1) what is python? Python is a high level programming language, created by Guido van Rossum in 1991. It is very easy to learn, easy to read and maintain. It is easy to connect with data base. It has some standard libraries like NumPy, Pandas, matpotlib etc. It is case sensitive language.

2) applications of python? Web development Game development Data science and analytics AI

3) benfits of python? Easy to learn, easy to read and maintain. It is easy to connect with data base. vast libraries. Easy syntax. It is open source, which is easily available and easy to install and use.

4) explain about Keywords in python? Keywords are unique and inbuilt int python. They are reserved words. They are structured for specific function. They contain only small letters.

5) Write rules for creating Variables? They contain alpha numeric characters and only '_' is used as special characters. It should start only with captial or small letters. They cannot be repeated. They should not start with digits. No any other special characters can be used.

6) Explain about Data types with Examples? core data types - list, tuple, string, set, dictionary other data types - integer, float, complex

```
In [ ]:  list = ['python', 1, 2.8, 0.1j, 'A' ]
         string = "I am learning python"
         tuple = ('python', 1, 2.8, 0.1j, 'A')
         set = {1,2,3,4,5,6}
         set_moviemaking = {'movie','song','scene','dialogue','dance'}
         dictionary = {'name': 'vaishnavi','age': 28, 'location' : 'hyderabad', 'working': 'yes
         int = 2
         float = 2.5
         complex = 2+2j
```

7) Why we Use Type Function? By usiing type() function, we can determine the class of the data type. example -

```
In [2]:  moviemaking = {'movie','song','scene','dialogue','dance'}
         print(type(set_moviemaking))

         <class 'set'>
```

```
In [3]:  dictionary = {'name': 'vaishnavi','age': 28, 'location' : 'hyderabad', 'working': 'yes
         print(type(dictionary))

         <class 'dict'>
```

8) What is mutable and immutable Give me examples? Mutable means, which can be changed or modified. - list, set Immutable means which cannot be chnaged or modified. - string, tuple,

9) Difference between List and Tuple? List - denoted by [] and , they are ordered and can be modified. they allow duplicate elements the elements in list can be of any data type. Tuple - denoted by () and , they are ordered and are immutable. the elements in a tuple can be of any data type.

In [7]:
```python
# 10) Create a list with 10 elements and access them one by one?

A = ['vaishnavi', 28, 'gadwal', 'amazon', 12 , 9 , 'hyderabad', 8.14 , 'Teks academy',
print(A[0])
print(A[1])
print(A[2])
print(A[3])
print(A[4])
print(A[5])
print(A[6])
print(A[7])
print(A[8])
print(A[9])
```

```
vaishnavi
28
gadwal
amazon
12
9
hyderabad
8.14
Teks academy
python
```

In [9]:
```python
#11) Give me a examples on Conditional Statements?

#if

A = "vaishu"

if A == "vaishu" :
    print("True")
```

```
True
```

In [10]:
```python
A = 50

if A > 10 :
    print("True")
```

```
True
```

In [11]:
```python
#else
A = 100

if A > 1000 :
    print("True")
else:
    print("false")
```

```
false
```

In [12]:
```python
#elif
A = 100

if A > 1000 :
    print("yes")
elif A < 10 :
    print ("no")
else :
    print("not defined")
```

not defined

In [27]:
```python
#12) Give me a Examples on Loop Statements?

#while

i = 10
while i<=100 :
    print(i)
    i = i*5
```

10
50

In [40]:
```python
#for

list = ['python', 1, 2.8, 0.1j, 'A' ]
for y in list:
 print(y)
```

python
1
2.8
0.1j
A

13) Give me a Examples on Control Statements?

In [41]:
```python
#they are used to control the flow of execution

#pass

for i in range (9):
    if i >= 5 :
        pass
    else :
        print(i)
```

0
1
2
3
4

In [44]:
```python
# break

for i in range(9):
    if i >= 6 :
        break
```

```python
    else:
        print(i)
```

```
0
1
2
3
4
5
```

In [45]:
```python
#continue

for i in range (5):
    if i ==2 :
        continue
    else :
        print(i)
```

```
0
1
3
4
```

14) Define Function?

In [ ]:
```
A function is a block of code, that performs a specific function
```

15) Example one example on function?

In [48]:
```python
def greet(name):
 print(f"Happy Birthday {name}!")
greet ("vaishu")
```

```
Happy Birthday vaishu!
```

In [ ]: