1. Flatten the nested list [[1, 2], [3, 4], [5, 6]] into a single list.

l1=[[1,2],[3,4],[5,6,7]]

l2=[]

for i in l1:

l2.extend(i)

print(l2)

2. From a nested list [[2, 5], [7, 9], [12, 15]], extract all even numbers.

list =[[2, 5], [7, 9], [12, 15]]

l2=[]

for i in list:

l2.extend(i)

for j in l2:

if j%2==0:

print(j)

3. Create a list of squares for numbers from 1 to 20.

l1=[1,2,3,4,5,6,7]

l2=[]

for i in l1:

l2.append(i\*i)

print(l2)

4. Print prime numbers between 10 to 20 using list comprehension?

ct=0

for i in range(10,20):

for j in range(2,i):

if i%j==0:

ct+=1

break

else:

ct=0

if ct<1:

print(i,"prime")

ct=0

l1=[i for i in range(10,20) if all(i%j!=0 for j in range(2,i))]

print(l1)

6. Write a Python program to swap the case of each character in a given string without

using the built-in swapcase() method.

x="HElloWorlD"

a=""

for i in x:

if ord(i)>=65 and ord(i)<=90:

y=ord(i)+32

a+=chr(y)

else:

z=ord(i)-32

a+=chr(z)

print(a)

7. Write a list comprehension to print only the word 'python' from the list.

s=[ ‘python’ ,’java’ , ‘c++’ , ‘developer’ ]

s=[ 'python' ,'java' , 'c++' , 'developer' ]

x=[i for i in s if i=="python"]

print(x)