

Question 1:

From the list below, separate a list that are even and odd and put them into the respective variables

```
num = [1, 5, 2, 89, 32, 112, 167, 333, 20, 5, 23]
odd_num = []
even_num=[]
```

the final output should be:

```
Odd numbers: [1, 5, 89, 167, 333, 5, 23]
Even numbers: [2, 32, 112, 20]
```

```
In [2]: #lets try using for loop

odd_num=[]
even_num=[]
num=[1,5,2,89,32,112,167,333,20,5,23]

for i in num:
    if i%2==0:
        even_num.append(i)
    else:
        odd_num.append(i)

print(odd_num)
print(even_num)

[1, 5, 89, 167, 333, 5, 23]
[2, 32, 112, 20]
```

```
In [4]: #lets try same above question using list comprehension:

odd_num=[]
even_num=[]
num=[1,5,2,89,32,112,167,333,20,5,23]

even_num=[i for i in num if i%2==0]
odd_num=[i for i in num if i%2!=0]

print(even_num)
print(odd_num)

[2, 32, 112, 20]
[1, 5, 89, 167, 333, 5, 23]
```

```
In [1]: #Question 2:
a=110
while a>100:
    print(a)
    a=a-2
```

```
110
108
106
104
102
```

Question 3:

Print table as asked by user

```
In [12]: num=int(input("Please enter number which multiplication you want: "))
for i in range(1,11):
    print(num, "*", i, "=", num*i)
```

```
Please enter number which multiplication you want: 4
4 * 1 = 4
4 * 2 = 8
4 * 3 = 12
4 * 4 = 16
4 * 5 = 20
4 * 6 = 24
4 * 7 = 28
4 * 8 = 32
4 * 9 = 36
4 * 10 = 40
```

In [13]: *#for loop in string*

```
a="Nepal"  
for i in a:  
    print(i)
```

N
e
p
a
l

In [14]: *#for loop in dictionary*

```
a={"city":"NYC","gender":"male"}  
for i in a.keys():  
    print(i)
```

city
gender

In [16]: *for i in a.values():*

```
    print(i)
```

NYC
male

In [17]: *for i in a.items():*

```
    print(i)
```

('city', 'NYC')
('gender', 'male')

In [18]: *#Zip function in python*

```
a=(1,2)  
b=("apple","mango")  
for i, j in zip(a,b):  
    print(i,j)
```

1 apple
2 mango

In [19]: *#enumerate in python for loop*

```
b=("cat","dog")  
for i in enumerate(b):  
    print(i)
```

(0, 'cat')
(1, 'dog')

In [20]: *# for loop with else*

```
a=["Red","Green","yellow"]  
for i in a:  
    print(i)  
else:  
    print("list completed")
```

Red
Green
yellow
list completed

In [22]: *#nested loop in python for loop*

```
a=[1,2,3,4,5]  
b=["red","green","yellow","blue","white"]  
for i in a:  
    for j in b:  
        print(i,j)
```

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

```
In [23]: #break statement in python
vehicles = ['Car', 'Cycle', 'Bus', 'Tempo']

for v in vehicles:
    if v == "Bus":
        break
    print(v)
```

```
Car
Cycle
```

```
In [24]: #continue statement in python
vehicles = ['Car', 'Cycle', 'Bus', 'Tempo']

for v in vehicles:
    if v == "Bus":
        continue
    print(v)
```

```
Car
Cycle
Tempo
```

```
In [25]: #count number inside list using python for loop
a=[10,20,21,34,55]
count=0
for i in a:
    count=count+1
print(count)
```

```
5
```

```
In [26]: #sum
a=[10,20,21,34,55]
sum=0
for i in a:
    sum=sum+i
print(sum)
```

```
140
```

```
In [27]: #sum
a=[10,20,21,34,55]
sum=0
for i in a:
    sum=sum+i
    print(sum)           #lets see difference
```

```
10
30
51
85
140
```

For now, we will only practice basic of for loop, because we will not need much in depth for data analysis . if in case during practice, if we need more. We will move on that too and do further practice.

```
In [ ]:
```