1. The else belongs to the second if condition. This is because the second if and else both are a part of the first if.
2. Output: foo , that’s because in the if condition, we are using ‘and’ …therefore both the fuctions should have had a true output but we know foo() returns false. Therefore if block wont run.
3. The code will run unchanged because the value for i is set by range() and everytime the loop runs , the value is set back as per it.
4. tuples\_list = [ (1, "a"), (2, "b"), (3, "c"), (1, "d") ]

target\_set = {1, 3}

t2=[]

for i in tuples\_list:

  if i[0] in target\_set:

      t2.append(i)

        print(t2)

5)we can change the mutable parts by type casting. The output for this code will show error (unhashable type: list)

6) because it wont get whole decimal values like 1.1,1.2….therefore not having= 1.5 , the loop runs forever. We can use <=1.5 to get the code running well.

7) squares = [i\*\*2 for i in range(10) if i%2==0]

print(squares)

8) nl = [1, [2, [3, 4], 5], 6]

print(nl[1][1][1])

9) def prime(list):

    list2=[]

    x=0

    for i in list:

       for j in range(i):

           j+=1

           if(i%j==0):

               x+=1

               if(x==2):

                   list2.append(i)

    return list2

10) l=[10,20,30,40,50]

if len(l)%2==0:

    l.pop(((len(l)/2)-1),len(l)/2)

else:

    l.pop(int((len(l)-1)/2))

11) l = [5, 6, 7, 8, 9]

m=len(l)

l2=[]

for i in range(len(l)):

         l2.append(l[m - i - 1])

print(l2)

12) def palindrome(s):

    x= 0

    y = len(s) - 1

    while x < y:

        if s[x] != s[y]:

            return False

        x += 1

        y -= 1

    return True

13) import numpy as np

num=np.random.randint(1,100,size=(5,5))

print(num)

for i in range(0,4):

    for j in range(0,4):

      if num[i][j]%2==0:

          num[i][j]=0

print(num)

14) import numpy as np

num1=np.random.randint(1,100,size=(3,3))

num2=np.random.randint(1,100,size=(3,3))

bool=num1==num2

print(bool)

15) import numpy as np

a = np.array([[45, 60], [30, 80]])

mean=0

sum=0

b=[]

for i in range(0,1):

    for j in range(0,1):

        if a[i][j]>50:

            a[i][j]=100

print(a)

for k in range(0,1):

    mean=0

    for l in range(0,1):

        sum=a[k][l]+sum

        mean=sum/2

        b.append(mean)

print(b)