PYTHON Notes

* What are the features of Python?

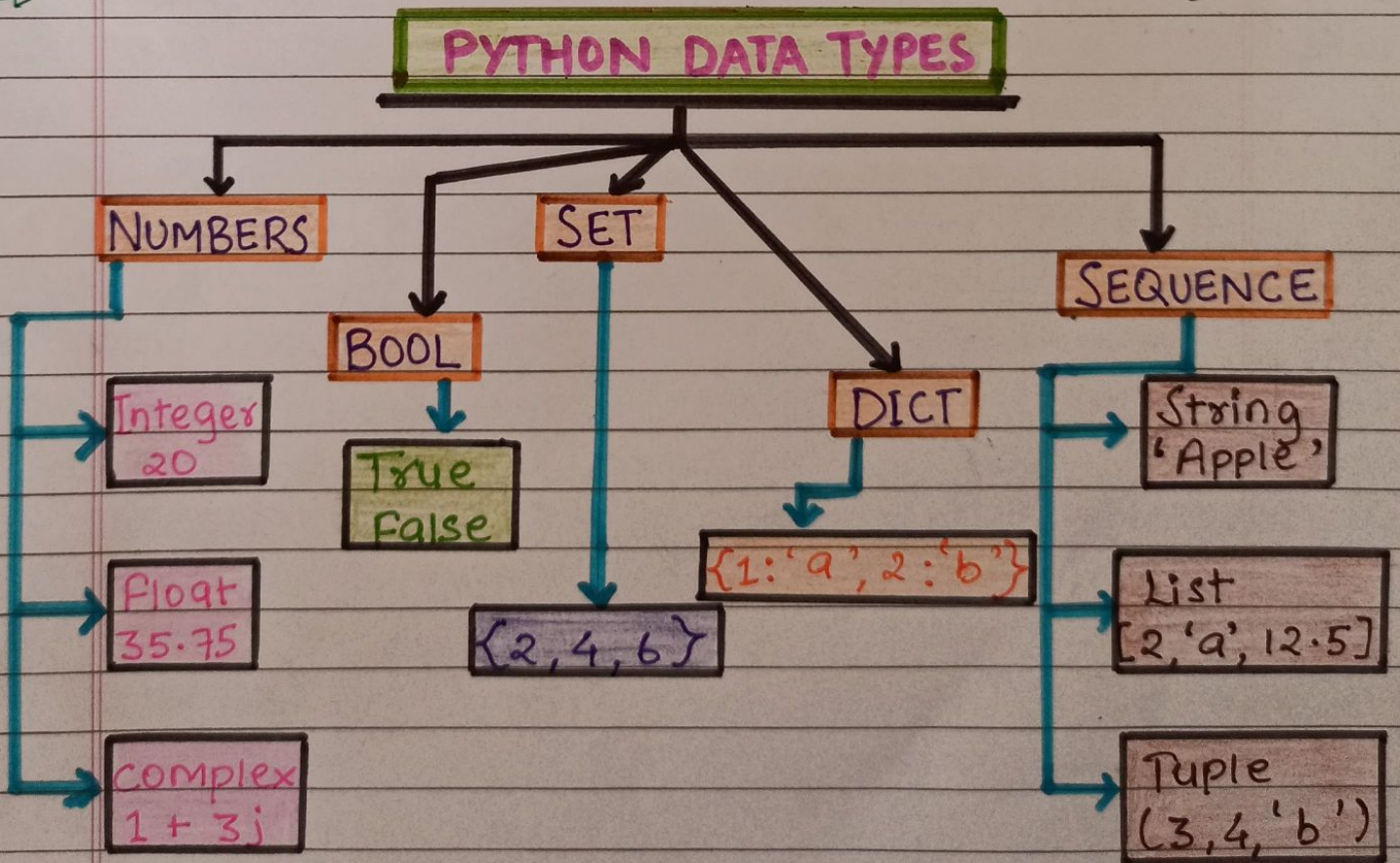⇒ Python is an interpreted, Object Oriented high level programming language.

Python has simple syntax as compared to other languages. Python allows a developer to write programs with fewer lines.

Python runs on an interpreter system, Means the code can be executed as soon as it is written.

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* What are the common built-in data types in python?

⇒

PYTHON DATA TYPES

- NUMBERS
  - Integer
    20
  - Float
    35.75
  - Complex
    1 + 3j
- BOOL
  - True
    False
- SET
  - {2, 4, 6}
- DICT
  - {1: 'a', 2 : 'b'}
- SEQUENCE
  - String
    'Apple'
  - List
    [2, 'a', 12.5]
  - Tuple
    (3, 4, 'b')

1.

* What is the key difference between list and tuples?

⇒ The key difference between the two is that while lists are mutable, tuples on the other hand are immutable objects. This means that lists can be modified, appended or sliced but tuples remain constant and cannot be modified.

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* What are loops in python and gives its types?

⇒ A Loop in Python is a control flow statement that is used to repeatedly execute a group of statements as long as the condition is satisfied types.

1.	For loop
2.	while loop
3.	do. while loop.

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* What is the use of break statement?

⇒ The break statement is used to terminate the execution of the current loop.
It transfers the control to outside the current block.
If the break is in a nested loop, it exists from the innermost loop.

* What is the swapcase ( ) function in python?

➡️ It is a string function which converts all uppercase characters into lowercase and vice versa. It automatically ignores all the non - alphabetic characters.

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* What is a negative index in Python and why are they used?

➡️ The index for the negative number starts from '-1' and that represents the last index, the sequence carries forward like the positive numbers.

• The negative index is used to remove any new line spaces from the string.

• The negative index is also used to show the index to represent the string in correct order.

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* What is a dictionary in Python?

➡️ The Python dictionary is a built-in data type. Dictionaries contain a pass of keys and their corresponding values. The keys are unique whereas values can be duplicate.

Example:-

```
dict = {'country' : 'India',
        'State'   : 'Maharashtra',
        'City'    : 'Mumbai'}
```

3.

* <u>What is a lambda function?</u>

⇨ The anonymous function in python is a function that is defined without a name. The anonymous functions are defined using lambda function rather than 'def'.

* <u>Explain Python functions.</u>

⇨ A function is a selection of the program or a block of code that is written once and can be executed whenever required in the program.

<u>Three types of functions.</u>

① <u>Built-in functions :</u>
copy(), len(), count() are some of the built-in functions.

② <u>User defined functions :</u>
User defined functions defined by the user in the program using 'def' Keyword.

③. <u>Anonymous functions :</u>
Anonymous functions also Known as lambda functions because they are not declared with the 'def' Keyword.

* What is a class and an object?

⇨ • **CLASS** :- A class can be understood as a template or a blueprint. Which contains some values known as members and some set of rules, known as functions.

• **OBJECT** :- An object refers to the instance of the class, which contains the instance of the members and behaviours defined in the class template.

→ In the real world, an object is an actual entity to which a user interacts, whereas class is just the blueprint for that object.

* What are Keyword in Python?

⇨ Keyword in Python are reserved words that have special meaning. Keyword cannot be used for variable or function names.
There are 33 keywords in python. some of which are mentioned below:

→ and   → break
→ if   → def
→ else   → return
→ for   → lambda
→ while   → true