```
#Q1 Given a two list. Create a
#third list by picking an odd-index element from the first list and even index
#elements from the second.

l1=[15,64,95,31,6,7,54,54,11,87]
l2=[85,64,34,13,78,55,69,2,99,46]
l3=[]
for i in l1[1::2]:
  l3.append(i)
for j in l2[0::2]:
  l3.append(j)
print(l3)
```

```
[64, 31, 7, 54, 87, 85, 34, 78, 69, 99]
```

```
#Q2 Given a number count the total
number of digits in a number
a=input("Enter the number:")
print("count of digit:",len(a))
```

```
Enter the number:12345
count of digit: 5
```

```
#Q3 Write a Python program to print the numbers of a
#specified list after removing even numbers from it.

l1=[26,45,86,13,77,66,99,18,8,65]
for i in l1:
  if i%2==0:
    l1.remove(i)
print(l1)
```

```
[45, 13, 77, 99, 8, 65]
```

```
#Q4 Write a Python program to generate and print a list of
#first and last 5 elements where the values are square of numbers between 1 and
#30 (both included).

import math
l1=[4,121,169,694,144,525,946,546,545,15,336,900,441,676,81]
l2=[]
for i in l1[0:6]:
  if math.sqrt(i) in range(1,31):
    l2.append(i)
for j in l1[-1:-6:-1]:
```

```
  if math.sqrt(j) in range(1,31):
    l2.append(j)
print(l2)
```

```
[4, 121, 169, 144, 81, 676, 441, 900]
```

```
#Q4
l1=[]
for i in range(1,31):
  if i in range(1,6):
    b=i*i
    l1.append(b)
  elif i in range(26,31):
    b=i*i
    l1.append(b)
print(l1)
```

```
[1, 4, 9, 16, 25, 676, 729, 784, 841, 900]
```

```
#Q5 Write a Python program to generate all permutations of a list in Python.
L=[1,2,3]
for i in range(len(L)):
        for j in range(len(L)):
            for k in range(len(L)):
              if (i!=j and j!=k and i!=k):
                    print(L[i], L[j], L[k])
```

```
1 2 3
1 3 2
2 1 3
2 3 1
3 1 2
3 2 1
```

```
#Q6 Write a python program to check whether two lists are
#circularly identical.
a=[0,1,0,1,1]
b=[1,0,1,1,0]
c=0
d=0
while True:
  e=a[0]
  a.pop(0)
  a.append(e)
  d=len(b)
  c+=1
```

```
  if a==b:
    print ('identical')
    break
  if c==d:
    print ('not identical')
    break
```

```
#Q7 Write a Python
#program to change the position of every n-th value with the (n+1)th in a
#list.
l1=[0,1,2,3,4,5]
for i in range(0,len(l1),2):
  temp=l1[i]
  l1[i]=l1[i+1]
  l1[i+1]=temp
print(l1)
```

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

```
#Q8 Write
#a Python program to iterate over two lists simultaneously.
l1=[1,2,3,4,5,6]
l2=['red','blue','green','white','yellow','black','pink']
for i in range(len(l1)):
    for j in range(len(l2)):
      if i==j:
        print(l1[i],l2[j])
```

```
1 red
2 blue
3 green
4 white
5 yellow
6 black
```

```
#Q9 Write a Python program to generate the combinations of n
#distinct objects taken from the elements of a given list.

list1 =  [1, 2, 3, 4, 5, 6, 7, 8, 9]
#list1 = [1,2,3]

list3 = []

for i in list1:
  for j in list1:
```

```
    list2 = []
    if (i == j):
      continue
    elif (i != j):
      list2.append(i)
      list2.append(j)
    list3.append(list2)
print(list3)
```

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

```
#Q10 Write a Python program to remove duplicates from a list of lists.

l1=[[10,20],[40],[30,56,25],[10,20],[33],[40]]
l1=sorted(l1)
l2=[]
for i in l1:
  if i not in l2:
    l2.append(i)
print(l2)
```

```
[[10, 20], [30, 56, 25], [33], [40]]
```

```
a=int(input("Enter the number:"))
day={1:'Monday',2:'Tuesdat',3:'Wednesday',4:'Thursday',5:'Friday',6:'Saturday',7:'Sunday'}
print(day[a])
```

```
Enter the number:1
Mondat
```

```
string='google.com'
b=[]
for i in string:
  c=string.count(i)
  b.append([i,c])
d=dict(b)
print(d)
```

```
{'g': 2, 'o': 3, 'l': 1, 'e': 1, '.': 1, 'c': 1, 'm': 1}
```

```
class Rectangle:
```

```
    def __init__(self):
      self.length=int(input("Enter length"))
      self.width=int(input("Enter width"))
    def Perimeter(self):
      #self.parameter=2*(self.length+self.width)
      return 2*(self.length+self.width)
    def Area(self):
      return (self.length*self.width)
    def display(self):
      print("Length=",self.length)
      print("Width=",self.width)
      print("Perimeter=",self.Perimeter())
      print("Area=",self.Area())
class Parallelepipede(Rectangle):
  def __init__(self):
    Rectangle.__init__(self)
    self.height=int(input("Enter Height: "))
  def Volume(self):
    return self.height*self.length*self.width
r1=Rectangle()
```

```
Enter length10
Enter width20
```

```
r1.Perimeter()
```

```
r1.Area()
```

```
200
```

```
r1.display()
```

```
Length= 10
Width= 20
Perimeter= 60
Area= 200
```