**PYTHON BASICS-I**

1. **Keywords** in Python are reserved words that can’t be used as ordinary identifiers. They are used to define the syntax and structure of the Python language.

import keyword

Print(keyword.kwlist)

['False', 'None', 'True', 'and', 'as', 'assert', 'async', 'await', 'break', 'class', 'continue', 'def', 'del', 'elif', ' else', 'except', 'finally', 'for', 'from', 'global', 'if', 'import', 'in', 'is', 'lambda', 'nonlocal', 'not', 'or', 'pass', 'raise', 'return', 'try', 'while', 'with', 'yield']

As of Python 3.9, there are 35 keywords.

1. **Rules** to create variables;
2. A variable name should start with either an alphabet or an underscore. Not with digits,it can be used it between.
3. Since it is case-sensitive, name, Name, and NAME are all different variables.
4. No need to declare the type of the variables.
5. Can change the type of data assigned to a variable at any time.
6. A **variable** is a named location used to store data in memory.

Variables are declared by writing the variable name and assigning it a value using the equals sign(=).

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3. No need to declare the type of the variables.
4. Can change the type of data assigned to a variable at any time.
5. A keyword ***cannot be*** used as a variable name. And if used so Python will show some syntax error since they are used to define the syntax and structure of Python. And it has specific meaning and usage. Instead of the keyword class, we could use the variable Class.
6. def keyword is used to define a function.

For eg: **def** MyFirstFunction():

print("def is keyword")

Here the keyword def is used to define a function MyFirstFunction()

1. The special character '\' is known as the backslash or escape character in many programming languages, including Python. It is used to indicate the start of an escape sequence or to escape special characters.

**Escape sequences**: The backslash is used to create special characters or escape sequences within strings. For example:

'\n' represents a newline character.

'\t' represents a tab character.

'\'' represents a single quote character.

'\"' represents a double quote character.

'\\' represents a backslash character.

1. **Homogenous list**: they are list containing values of the same data types.

Eg: Marks=[45,46,40,36,50]

Subjects=[‘Python’, ’SQL’ ‘JAVA’]

**Heterogenous set**: they are sets containing values of different data types.

Eg: integers= {1,2,’ Three’, 4, ‘Five’}

**Homogenous tuple**: they are tuple containing values of different data types.

Eg: Colours= (‘Black’, ‘Red’, ‘Blue’, ‘Yellow’)

1. **Mutuable** are the ones which can be modified after they are created. Whereas the **immutable** are the ones which cannot.

List, Dictionaries,Sets are mutable.

Tuple is immutable.

1. row= 5

for i in range(1, row+1):

for j in range(row-i):

print(' ', end='')

for k in range(2 \* i - 1):

print('\*', end='')

print()

1. n=5

row=1

spaces=0

pattern= 2 \* n - 1

while row<=n:

count=1

while count<=spaces:

print(' ',end='')

count+=1

count=1

while count<=pattern:

print('|',end='')

count+=1

print()

row+=1

spaces+=1

pattern-=2