Assignment1

June 7, 2022

pythonassignment1

Use the "Run" button to execute the code.

[ ]:
```
!pip install jovian --upgrade --quiet
```

[ ]:
```
import jovian
```

[ ]:
```
# Execute this to save new versions of the notebook
jovian.commit(project="pythonassignment1")
```

0.0.1 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.

[13]:
```
listOne = [3, 6, 9, 12, 15, 18, 21]
listTwo = [4, 8, 12, 16, 20, 24, 28]
listThree=[]
listFour=[]
listFive=[]
for i in range(0,7):
    if(i%2!=0):
        listThree.append(listOne[i])
    if(i%2==0):
        listFour.append(listTwo[i])
listFive.extend(listThree)
listFive.extend(listFour)
print("Element at odd-index positions from list one\n",listThree)
print("Element at even-index positions from list two\n",listFour)
print("Printing Final third list\n",listFive)
```

```
Element at odd-index positions from list one
 [6, 12, 18]
Element at even-index positions from list two
 [4, 12, 20, 28]
Printing Final third list
 [6, 12, 18, 4, 12, 20, 28]
```

0.0.2 Q2:Given a number count the total number of digits in a number

[10]:
```
a=(input("Enter number:"))
print("total count is:",len(a))
print(a)
```

```
Enter number:45546
total count is: 5
45546
```

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

[11]:
```
a=[1,3,4,5,6,7,8]
for i in a:
    if(i%2==0):
        a.remove(i)
print("After removed even number from list:",a)
```

```
After removed even number from list: [1, 3, 5, 7]
```

0.0.4 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)

[2]:
```
lst=[]
lst1=[]
for i in range(1,31):
    lst.append(i**2)
print(lst)
lst1.extend(lst[0:5])
lst1.extend(lst[25:30])
print("first and last 5 ele square number",lst1)
```

```
[1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144, 169, 196, 225, 256, 289, 324,
361, 400, 441, 484, 529, 576, 625, 676, 729, 784, 841, 900]
first and last 5 ele square number [1, 4, 9, 16, 25, 676, 729, 784, 841, 900]
```

0.0.5 Q5.Write a Python program to generate all permutations of a list in Python.

[17]:
```
L1=[1,2,3]
def permutations(start, end=[]):
    if len(start) == 0:
        print(end)
    else:
        for i in range(len(start)):
            permutations(start[:i] + start[i+1:], end + start[i:i+1])
```

```
permutations(L1)
```

```
[1, 2, 3]
[1, 3, 2]
[2, 1, 3]
[2, 3, 1]
[3, 1, 2]
[3, 2, 1]
```

0.0.6 Q6.Write a python program to check whether two lists are circularly identical.

[3]:
```
a=[3,4,5,1,2]
b=[1,2,3,4,5]
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
```

```
identical
```

0.0.7 Q7.Write a Python program to change the position of every n-th value with the (n+1)th in a list.

[8]:
```
l=[0,1,2,3,4,5]
for i in range(0,5):
    for j in range(0,i+1):
        l[i],l[i+1]=l[i+1],l[i]
print(l,end=" ")
```

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

0.0.8 Q8.Write a Python program to iterate over two lists simultaneously.

[14]:
```
l1=[1,2,3,4,5]
l2=[6,7,8,9,10]
l3=[]
```

```
j=0
for i in l1:
    l3.append(i)
    l3.append(l2[j])
    j+=1
print(l3)
```

```
[1, 6, 2, 7, 3, 8, 4, 9, 5, 10]
```

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

Original list: [1, 2, 3, 4, 5, 6, 7, 8, 9] Combinations of 2 distinct objects: [1, 2] [1, 3] [1, 4] [1, 5] .... [7, 8] [7, 9] [8, 9]

[15]:
```
list1=[1,2,3,4,5,6,7,8,9]
list2=[]
for i in  list1:
    for j in (list1[i:]):
        a=[]
        if i==j:
            continue
        a.append(i)
        a.append(j)
        list2.append(a)
print("Original List",list1)
print("Combination of 2 distinct objects:\n",list2)
```

```
Original List [1, 2, 3, 4, 5, 6, 7, 8, 9]
Combination of 2 distinct objects:
 [[1, 2], [1, 3], [1, 4], [1, 5], [1, 6], [1, 7], [1, 8], [1, 9], [2, 3], [2,
4], [2, 5], [2, 6], [2, 7], [2, 8], [2, 9], [3, 4], [3, 5], [3, 6], [3, 7], [3,
8], [3, 9], [4, 5], [4, 6], [4, 7], [4, 8], [4, 9], [5, 6], [5, 7], [5, 8], [5,
9], [6, 7], [6, 8], [6, 9], [7, 8], [7, 9], [8, 9]]
```

[ ]:
```

```

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

[3]:
```
l=[]
while True:
    i=input("enter the number: ")
    if(i==""):
        break
    l.append(int(i))
print("list with duplicates",l)
aset=set(l)
print("List without duplicates",sorted(list(aset)))
```

```
enter the number: 1
enter the number: 2
enter the number: 3
enter the number: 4
enter the number: 5
enter the number: 6
enter the number: 2
enter the number: 3
enter the number:
list with duplicates [1, 2, 3, 4, 5, 6, 2, 3]
List without duplicates [1, 2, 3, 4, 5, 6]
```

[ ]:

[ ]: