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Q1) Difference between list and tuple

- List is ordered and mutable.
- List is unchangeable.
- List is defined by square brackets. [ ]
- List allowes duplicates.

eg.

② list = [1, 2, 3, 4]

Tuple

- Tuple changeable.
- Tuple is defined by round brackets. ( ).
- ordered immutable collection of items.

eg.

Tuple = (1, 2, 3, 4)

- Tuple allowes duplicates.

2) Set

A Set is collection which is unorderd, unchangable and unindexed sets are written by curly brackets.

Set items can appear in a different order every time you use them and cannot be reffered to by index or key.

eg Set = {"I", "am", "a", "girl"}.
print (set).

3) Integer

Integer can be negative or positive.

Integer is commonly used for counting, indexing and performing arithemtic operations.

eg - int = 18
print (int).

Float

Float represents decimal numbers.

Float is used when dealing with numbers that are not whole.

→ eg = 18.0

float have more memory access
float is 4 bit and int is 2 bit.

4) Dictionary.

- Dictionary does not allows duplicate.

eg- Dict = { "Name" : "Simra"
             "age" : "16"
           }

②

- Float and integer are unordered
  and dictionary is ordered.

- Dictionary value is stored in pairs.

- Name is key ~~value~~.
  Simra is value.

  We access value by its key.

5) DOC

- The DOC string is the part of
  ② string in python.

- DOC string use comment and
  multiple ~~H~~ line

- Double quotes is used ~~(⸺)~~. (" ⸺ ")

eg DOC say what the code is about.

eg - int = a
    int = b
    a + b

"""
The above code as the code
is about adding two variables
in python
"""

6) // operator

- It is also known as floor
  division.

① floor division is a normal division
  operator.

7) is identity operators.
① ~~is list wise operator~~
   == is comparision operator
① is identity operator is ~~used to check if~~
   the element is in the list.

8) += operator

- It is addition ~~operator~~ assignment
  operator.

② - used for adding right operator to
  left operator and assign the
  result to left operator.
    a += b

9) in operator

To check if the element is
there in the list.

eg* l = [1, 2, 3, 4]

1 in l   # It will give True.

5 not in l   # will return True.

10) x if condition else y.

ternary operator.

11) If statement.

It is used to give condition.

12) loop is used to initial condition and steps at the top.

while loop is use to get the condition at top.

②
```
for i in range (0,7):
    print (i);
```

```
i = 0
while (i >= 2):
    print (i)
```

13) Break statement is used to break the execution of code.

14) The continue statement is used to continue the code by escape the element.