

In [1]:

```
1 # 1
2
3
4 def filter_list(l):
5     k=[]
6     for i in l:
7         if type(i)==int:
8             k.append(i)
9     print(k)
10
11
12 filter_list([1, 2, 3, "a", "b", 4])
13 filter_list(["A", 0, "Edabit", 1729, "Python", "1729"])
14 filter_list(["Nothing", "here"])
```

```
[1, 2, 3, 4]
[0, 1729]
[]
```

In [2]:

```
1 # 2
2 def add_indexes(l):
3
4     for i in range(len(l)):
5         l[i]+=i
6     print(l)
7
8
9 add_indexes([0, 0, 0, 0, 0])
10 add_indexes([1, 2, 3, 4, 5])
11 add_indexes([5, 4, 3, 2, 1])
```

```
[0, 1, 2, 3, 4]
[1, 3, 5, 7, 9]
[5, 5, 5, 5, 5]
```

In [5]:

```
1 # 3
2 def func(h,r):
3
4     print(3.14*r**2*h/3)
5
6 func(3,2)
7 func(15,6)
8 func(18,0)
```

```
12.56
565.2
0.0
```

In [11]:

```
1 # 4
2
3 l=[1,3,6,10,15]
4
5 def tri(n):
6     if n<=len(l):
7         return l[n-1]
8     else:
9
10         return n+tri(n-1)
11
12
13
14
15
16 print(tri(1))
17 print(tri(6))
18 print(tri(215))
```

```
1
21
23220
```

In [12]:

```
1 # 5
2
3 def func(l):
4
5     for i in range(1,11):
6         if i not in l:
7             return i
8 print(func([1, 2, 3, 4, 6, 7, 8, 9, 10]))
9 print(func([7, 2, 3, 6, 5, 9, 1, 4, 8]))
10 print(func([10, 5, 1, 2, 4, 6, 8, 3, 9]))
```

```
5
10
7
```