6-lesson

Python – List ,Tuple

Python – List (tartiblangan tur)

Uzunligi = 6

	'P'	'y'	't'	'h'	'o'	'n'
index	0	1	2	3	4	5
negative index	-6	-5	-4	-3	-2	-1

Python – List(index bilan ishlash)

Python Prints	Results
listofnumbers=[10,20,4,2,66,75]	
print(listofnumbers)	[10, 20, 4, 2, 66, 75]
print(type(listofnumbers))	<class 'list'>
print(listofnumbers[0])	10
print('oxirgi index=',listofnumbers[-1])	oxirgi index= 75
print(listofnumbers[-3])	2
total=len(listofnumbers) print('list uzunligi=',total, 'oxirgi element',listofnumbers[total-1])	list uzunligi= 6 oxirgi element 75

Python – List(ajratib olish,step-size,qo'shish,tekshirish)

Python Prints	Results
colors=['black','white','orange','pink','brown'] colors2=['blue','green','gold']	
print(colors[2:])	['orange', 'pink', 'brown']
print(colors[:2])	['black', 'white']
print(colors[2:4])	['orange', 'pink']
print(colors[::1])	['black', 'white', 'orange', 'pink', 'brown']
print(colors[::-1]) //reverse list	['brown', 'pink', 'orange', 'white', 'black']
print(colors+colors2)	['black', 'white', 'orange', 'pink', 'brown', 'blue', 'green', 'gold']
print('black' in colors)	True
print('orange' in colors)	False
for color in colors: print(color)	black white orange pink brown

Python – List(Elementlarni for loopi yordamida chop etish)

Python Prints	Results
colors=['black','white','orange','pink','brown']	
for i in range(5): print(i)	0 1 2 3 4
for i in range(len(colors)): print('index',i,'value=',colors[i])	index= 0 value= black index= 1 value= white index= 2 value= orange index= 3 value= pink index= 4 value= brown
for i in range(len(colors)): print('index:{} value{}'.format(i,colors[i])	index:0 value:black index:1 value:white index:2 value:orange index:3 value:pink index:4 value:brown

Python – List(append,insert,pop,remove,del,update,reverse)

Python Prints	Results
colors=['black','white','orange','pink','brown']	
append - list oxiriga yangi element qo'shadi colors.**append**('lightgrey')	['black', 'white', 'orange', 'pink', 'brown', 'lightgrey']
insert - index bo'yicha yangi element qo'shadi colors.**insert**(2,'lightgrey')	['black', 'white', 'lightgrey', 'orange', 'pink', 'brown']
pop - listdagi oxirgi elementni o'chiradi colors.**pop**()	['black', 'white', 'orange', 'pink']
remove - listdan nomi bo'yicha o'chiradi colors.**remove**('orange')	['black', 'white', 'pink', 'brown']
del - listdan nomi bo'yicha o'chiradi **del** colors.[1]	['black', 'orange', 'pink', 'brown']
colors[1]='greenlight'	['black', 'greenlight', 'orange', 'pink', 'brown']
reverse- listni teskarti tartibda tartiblaydi colors.**reverse**()	['brown', 'pink', 'orange', 'white', 'black']
count() - listni ichida berilgan element nech marotaba takrorlanganini hisoblaydi	

Python – List(index,sort,reverse,extend)

Python Prints	Results
colors=['black','white','orange','pink','brown'] colors2=['gold',green,lightgrey]	
index- tanlanga elementni indexini qaytaradi colors.**index**('pink')	3
sort- elementlarni tartiblaydi **sorted**() colors.**sort()**	['black', 'brown', 'orange', 'pink', 'white']
reverse- elementlarni teskari holatda tartiblaydi colors.**reverse**()	['brown', 'pink', 'orange', 'white', 'black']
extend- 2 ta listni bitta listga aylantradi colors.**extend**(colors2)	['black', 'white', 'orange', 'pink', 'brown', 'blue', 'green', 'gold']
extend([]) list oxiriga bir nechta element qo'shish	

Python – Tuple and List unpacking

Tuple unpacking

```
a=5
b=3
c=8
```

```
a,b,c=5,3,8
```

List unpacking

```
numbers=[1,2,3,4,5]
```

```
a,b,c,d,e=numbers
```

```
a,*b=numbers
```

1, 2 3 4 5

```
a,*b,c=numbers
```

1, 2 3 4 , 5

Python – Tuple

Uzunligi = 6

	'P'	'y'	't'	'h'	'o'	'n'
index	0	1	2	3	4	5
negative index	-6	-5	-4	-3	-2	-1

Python – Tuple(del,insert,slicing,step-size)

Python Prints	Results
colors=('black','white','orange','pink','brown')	
tp=10 -bu holatda ozgaruchidagi qiymat int tp=10,20,30 - bu holatda esa qiymat tuple	('black', 'white', 'orange', 'pink', 'brown')
tuple- tuple o'zgarmas elementlar to'plamini o'z ichiga oladi,ya'ni undagi elementlarga yangi qiymat bera olmaymiz **colors**[1]='indigo'	TypeError: 'tuple' object does not support item assignment
del- elementlarni o'chirib xam bo'lmaydi **del** colors[3]	TypeError: 'tuple' object doesn't support item deletion

print(colors[2:]) //Slicing
print(colors[:2])
print(colors[1:4])
	('orange', 'pink', 'brown')
	('black', 'white')
	('white', 'orange', 'pink')

print(colors[::1]) //Step Size
print(colors[::2])
print(colors[::-1])
print(colors[::-2])
	('black', 'white', 'orange', 'pink', 'brown')
	('black', 'orange', 'brown')
	('brown', 'pink', 'orange', 'white', 'black')
	('brown', 'orange', 'black')

Python – Tuple(index,value,for loop)

Python Prints	Results
colors=('black','white','orange','pink','brown') color2=('indigo','gold')	
for i in color: print(i) //tupleni siklga qo'yganimizda qiymatlarni qaytaradi ularning indexini emas	black white orange pink brown
for i in range(len(color)): print(i) // tuple elementlarini indexini olish uchun yuqoridagi kabi sikldan foydalanamiz	0 1 2 3 4
Biror element ushu tuple listda bor yoki yo'qligini aniqlash uchun quyidagicha kod yozamiz if 'black' in color: print('element found') else: print('not found')	True,(agarda mavjud bo'lmasa False qiymat qaytaradi)
2ta tuple listni bir-biriga qo'shish print(color+color2)	('black', 'white', orange','pink','brown','indigo','gold')
Agarda qaysidir element listni ichida necha marotaba takrorlanganini bilish uchun count() dan foydalanamiz print(color.count('orange'))	1

List - o'zgarishi m/n bo'lgan tur ,ln type dagi qiymat o'zgarmasdir.List ning ko'plab methodlari bor, Tuple da esa atiga 2 ta.Bular: count va index

Python – Topshiriqlar

Topshiriq 1 -Listda sizning har bir oila a'zongiz ismini saqlab ularni birma bir ekranga chiqaradigan dastur tuzing.

Topshiriq 2 -Standart kiruvchi ma'lumotdagi vergul bilan ajratilgan so'zlar ketma-ketligini teskari tartibda chiqaradigan dastur tuzing

Masalan:

Ismlar: john, alice, bob Natija: bob, alice, john

```
words = input("Vergul bilan ajratib so'zlar kiriting:").split(sep=",")
# davomini o'zingiz yozing!
```

Python – Topshiriqlar

Topshiriq 3 -Standart kiruvchi ma'lumotdagi vergul bilan ajratilgan so'zlar ketma-ketligini alifbo tartibida chiqaradigan dastur tuzing

Masalan:

Ismlar: john, alice, bob

Natija: alice, bob, john

```
words = input("Vergul bilan ajratib so'zlar kiriting:").split(sep=",")
# davomini o'zingiz yozing!
```

Python – Topshiriqlar

Topshiriq 4 - Standart kiruvchi ma'lumotdagi vergullar bilan ajratilgan so'zlar ketma-ketligi orasida maqsad qilingan so'z aynan qaysi indeksda turganligini aniqlovchi dastur tuzing

Masalan:

- Ismlar: john, alice, bob
- Maqsad: bob Natija: 2

Python – Topshiriqlar

Topshiriq 5 – Standart kiruvchi ma'lumotdagi vergul bilan ajratilgan so'zlar ketma-ketligida maqsad qilingan so'z necha marta takrorlanganligini aniqlovchi dastur tuzing Masalan:

- Ismlar: alice, john, bob, alice, bob, john, alice
- Maqsad: alice
- Natija: 3

```
words = input("Vergul bilan ajratib so'zlar kiriting:").split(sep=",")
# davomini o'zingiz yozing!
```