### ****Python an interpreted language. Explain.****

***Ans:***An interpreted language is any programming language which is not in machine-level code before runtime. Therefore, Python is an interpreted language.

**What is the difference between list and tuples in Python?**

|  |  |
| --- | --- |
| **LIST** | **TUPLES** |
| Lists are mutable i.e they can be edited. | Tuples are immutable (tuples are lists which can’t be edited). |
| Lists are slower than tuples. | Tuples are faster than list. |
| Syntax: list\_1 = [10, ‘Chelsea’, 20] | Syntax: tup\_1 = (10, ‘Chelsea’ , 20) |

**What are Keywords in Python?**

***Ans:*** Keywords in python are reserved words that have special meaning.They are generally used to define type of variables. Keywords cannot be used for variable or function names. There are following 33 keywords in python-

* And
* Or
* Not
* If
* Elif
* Else
* For
* While
* Break
* As
* Def
* Lambda
* Pass
* Return
* True
* False
* Try
* With
* Assert
* Class
* Continue
* Del
* Except
* Finally
* From
* Global
* Import
* In
* Is
* None
* Nonlocal
* Raise
* Yield

**What is type conversion in Python?**

***Ans:***Type conversion refers to the conversion of one data type into another.

**int()** – converts any data type into integer type

**float()** – converts any data type into float type

**ord()** – converts characters into integer

**hex(**) – converts integers to hexadecimal

**oct()** – converts integer to octal

**tuple() –**This function is used to convert to a tuple.

**set() –**This function returns the type after converting to set.

**list() –**This function is used to convert any data type to a list type.

**dict() –**This function is used to convert a tuple of order (key, value) into a dictionary.

**str() –**Used to convert integer into a string.

**complex(real,imag) –** This function converts real numbers to complex(real,imag) number.

**What are Dict and List comprehensions?**

***Ans:*** Dictionary and list comprehensions are just another concise way to define dictionaries and lists.

Example of list comprehension is-

|  |  |
| --- | --- |
| 1 | x**=**[i **for** i **in** range(5)] |

The above code creates a list as below-

|  |  |
| --- | --- |
| 1  2 | 4  [0,1,2,3,4] |

Example of dictionary comprehension is-

|  |  |
| --- | --- |
| 1 | x**=**[i : i**+**2 **for** i **in** range(5)] |

The above code creates a list as below-

|  |  |
| --- | --- |
| 1 | [0: 2, 1: 3, 2: 4, 3: 5, 4: 6] |

**What is a lambda function?**

***Ans:***An anonymous function is known as a lambda function. This function can have any number of parameters but, can have just one statement.

**Example:**

|  |  |
| --- | --- |
| 1  2 | a **=** **lambda** x,y : x**+**y  print(a(5, 6)) |

**What does [::-1} do?**

***Ans:*** [::-1] is used to reverse the order of an array or a sequence.

*For example:*

|  |  |
| --- | --- |
| 1  2  3 | **import** array as arr  My\_Array**=**arr.array('i',[1,2,3,4,5])  My\_Array[::**-**1] |

**Output**: array(‘i’, [5, 4, 3, 2, 1])

[::-1] reprints a reversed copy of ordered data structures such as an array or a list. the original array or list remains unchanged.

**How can you randomize the items of a list in place in Python?**

**Ans:** Consider the example shown below:

|  |  |
| --- | --- |
| 1  2  3  4 | **from** random **import** shuffle  x **=** ['Keep', 'The', 'Blue', 'Flag', 'Flying', 'High']  shuffle(x)  print(x) |

The output of the following code is as below.

['Flying', 'Keep', 'Blue', 'High', 'The', 'Flag']

**What are python iterators?**

***Ans:***Iterators are objects which can be traversed though or iterated upon.