20 May **Python Basic - 1**

Q.1. What are keywords in python? Using the keyword library, print all the python keywords.Python keywords(35) are special reserved words that have specific meanings and purposes and can’t be used for anything but those specific purposes.

import keyword

print(keyword.kwlist)

o/p::['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']

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Q.2. What are the rules to create variables in python?

Q.3. What are the standards and conventions followed for the nomenclature of variables in python to improve code readability and maintainability?

Q.4. What will happen if a keyword is used as a variable name?Rules for Python variables:

A variable name must start with a letter or the underscore character.

A variable name cannot start with a number.

A variable name can only contain alpha-numeric characters and underscores (A-z, 0-9, and \_ )

Variable names are case-sensitive (leo, Leo and LEO are three different variables)

Q.5. For what purpose def keyword is used?The def keyword is used to create, (or define) a function.

def function\_name(arguments):

“ “ “

functions logics

” ” ”

return values

Q.6. What is the operation of this special character ‘\’?We use a backslash (\) as an escape character. For instance, \n represents a line feed, and \t represents a tab.

Q.7. Give an example of the following conditions:

* Homogeneous list flowers=["sunflower","rose","tulip"]

print(flowers)

* Heterogeneous set flowers=["sunflower","rose","tulip","56","aeroplane","a+b"]
* Homogeneous tuple flowers=("sunflower","rose","tulip","56","aeroplane","a+b",[2,3])
* Explain the mutable and immutable data types with proper explanation & examples.mutable data types in Python are those whose value can be changed in place after they have been created.

list1=[2,45,78]

we can add n remove no

list1=[2,45,78,89]

There are basically 3 mutable data types in Python:

List

Dictionary

Set

Immutable datatypes are objects that cannot be modified or altered after they have been created (for example, by adding new elements, removing elements, or replacing elements). Python's immutable data types are: Int. Float.

inputString = 'hello students and teachers'

inputString[1] = 'a'

print(inputString)

OUTPUT

TypeError Traceback (most recent call last)

Cell In [9], line 2

1 inputString = 'hello students and teachers'

----> 2 inputString[1] = 'a'

3 print(inputString)

TypeError: 'str' object does not support item assignment

* Write a code to create the given structure using only for loop.

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rows = 5

k = 0

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

for space in range(1, (rows-i)+1):

print(end=" ")

while k!=(2\*i-1):

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

k += 1

k = 0

print()

* Write a code to create the given structure using while loop.

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rows = 5

for i in range(rows, 1, -1):

for space in range(0, rows-i):

print(" ", end="")

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

print("| ", end="")

for j in range(1, i-1):

print("| ", end="")

print()