

Immutable Object Vs Mutable object

1) What is an immutable object ? ---> Can not be modified

What is a mutable object ? ---> Can be modified

2) What are the 5 + 3 = 8 immutable objects ? ---> int , float , complex , bool , NoneType
and

str , tuple , range

What are the three mutable objects ? ---> List , set and dict

3) Is it possible to add / remove elements to / from immutable object ? --->

No becoz

they are neither growable nor shrinkable

What about mutable object ? ---> Elements can be appended and removed from
mutable object

4) Are immutable objects reusable ? ---> Yes except range object

What about mutable objects ? ---> They are not reusable

5) What is reusability ? ---> If same object already exists in memory,
it will be reused and new object is not created

6) What happens when an object does not exist ? ---> A new object will be created

7) a = 25

b = 25

What does b = 25 do ? ---> Reference 'b' points to same object 25 becoz 25 is
immutable and reusable

What is the result of a is b ? ---> True becoz references 'a' and 'b' point to same
object 25

8) a = [10 , 20 , 30]

b = [10 , 20 , 30]

What does b = [10 , 20 , 30] do ? --->

Refence 'b' points to new list even

though [10 , 20 , 30] already exists in memory

becoz list is mutable and not reusable

What is the result of a is b ? ---> False becoz references 'a' and 'b' point to different
lists

9) a = range(5)

b = range(5)

What does b = range(5) do ? ---> Refence 'b' points to new range object even though
range object already

exists in memory becoz range is

immutable but not reusable

10) a = 25

a = 35

What is modified when a = 35 is executed ? ---> Reference but not object

11) In other words, reference 'a' points to another object 35

12) Why is object not modified when a = 35 is executed ? ---> Since int object is immutable

and hence it can not be modified