

20 May

# Python Basic - 1

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

**Sol-** Keywords in python are reserved words that have special meanings and purposes in the language.

```
import keyword

# Get all the Python keywords
all_keywords = keyword.kwlist

# Print the keywords
for keyword in all_keywords:
    print(keyword)
```

```
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
```

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

**Sol-** Variable names cannot start with a number, they are case sensitive, cannot use reserved keywords as variables names,

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

**Sol-** 1) Use lowercase letters for variables. 2) separate words using underscore. 3) Constants should be written in uppercase. 4) Use lowercase letters and underscores for function names.

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

**Sol-** Syntax Error

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

**Sol-** For defining a function.

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

**Sol-** Escape sequences

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

- (i) Homogeneous list - numbers[1,2,3,4,5]
- (ii) Heterogeneous set - set(['mango', 2, 3.14])
- (iii) Homogeneous tuple - (10,20,30)

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

**Sol-** Mutable- It can be modified and changed after they are created. Eg- Lists, sets, dictionary.

Immutable - It cannot be modified once they are created. Eg- Strings, Tuples.

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

```
*  
***  
*****  
*****  
*****
```

```
num_rows = 5  
  
for i in range(num_rows):  
    for j in range(i + 1):  
        print('*', end=' ')  
        print('*' * j, end=' ')  
    print()
```

Sol-

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

```
|||||||  
|||||  
||||  
|||  
||  
|
```

```
num_rows = 5  
count = num_rows  
  
while count >= 1:  
    print('|' * (count * 2 - 1))  
    count -= 1
```

Sol-