# OOPs

In [1]:
```
class languages():
    pass
```

In [5]:
```
lang1 = languages()
lang1.name = "python"
lang1.users = "a lot uses "
lang1.easy = "easy to use"
```

In [7]:
```
print("The name of the language is ",lang1.name ,"this language is ", lang1.users ," and it is ", lang1.easy)
```

```
The name of the language is  python this language is  a lot uses   and it is  easy to use
```

In [9]:
```
lang2 = languages()
lang2.name = "Java"
lang2.users = "a lot uses"
lang2.easy = "very easy to use "

print("The name of the language is" ,lang2.name, " this language is" , lang2.users," and it is",lang2.easy)
```

```
The name of the language is Java  this language is a lot uses  and it is very easy to use
```

In [11]:
```
class languages2():
    types = "programming language"
```

In [17]:
```
lang3 = languages2()
lang3.name = "C++"
lang3.uses = "object oriented programm"

print("The name is : ",lang3.name ,"the type of language is : ",lang3.uses , lang3.types)
```

```
The name is :  C++ the type of language is :  object oriented programm programming language
```

In [19]:
```
lang4 = languages2()

print(lang4.types)
```

```
programming language
```

In [41]:
```
class lan3():
    def __init__(self,aName,aTypes):

        self.name = aName
        self.type = aTypes
```

In [43]:
```
lang5 = lan3("C#","software  development")
print(lang5.name)
print(lang5.type)
```

```
C#
software  development
```

# instances and class variable

In [44]:
```
class student():
    language = "Python"
```

In [45]:
```
stu1 = student()
stu1.name = "college"
stu1.age = "26"
print(stu1.name)
print(stu1.age)
```

```
college
26
```

In [46]:
```
print(stu1.language)
```

```
Python
```

In [48]:
```
stu1.language = "collin"
print(stu1.language)
```

```
collin
```

In [49]:
```
stu2 = student()
stu2.name = "finder"

print(stu2.name)
print(stu2.language)
```

```
finder
Python
```

In [51]:
```
print(stu1.name)
print(stu2.name)
print(stu2.language)
```

```
college
finder
Python
```

# inheritance

In [52]:
```
class one():
    name = "one"
```

In [57]:
```
class two (one):
    num = 12543
```

In [60]:
```
person1 = one()
print(person1.name)
```

```
one
```

In [62]:
```
person2 = two()
print(person2.name)
print(person2.num)
```

```
one
12543
```

In [63]:
```
class one():
    name = "one"

class two():
    num = 356269
```

In [64]:
```
person1 = one()
person2 = two()

print(person1.name)
print(person2.num)
```

```
one
356269
```

# multiple inheritance

In [76]:
```
class three():
    country = "India"

class four(one,three):
    city = "Hyderabad"
```

In [77]:
```
person3 = four()

print("the method from class1 : ",  person3.name )
print("the method from class3 : ",  person3.country)
print("the method from class4 : ",  person3.city)
print(person3.country)
print(person3.city)
```

```
the method from class1 :  one
the method from class3 :  India
the method from class4 :  Hyderabad
India
Hyderabad
```

# multi level inheritance

In [78]:
```
class a():
    name = "one"
    ids = "456"
```

In [79]:
```
class b():
    num = 89456
```

In [86]:
```
class c(a,b):

    country = "India"
```

In [87]:
```
person4 = c()
print(person4.name)
print(person4.ids)
print(person4.num)
print(person4.country)
```

```
one
456
89456
India
```

In [88]:
```
######## polymorphism.............
```

In [89]:
```
print(55+66)
```

```
121
```

In [90]:
```
print("55"+"66")
```

```
5566
```

In [ ]:
```

```