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CU ROLL - 193314-21-0007

CU REG. - 314-1111-0229-19

SUBJECT : PYTHON

DATE : 20/01/2022

SUBJECT CODE - DSE-B-2

1) What is scope in Python?

2) What are lists and tuples? What is the key difference between the two?

3) What is pass in Python?

4) What is __init__?

5) What is break and continue in Python?

1) What is scope in Python?

A variable is only available from inside the region it is created. This is called scope.

Local scope: A variable created inside a function belongs to the local scope of that function, and can only be used inside that function.

```
def myfunc():
    x = 100
    print(x)

myfunc()
```

output:
100

Global scope: A variable created in the main body of the python code is a global variable and belongs to the global scope.

Global variable are available from within any scope, global and local.

```
x = 200
def myfunc():
    print(x)

myfunc()
print(x)
```

output
200
300
300

2) **List:** Lists are used to store multiple items in a single variable. A python list is an ordered and mutable python container being one of the most common data structures in python.

Source code:

```
list_1 = ["Hey", 1, 10, [1, 2, 3]]
print(list_1)
```

output:
['Hey', 1, 10, [1, 2, 3]]

Tuple: A Tuple is a collection of python objects separated by commas

```
tup = ('python', 'c++')
print(tup)
```

output:

```
('python', 'c++')
```

The key difference between the tuples and lists is that while the tuples are immutable objects, the lists are mutable.

3) In python, pass is a null statement. The interpreter does not ignore a pass statement, but nothing happens and the statement results into no operation. The pass statement is useful when you don't write the implementation of a function but you want to implement it in the future.

Syntax:

```
def myfunc():
    pass
```

4) The __init__ is python equivalent of the c++ constructor in an object oriented approach. The __init__ method is called everytime an object is created from a class. The __init__ method lets the class initialize the objects attributes and ~~serves~~ serves no other purpose. It is only used within classes.

Syntax:

```
Class Person:
    def __init__(self, name, age):
        self.name = name
        self.age = age

P1 = Person("John", 36)

print(P1.name)
print(P1.age)
```

Output:

```
John
36
```

5) The python break statement stops the loop in which the statement is placed.

Syntax:

```
for i in range(5):
    if i == 3:
        break
    else:
        print(i)
```

Output:

```
0
1
2
```

The python continue statements skips a single iteration in a loop.

Syntax:

```
for i in range(5):
    if i == 3:
        continue
    else:
        print(i)
```

Output:

```
0
1
2
4
```