1/20/2021 DSAOOP

```
In [ ]: Class:
        field or data member
        method
        constructor
         ## Way to create object in java
         Test ob = new Test()
         ## way to create object in python
         ## implicitly calls constructor - creates object
         ob = Test()
In [1]: class Test:
            def __init__(self):
                 self.a = 10
            def setField(self,data):
                 self.a = data
             def getField(self):
                 print(self.a)
        ob1 = Test()
         ob2 = Test()
        Test.setField(ob1, 20)
         ob1.getField() #Test.getField(ob1)
        ob2.setField(35)
         ob2.getField()
        20
        35
```

Function

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```
In [2]: def add():
             a = int(input("Enter val1: "))
             b = int(input("Enter val2: "))
             print(a + b)
             return
         add()
        Enter val1: 10
        Enter val2: 20
In [3]: def add(a, b):
             print(a + b)
         add(10, 20)
         30
In [4]: def add(a, b):
             return a + b
         res = add(10, 20)
         print(res)
         30
In [7]: def fun():
             print("before pass")
             pass
             print("After pass")
         fun()
        before pass
        After pass
```

Scope of variables

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```
In [8]: def fun():
            x = 20 #create local variable
            print("Inside function:", x)
        x = 10
        print("before function", x)
        print("After function:", x)
        before function 10
        Inside function: 20
        After function: 10
In [9]: def fun():
            global x
            x = 20
            print("Inside function:", x)
        x = 10
        print("Before function: ", x)
        print("After function:", x)
        before function 10
        Inside function: 20
        After function: 20
In [ ]: class Node:
            def init (self, data):
                self.data = data
                self.next = None
        class LinkedList:
            def __init__(self):
                self.head = None
            def insertEnd(self, data):
                pass
            def display():
                pass
```