20 May

**Python Basic - 1**

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

Ans: Python keywords are reserved keywords by Python which is used by itself also we can not modify, or use them as variables and functions while programming. They are immutable.

pip install keywords  
import keyword

print(keyword.kwlist)

**Q.2. What are the rules to create variables in python?**Ans: 1. The variable name must start with a letter or the underscore character. 2. variables names can’t be start from numbers. 3. Variables is case-sensitive. 4. Variables name cannot be any of the python keywords. 5 variable name can contain only alpha-numeric character and underscore i.e (A-z, 0-9, \_).

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

Ans: 1. Avoiding reserved words

2. Snake Case

3. Descriptive Name

4. Avoid Single Character name

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

Ans: It will through a syntax error.

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

Ans: to define the function or method we use def keyword as prefix to our function name.

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

Ans: This special character ‘\’ can be use as line continuing character.   
Also if added some character it can be used as may ways!  
“\n” → New line  
“\t” → tab

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

**(i) Homogeneous list**

**(ii) Heterogeneous set**

**(iii) Homogeneous tuple**  
Ans: (i) Homogeneous list: a = [1, ”apple”, “22”, [1,2,3,4,5], 1.1, 2.4444 ]

(ii) Heterogeneous set: Sets are not heterogeneous it gives error when list is added  
 sets = {1,2,3,"Ashu",1.2}

(iii) Homogeneous tuple: a = (1,2,3,4,”Ashu”, [1,2,4], 1.1)

**Q.8. Explain the mutable and immutable data types with proper explanation & examples**.

Ans: Mutable → Objects of mutable data types can be altered or modified after they are created.   
Ex:   
List  
Sets  
Dictionaries

immutable → Objects of mutable data types can not be altered or modified after they are created  
Ex:  
Tuples  
string

**Q.9. Write a code to create the given structure using only for loop.**

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Ans:

num\_rows = 5

for i in range(num\_rows):

for j in range(num\_rows - i):

print(" ", end="")

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

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

print()

Q.10. Write a code to create the given structure using while loop.

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