input.

Encapsulation:

Hiding the private details of a class from other objects.

Class/object

Class:

```
class Pen:
    pass
```

Object: obj=Pen()

Flow Control Method

- **if-else** (Conditional Statement)

```
if price>=700:
        print("Buy.")
 else:
        print("Don't buy.")
```

- **For loop** (Iterative Loop Statement)

```
a="New Text"
count=0
for i in a:
    if i=='e':
        count=count+1
print(count)
```

- **While loop** (Conditional Loop Statement)

```
a=0
i=1
while i <10:
        a=a*2
        i=i+1
print(a)
```

- **Loop Control: Break, Pass and continue**

Functions

```
def new_function():
    print("Hello World")

new_function()
```

Lambda Function

lambda a,b: a+b

lambda a,b: a*b

Comments

 # Single Line Comment

"""

Multi-line comment

"""

Generic Operations

- range(5): 0,1,2,3,4
- S=input("Enter:")
- Len(a): Gives item count in a
- min(a): Gives minimum value in a
- max(a): Gives minimum value in a
- sum(a): Adds up items of an iterable and returns sum
- sorted(a): Sorted list copy of a
- importing modules: import random

File Operations

f= open("File Name","opening mode")

(Opening modes: r: read, w: write, a: append, r+: both read and write)

Try & Except Block

```
try:
        [Statement body block]
        raise Exception()
except Exception as e:
        [Error processing block]
```

IntelliPaat

FURTHERMORE:

Python for Data Science Certification Training Course