

In [1]: `#introduction program`

```
print("hello world")
```

hello world

In [2]: `a=10`

```
b=20
```

```
print(a+b)
```

30

In [4]:

```
"""
```

```
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```

```
will allow duplicate elements
```

```
list supports index based operations
```

```
modify the list
```

```
"""
```

```
a=[]
```

```
print(a)
```

[]

In [26]: `a=[]`

```
print(type(a))
```

<class 'list'>

In [25]: `a=[10,20,30,10]`

```
print(a) #will allow duplicate elements
```

[10, 20, 30, 10]

In [27]: `a=[]`

```
a=[10,20,30,10]
```

```
print(a) #copy
```

```
a.sort() #sort
```

```
print(a)
```

```
a.clear()
```

```
print(a) #clear
```

```
[10, 20, 30, 10]
```

```
[10, 10, 20, 30]
```

```
[]
```

In [28]:

```
a=[]
```

```
a=[10,20,30,10]
```

```
a.append(100) #append
```

```
print(a) #modify the list
```

```
[10, 20, 30, 10, 100]
```

In [29]:

```
a=[]
```

```
a=[10,20,30,10]
```

```
print(a[0]) #list supports index based operations
```

```
10
```

In [30]:

```
a=[]
```

```
a=[10,20,30,10]
```

```
print(a.count(10))
```

```
print(a.count(20)) #count
```

2
1

```
In [31]: a=[]  
a=[10,20,30,10]  
a.remove(10)  
print(a) #remove  
[20, 30, 10]
```

```
In [32]: a=[]  
a=[10,20,30,10]  
a.pop(2)  
print(a) #pop  
[10, 20, 10]
```

```
In [33]: a=[]  
a=[10,20,30,10]  
a.insert(2,1000)  
a.insert(4,88)  
a.insert(5,188)  
a.insert(6,90)  
a.insert(7,77)  
print(a) #insert  
[10, 20, 1000, 30, 88, 188, 90, 77, 10]
```

```
In [34]: a=[]
```

```
a=[10,20,30,10]
a.reverse()
print(a) #reverse
```

```
[10, 30, 20, 10]
```

In [35]:

```
a=[]
a=[10,20,30,10]
a.insert(3,1000)
a.insert(8,88)
a.insert(5,188)
a.insert(6,90)
a.insert(7,77)
print(a)
print(a[2:]) #from index 2 to all
```

```
[10, 20, 30, 1000, 10, 188, 90, 77, 88]
[30, 1000, 10, 188, 90, 77, 88]
```

In [36]:

```
a=[]
a=[10,20,30,10]
a.insert(3,1000)
a.insert(8,88)
a.insert(5,188)
a.insert(6,90)
a.insert(7,77)
```

```
print(a)

print(a[::-1]) #from last to first index

[10, 20, 30, 1000, 10, 188, 90, 77, 88]
[88, 77, 90, 188, 10, 1000, 30, 20, 10]
```

In [37]:

```
a=[]

a=[10,20,30,10]

a.insert(3,1000)

a.insert(8,88)

a.insert(5,188)

a.insert(6,90)

a.insert(7,77)

print(a)

print(a[2:5]) #from index 2 to 5

[10, 20, 30, 1000, 10, 188, 90, 77, 88]
[30, 1000, 10]
```

In [38]:

```
a=[]

a=[10,20,30,10]

a.insert(3,1000)

a.insert(8,88)

a.insert(5,188)

a.insert(6,90)

a.insert(7,77)

print(a)
```

```
print(a[:5]) #from start to 4th index (n-1)
```

```
[10, 20, 30, 1000, 10, 188, 90, 77, 88]  
[10, 20, 30, 1000, 10]
```

In [1]:

```
a=100
```

```
b=92
```

```
print("Please give me "+ str(a)+ "$."+" I have only "+ str(b)+ "$.")
```

```
print("alright give it.")
```

```
Please give me 100$. I have only 92$.  
alright give it.
```

In []: