20 May **Python Basic - 1**

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

Keywords are reserved words used in python that cannot be used as variable name, function or any other identifier.

Below are the list of python keywords.

['False', 'None', 'True', '\_\_peg\_parser\_\_', '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']

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

Variables in python can either start with a string or \_ and cannot start with number.

Variables cannot be keywords.

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

* Meaningful and understandable variables name helps anyone to understand the reason of using it.
* Local variables should be named using camel case letter.
* Global variables names should start with a capital letter.

Q.4. What will happen if a keyword is used as a variable name?

Invalid syntax error is thrown.

Q.5. For what purpose def keyword is used?

def keyword is used to define a function.

Q.6. What is the operation of this special character ‘\’?

To insert characters that are not allowed in a string in such cases ‘\’ is used.

Eg- print("hello \"Ram\" how are you")

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

1. Homogeneous list – list1=["a","b","c"]
2. Heterogeneous set - s={“a”,23, ”\*90”}
3. Homogeneous tuple - t=(91,23,89)
   1. Explain the mutable and immutable data types with proper explanation & examples.

Mutable datatypes are the ones which can be modified once they are created like list,set and dictionary.

Immutable datatypes are the ones which cannot be modified once they are created like tuple and strings.

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

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Answer:

n=10

k=n-1

for i in range(0, n,2):

for j in range(0, k):

print(end=" ")

k = k - 2

for j in range(0, i+1):

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

print("\r")

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

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**Code**

i=9

k=list(range(8))

idx=0

while (i>=1):

idx=idx+1

while(k[idx]>1):

print(" ",end="")

k[idx]-=1

j=1

while(j<=i):

print("|",end="")

j+=1

print("\r")

i-=2