In [2]:
```
l1=[10,20,[30,40,[50,60],80],90,100]       #task-4
print(l1)
```

```
[10, 20, [30, 40, [50, 60], 80], 90, 100]
```

In [3]:
```
l1[2]
```

Out[3]:
```
[30, 40, [50, 60], 80]
```

In [5]:
```
a=l1[2][2]
```

In [6]:
```
print(a)
```

```
[50, 60]
```

In [7]:
```
a.insert(2,70)
```

In [8]:
```
print(a)
```

```
[50, 60, 70]
```

In [9]:
```
print(l1)
```

```
[10, 20, [30, 40, [50, 60, 70], 80], 90, 100]
```

In [1]:
```
L2=[1,2,[3,4,5,6],9]                        #task-4
```

In [3]:
```
print(L2)
```

```
[1, 2, [3, 4, 5, 6], 9]
```

In [4]:
```
L2[2]
```

Out[4]:
```
[3, 4, 5, 6]
```

In [5]:
```
a=L2[2]
```

In [6]:
```
a.insert(4,[7,8])
```

In [7]:
```
print(L2)
```

```
[1, 2, [3, 4, 5, 6, [7, 8]], 9]
```

In [ ]:
```

```

In [ ]:
```
                                            #task-5
```

In [1]:
```
dict1 = {
   "april_batch":{
      "student":{
         "name":"Mike",
         "marks":{
            "python":80,
            "maths":70
         }
      }
   }
}
```

In [2]:
```
dict1
```

Out[2]:
```
{'april_batch': {'student': {'name': 'Mike',
   'marks': {'python': 80, 'maths': 70}}}}
```

In [3]:
```
dict1["april_batch"]["student"]["name"]
```

Out[3]:
```
'Mike'
```

In [5]:
```
dict1["april_batch"]["student"]["marks"]["python"]
```

Out[5]:
```
80
```

In [15]:
```
dict1["april_batch"]["student"]["name"]="DJ"
```

In [16]:
```
dict1
```

Out[16]:
```
{'april_batch': {'student': {'name': 'DJ',
   'marks': {'python': 80, 'maths': 70, 'ml': 80, 'DL': 80}}}}
```

In [10]:
```
dict1["april_batch"]["student"]["marks"]["ml"]=80
```

In [11]:
```
dict1["april_batch"]["student"]["marks"]["DL"]=80
```

In [17]:
```
dict1
```

Out[17]:
```
{'april_batch': {'student': {'name': 'DJ',
   'marks': {'python': 80, 'maths': 70, 'ml': 80, 'DL': 80}}}}
```

In [21]:
```
tup1 = (1,2,3,4,5)                              #task-6
```

In [22]:
```
tup1
```

Out[22]:
```
(1, 2, 3, 4, 5)
```

In [23]:
```
list1=list(tup1)
```

In [28]:
```
list2=['a','b','c','d','e']
```

In [29]:
```
list1.extend(list2)
```

In [30]:
```
list1
```

Out[30]:
```
[1, 2, 3, 4, 5, 'a', 'b', 'c', 'd', 'e']
```

In [ ]:
```
tup1 = tuple(list1)
```

In [ ]:
```
                                            #task-9
```

In [ ]:
```
num1=input("enter 1st number")
```

In [ ]:
```
num2=input("enter 2nd number")
```

In [ ]:
```
x=float(num1)
```

In [ ]:
```
y=float(num2)
```

In [ ]:
```
select operation=input("press 1.to add 2.to subtract 3.to multiply 4.to
 divide")
```

In [ ]:
```
if(select operation==1):
    print("result=x+y")
elif(select operation==2):
    print("result=x-y")
elif(select operation==3):
    print("result=x*y")
elif(select operation==4):
    print("result=x/y")
else:
    print("invalid input")
```

In [ ]:
```

```

In [ ]:
```

```