

# Part 1 : Class

Code of Ex 1 :

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## Ex 1 Cylinder

```
class Cylinder():
    def __init__(self, radius, height):
        self.radius = radius
        self.height = height
    def __str__(self):
        return "Radius:" + str(self.radius) + ", Height: " + str(self.height)

    def getRadius(self):
        return self.radius
    def getHeight(self):
        return self.height
    def calculate(self):
        self.measure = (self.radius) * (self.radius) * 3.14 * (self.height)
        return self.measure

cd1 = Cylinder(5, 10)
print("First Cylinder parametres")
print("Radius: " + str(cd1.getRadius()))
print("Height: " + str(cd1.getHeight()))
print(cd1)
print("The measure of first cylinder is " + str('%.2f' .format(cd1.calculate())))

cd2 = Cylinder(7, 13)
print("Second Cylinder parametres")
print("Radius: " + str(cd2.getRadius()))
print("Height: " + str(cd2.getHeight()))
print(cd2)
print("The measure of second cylinder is " + str('%.2f' .format(cd2.calculate())))
```

cd1

Radius = 5

Calculate

Cylinder instance

Radius: 5	Height: 10
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height	10
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radius	5
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height=10

cd2

Radius = 7

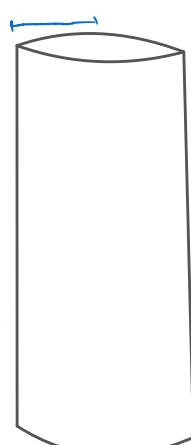
Calculate

Cylinder instance

Radius: 7	Height: 13
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height	13
--------	----

radius	7
--------	---



height=13

## Ex 2 Pyramid

```
class Pyramid():
    Length = ""
    Width = ""
    Height = ""
```

```
def calculate(self):
    self.measure = (self.Length.Length)*(self.Width.Width)*(self.Height.Height)/3
    return self.measure
```

```
class getLength():
    Length = 0
class getWidth():
    Width = 0
class getHeight():
    Height = 0
```

```
new1Pm = Pyramid()
```

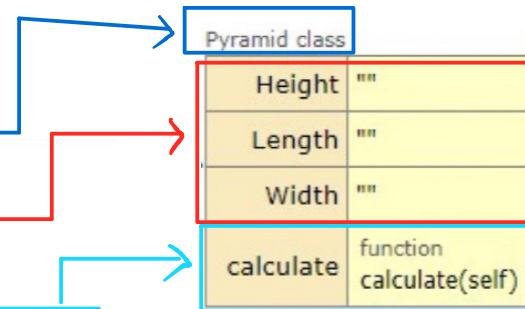
```
new1Length = getLength()
new1Length.Length = 10
new1Width = getWidth()
new1Width.Width = 7
new1Height = getHeight()
new1Height.Height = 17
```

```
new1Pm.Length = new1Length
new1Pm.Width = new1Width
new1Pm.Height = new1Height
```

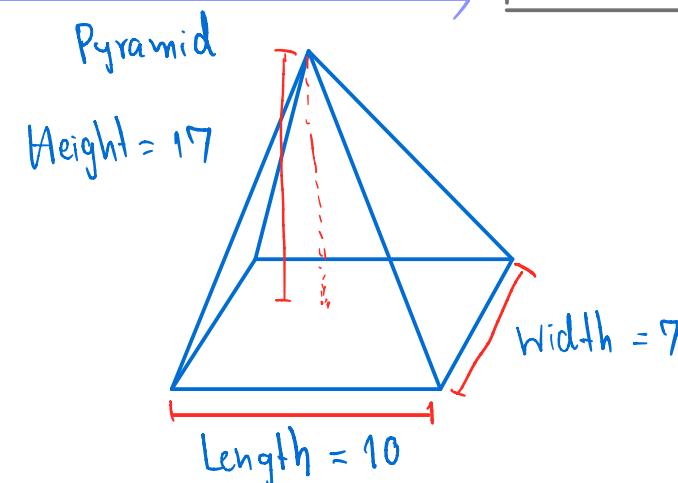
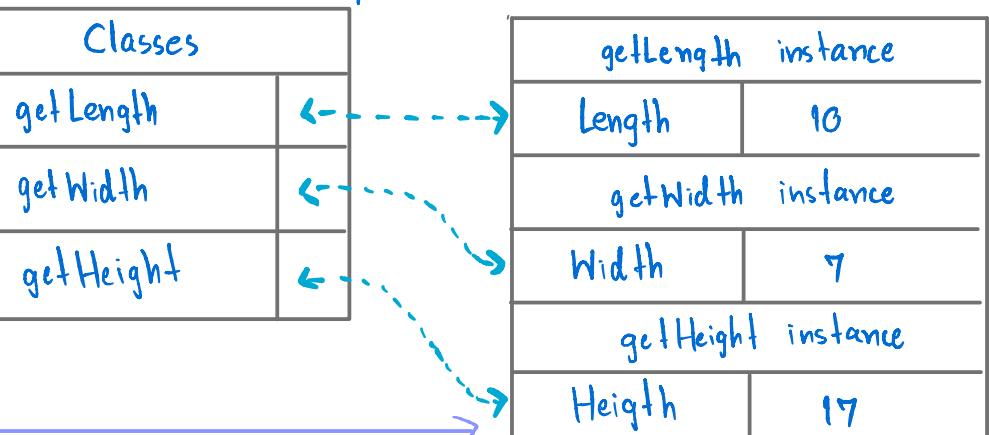
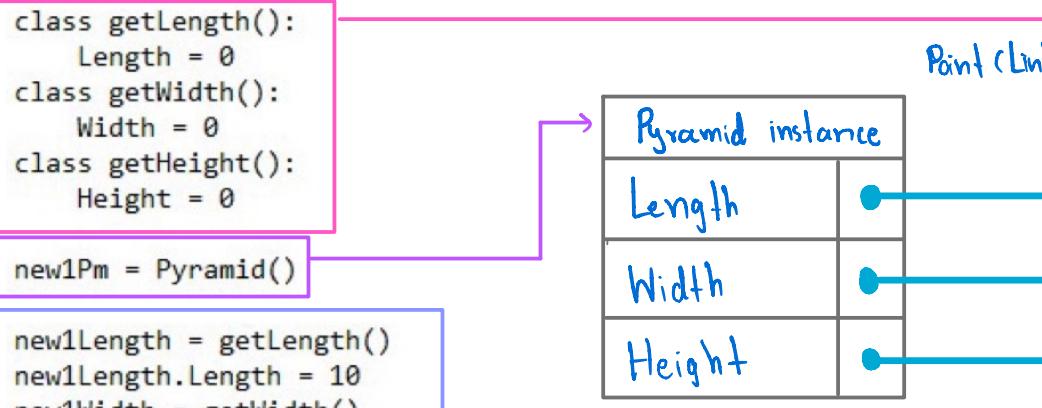
```
print("Pyramid volume = ",'{:.2f}'.format(new1Pm.calculate()))
print()
```

Pyramid code (edit code):

▶ <https://onlinegdb.com/xwoSPGSU9z>



Classes contain  
parameter and value

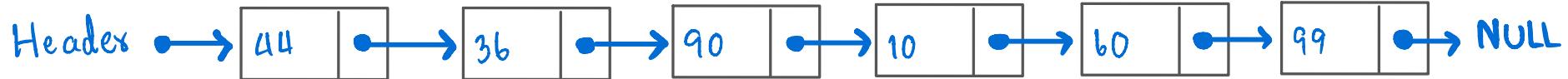


## Part 2 : Linked List

### Exercise 3

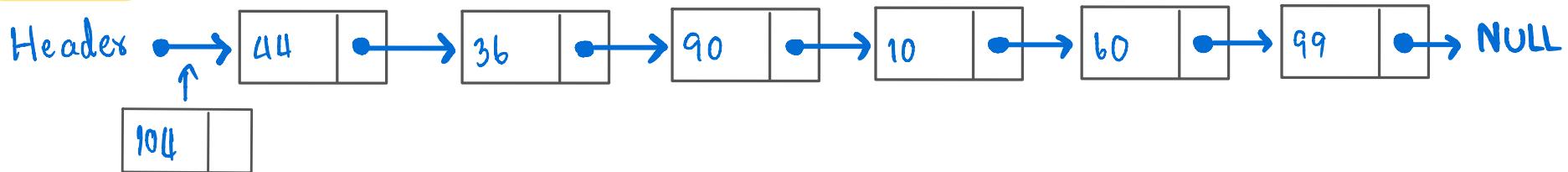
Code of Exercise 3:

#### Ex 3.1 Create Linked List

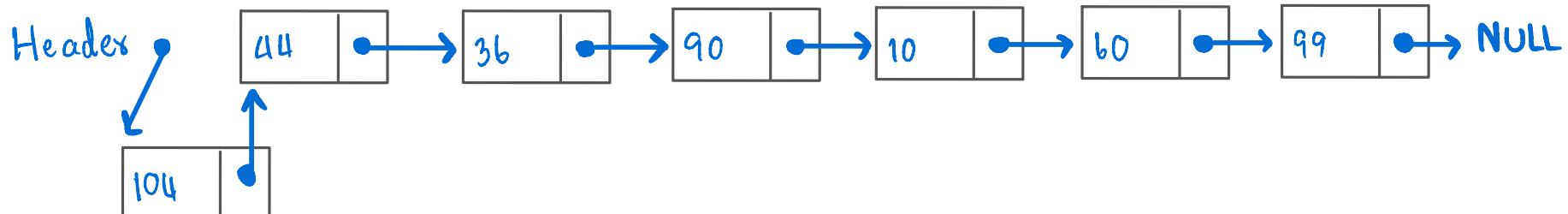


#### Ex 3.2 Insert 104 from header

Create Node7 = Node(104)



Link  
Node7 next value = Node1  
List1.header = Node7



Result



### Ex 3.3 Insert 57 from last index (append)

Create

Node 8 = Node(57)

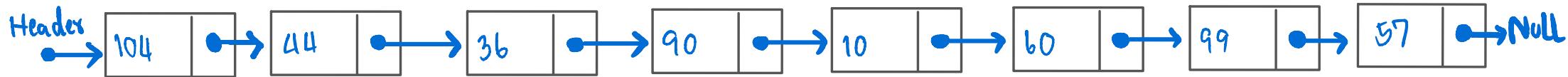
Node 6 next value = Node 8



Link

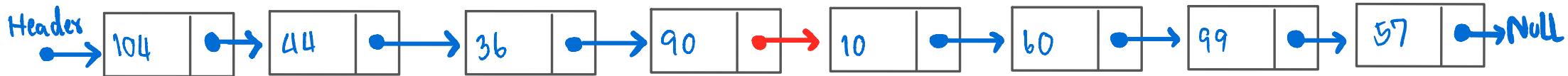
Node 6 next value = Node 8

Result

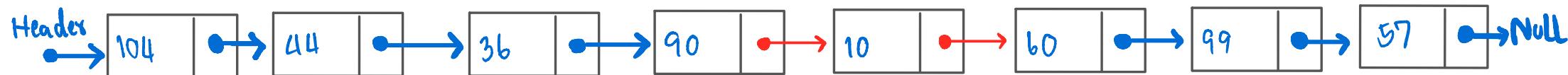


### Ex 3.4 Remove value where index = 4(10)

Link Node 3 to Node 5 (Node3 next value = Node 5)



Cut Node 4 next value = " "



Result

