

LISTS

#Author - Shiuli Maji

Date - 15/12/2022

#(a) Create a list list1 =

```
[1,2,5,'hello',41,'world'] print(list1)
```

OUTPUT:

```
PS D:\Python> python -u "d:\Python\Assignment List\create.py"
```

```
[1, 2, 5, 'hello', 41, 'world']
```

#Author - Shiuli Maji

Date - 05/01/2023

#(b) Concatenate two lists

```
li1 = ['Soumitra']
```

```
li2 = ['Das']
```

```
print(li1)
```

```
print(li2) print(li1
```

```
+ li2)
```

OUTPUT:

```
PS D:\Python> python -u "d:\Python\Assignment List\concatenate.py"
```

```
['Soumitra']
```

```
['Das']
```

```
['Soumitra', 'Das']
```

#Author - Shiuli Maji

Date - 05/01/2023

#(c) Extend another list in a list a

```
= [1,2,3,4] b =
```

```
[5,6,7,8] print("Tuple
```

```
'a' is =",a)
print("Tuple 'b' is
=",b)

a.extend(b)
print("Extend tuple is =",a)
```

OUTPUT:

```
PS D:\Python> python -u "d:\Python\Assignment List\extend.py"
Tuple 'a' is = [1, 2, 3, 4]
Tuple 'b' is = [5, 6, 7, 8]
Extend tuple is = [1, 2, 3, 4, 5, 6, 7, 8]
```

#Author - Shiuli Maji

Date - 05/01/2023

#(d) Append an item in a list

```
a = [1,2,4,57,6]
print("Before Append List is : ",a)
n=int(input("Enter the number which can be append : "))
a.append(n)
print("After append() tuple is : ",a)
```

OUTPUT:

```
PS D:\Python> python -u "d:\Python\Assignment List\append.py"
Before Append List is : [1, 2, 4, 57, 6]
Enter the number which can be append : 99
After append() tuple is : [1, 2, 4, 57, 6, 99]
```

#Author - Shiuli Maji

Date - 05/01/2023 #(e)

Insert an item in the 3rd position of a list.

```
li = ['python','is','a','language'] print("Before  
insert an item the list is : ",li)  
pos=int(input("Enter the position where can  
be insert : ")) ele=input("Enter the element  
: ") li.insert(pos-1,ele)  
print("After insert an item the list is : ",li)
```

OUTPUT:

```
PS D:\Python> python -u "d:\Python\Assignment List\insert.py"  
Before insert an item the list is : ['python', 'is', 'a', 'language']  
Enter the position where can be insert : 4  
Enter the element : scripting  
After insert an item the list is : ['python', 'is', 'a', 'scripting', 'language']
```

#Author - Shiuli Maji

Date - 05/01/2023 #(f)

Pop an item.

```
a = [1,2,4,7,5,4] print("Before  
pop , list is : ") print(a)  
a.pop(3)  
print("After pop , list is : ")  
print(a)
```

OUTPUT:

```
PS D:\Python> python -u "d:\Python\Assignment List\pop.py"
```

Before pop , list is :

[1, 2, 4, 7, 5, 4]

After pop , list is :

[1, 2, 4, 5, 4]

#Author - Shiuli Maji

Date - 05/01/2023 #(g)

Find the index of a given item by using index() method.

```
a = [5,8,4,2,1]
```

```
print("List is : ") print(a)
```

```
ele=int(input("Enter the element from above list : "))
```

```
ind=a.index(ele)
```

```
print("Index of {} is : {}".format(ele,ind))
```

OUTPUT:

```
PS D:\Python> python -u "d:\Python\Assignment List\index.py"
```

```
List is :
```

```
[5, 8, 4, 2, 1]
```

```
Enter the element from above list : 8
```

```
Index of 8 is : 1
```

#Author - Shiuli Maji

Date - 05/01/2023 #(h)

Count number of items in the list.

```
a = [1,2,5,7,5,8,4,1,4,5] print("Before  
count the list : ",a) ele=int(input("Enter  
the element :  
")) co=a.count(4) print("After count,an item of {} is = {}  
times".format(ele,co))
```

OUTPUT:

```
PS D:\Python> python -u "d:\Python\Assignment List\count.py"  
Before count the list : [1, 2, 5, 7, 5, 8, 4, 1, 4, 5]  
Enter the element : 4  
After count,an item of 4 is = 2 times  
PS D:\Python> python -u "d:\Python\Assignment List\count.py"  
Before count the list : [1, 2, 5, 7, 5, 8, 4, 1, 4, 5]  
Enter the element : 5  
After count,an item of 5 is = 2 times
```

#Author - Shiuli Maji

Date - 05/01/2023 #(i)

Sort the list.

```
a = [6,5,4,3,2,1]  
print("Before sort , list is : ",a)  
a.sort()  
print("After sort , list is : ",a)
```

OUTPUT:

```
PS D:\Python> python -u "d:\Python\Assignment List\sort.py"  
Before sort , list is : [6, 5, 4, 3, 2, 1]
```

After sort , list is : [1, 2, 3, 4, 5, 6]

#Author - Shiuli Maji

Date - 05/01/2023 #(j)

Reverse the list using reverse() function.

```
a = [5,4,1,9,4,2,4]
print("Before reverse , the list is : ",a)
a.reverse()
print("After reverse , the list is : ",a)
```

OUTPUT:

```
PS D:\Python> python -u "d:\Python\Assignment List\reverse.py"
Before reverse , the list is : [5, 4, 1, 9, 4, 2, 4]
After reverse , the list is : [4, 2, 4, 9, 1, 4, 5]
```

#Author - Shiuli Maji

Date - 05/01/2023 #(k)

Copy the list into another list.

```
list1 = [4,7,5,8,7,2,4]
print("Before copy , list1 is : ",list1)
list2 =list1.copy()
print("After copy , list2 is : 
",list2) print(id(list1))
print(id(list2))
```

OUTPUT:

```
PS D:\Python> python -u "d:\Python\Assignment List\copy.py"
Before copy , list1 is : [4, 7, 5, 8, 7, 2, 4]
```

After copy , list2 is : [4, 7, 5, 8, 7, 2, 4]

2024036710336 2024036964288

#Author - Shiuli Maji

Date - 05/01/2023 #(l)

Create a multi-dimensional list.

```
a = [1,2,[3,4,5],[6,7,8,9],10] print("A multi-  
dimensional list is :\n ") print(a)
```

OUTPUT:

```
PS D:\Python> python -u "d:\Python\Assignment List\multi_list.py" A  
multi-dimensional list is :
```

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

#Author - Shiuli Maji

Date - 05/01/2023 #(m)

illustrate join() and split() method.

```
li = ['python','is','a','object','oriented','language'] stg  
= '*' print("Before join method , list  
is : ",li) stg = stg.join(li)  
print("After join method , list is : ",stg)
```

```
msg = "I Love My Parents"  
print("Before split: ",msg) li  
= msg.split()  
print("After split, list is : ",li)
```

OUTPUT:

PS D:\Python> python -u "d:\Python\Assignment List\join_split.py"

Before join method , list is : ['python', 'is', 'a', 'object', 'oriented', 'language']

After join method , list is : python*is*a*object*oriented*language

Before split: I Love My Parents

After split, list is : ['I', 'Love', 'My', 'Parents']

#Author - Shiuli Maji

Date - 05/01/2023 #(n)

create list alias.

```
a = [1,4,5,7,3,2] b
= a print("List 'a' is
:',a) print("List 'b' is
:',b) if (id(a)==id(b)):
print("Alias is
occurred") else:
    print("Not occurred")
```

OUTPUT:

PS D:\Python> python -u "d:\Python\Assignment List\alias.py"

List 'a' is : [1, 4, 5, 7, 3, 2]

List 'b' is : [1, 4, 5, 7, 3, 2]

Alias is occurred

#Author - Shiuli Maji

Date - 05/01/2023

(o) illustrate shallow copy and deep copy import

copy

s5=

[1,2,[3,4,5],6,[7,8,9,10],11]

print("The original list is :",s5)

s6=copy.copy(s5) print("The

copied list is :",s6)

s5[4][2]=99#add 99 in inner

list s5[4][2] print("After add

item in inner list :: ")

print("The original list is: ",s5)

print("The copied list is :",s6)

OUTPUT:

The original list is : [1, 2, [3, 4, 5], 6, [7, 8, 9, 10], 11]

The copied list is : [1, 2, [3, 4, 5], 6, [7, 8, 9, 10], 11]

After add item in inner list ::

The original list is: [1, 2, [3, 4, 5], 6, [7, 8, 99, 10], 11]

The copied list is : [1, 2, [3, 4, 5], 6, [7, 8, 99, 10], 11]

s5= [1,2,[3,4,5],6,[7,8,9,10],11]

#deepcopy

print("The original list is :",s5) s6=copy.deepcopy(s5)

print("The copied list is :",s6)

s5[4][2]=99#add 99 in inner list s5[4][2]

```
print("After add item in inner list  
s5[4][2]:: ") print("The original list is:  
",s5) print("The copied list is :",s6)
```

OUTPUT:

The original list is : [1, 2, [3, 4, 5], 6, [7, 8, 9, 10], 11]

The copied list is : [1, 2, [3, 4, 5], 6, [7, 8, 9, 10], 11]

After add item in inner list s5[4][2]::

The original list is: [1, 2, [3, 4, 5], 6, [7, 8, 9, 10], 11]

The copied list is : [1, 2, [3, 4, 5], 6, [7, 8, 9, 10], 11]

#Author - Shiuli Maji

Date - 05/01/2023 #(p)

unpack list itmes into variables.

```
li = [4,5,1,2,7,8]  
print("Before unpack , list is : ")  
print(li)  
print("After unpack : ")  
a,b,c,d,e,f = li  
print(a)  
print(b) print(c)  
print(d)  
print(e)  
print(f)
```

OUTPUT:

PS D:\Python> python -u "d:\Python\Assignment List\unpack.py" Before

unpack , list is : [4, 5, 1, 2, 7, 8] After unpack :

4

5

1

2

7

8