20 May

Python Basic - 1

* 1. What are keywords in python? Using the keyword library, print all the python keywords.

Ans. Keywords in Python are reserved words that have special meanings and purposes in the language.

import keyword

# Get all the Python keywords

keywords = keyword.kwlist

# Print the keywords

for keyword in keywords:

print(keyword)

* 1. What are the rules to create variables in python?

Ans

Variable names must start with a letter (a-z, A-Z)

After the first character, variable names can contain letters, numbers, and underscores. They are case-sensitive, meaning that variables named "myVariable" and "myvariable" are considered different.

Python keywords (reserved words) cannot be used as variable names. For example, you cannot name a variable "if" or "for" because these words have special meanings in Python.

Variable names should be descriptive and meaningful, so it's easier to understand the purpose of the variable by looking at its name. For example, a variable storing a person's age could be named "age," while a variable storing a person's name could be named "name."

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

Ans :

* 1. What will happen if a keyword is used as a variable name?

Ans. If a keyword is used as a variable name in a programming language, it will typically result in a syntax error or a compilation error.

* 1. For what purpose def keyword is used?

Ans def keyword is use for creating a function

* 1. What is the operation of this speciacharacter ‘\’?

Ans

\ n represents a newline character.

\t represents a tab character.

\" represents a double quotation mark character within a string literal.

\\ represents a literal backslash character.

* 1. Give an example of the following conditions:

1. Homogeneous list
2. Heterogeneous set
3. Homogeneous tuple

Ans

Homogeneous list= numbers = [1, 2, 3, 4, 5]

Heterogeneous set=

my\_set = {1, "apple", 3.14, True}

Homogeneous tuple=

fruits = ("apple", "banana", "cherry", "durian")

* 1. Explain the mutable and immutable data types with proper explanation & examples.

Ans

mutable Data Types:

Mutable data types are those whose values can be changed or modified after they are created. This means you can update, add, or remove elements within the data structure without creating a completely new object. List and dictionary are mutable data type

Immutable Data Types:

Immutable data types, on the other hand, are those whose values cannot be changed once they are created. Instead of modifying the existing object, any operation on an immutable data type creates a new object with the desired changes. This property ensures that the data remains consistent and prevents accidental changes.tupel and string are immutable data type

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

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Ans

num\_lines = 5

for i in range(num\_lines):

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

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

print()

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

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Ans. num\_rows = 5

counter = num\_rows

while counter > 0:

print('|' \* counter)

counter -= 1