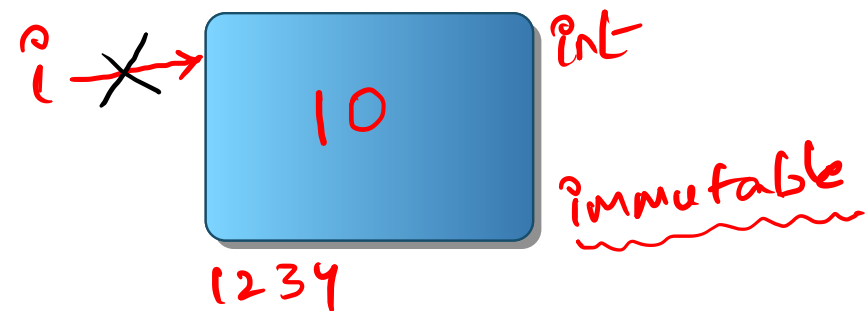
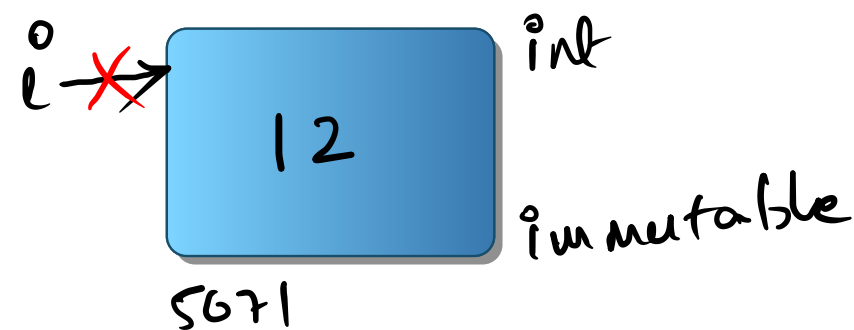


```
i = 10
→ i = 12
→ i = 'python'
→ i = 100
```

garbage collector



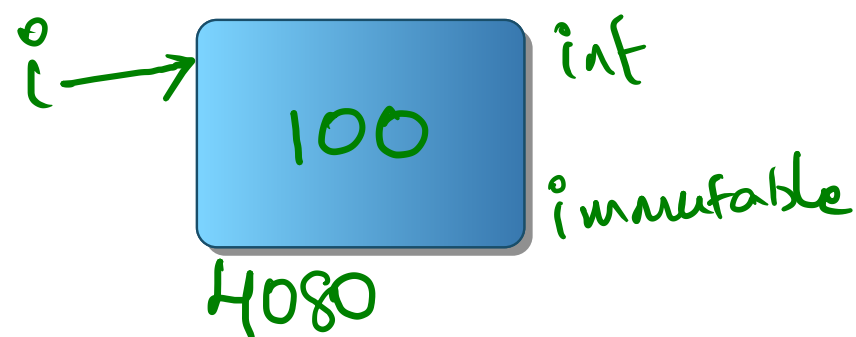
4



4



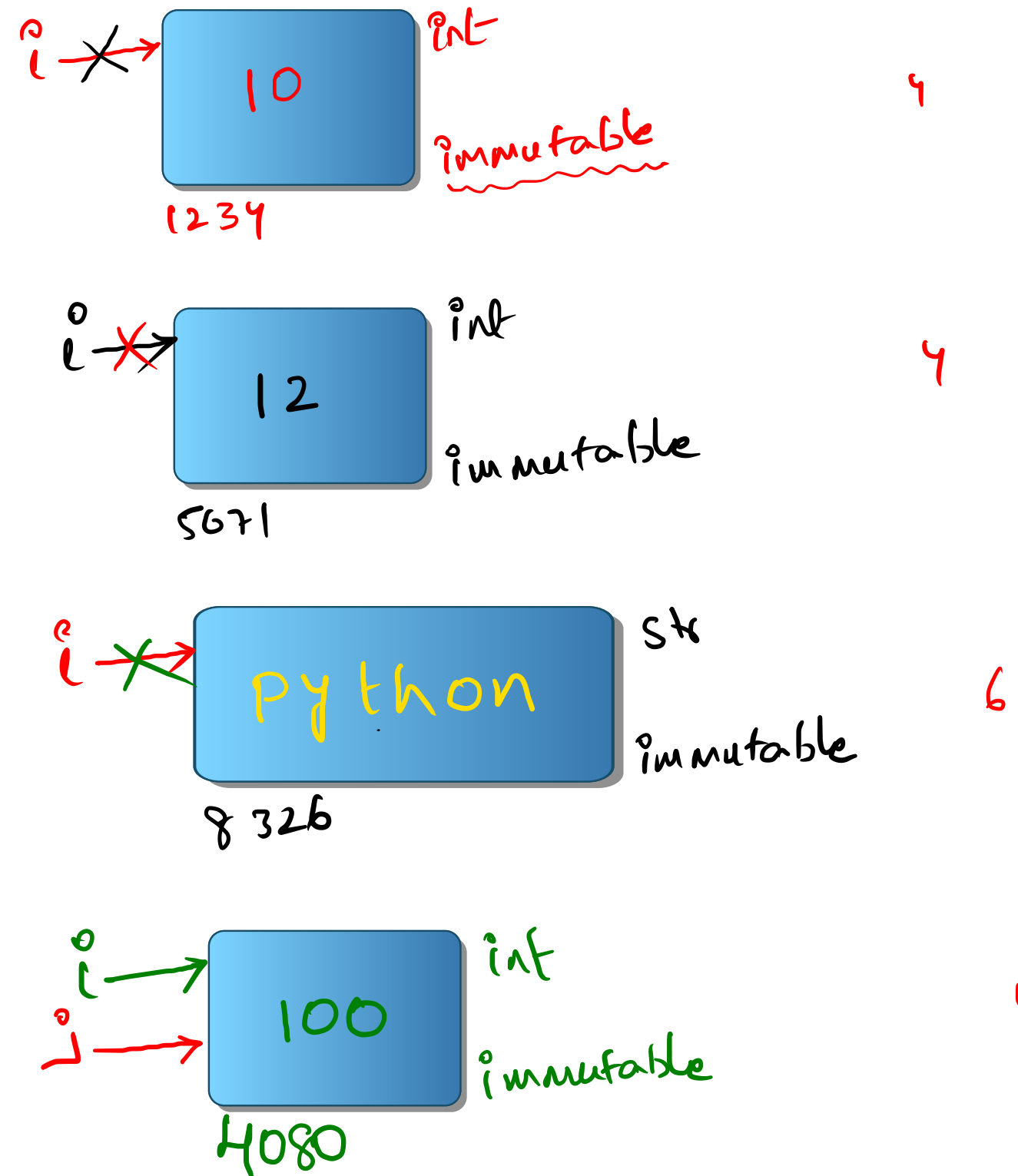
6



4

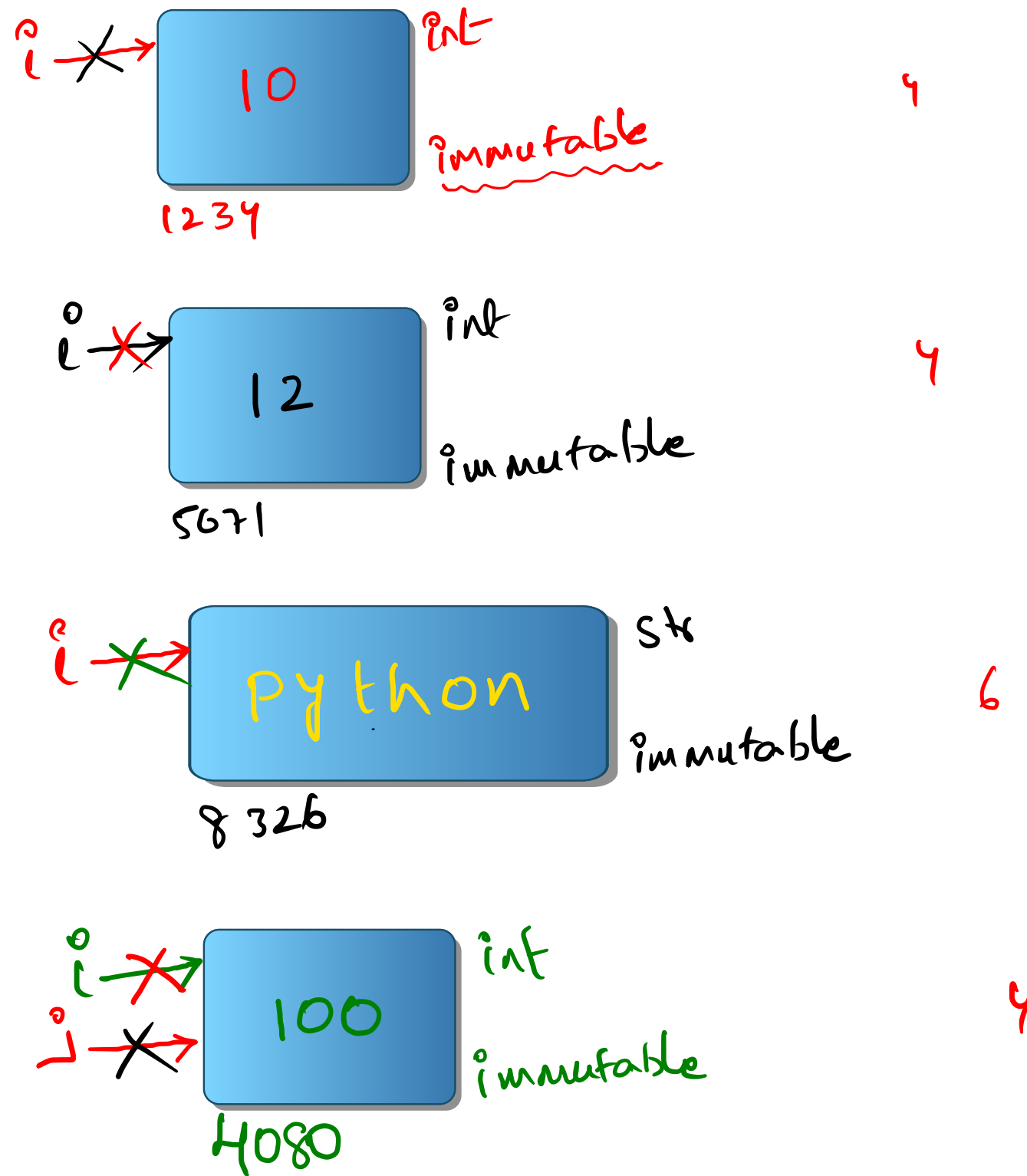
```
i = 10
→ i = 12
→ i = 'python'
→ i = 100

j = i
```



```
i = 10
i = 12
i = 'python'
i = 100
```

```
j = i
del i
```



# String slicing

S = 'python'

0	1	2	3	4	5
p	y	t	h	o	n
-6	-5	-4	-3	-2	-1

String[start\_index : stop\_index]

→ will be excluded

s[0:5] ⇒ pytho

s[1:4] ⇒ yth

s[2:3] ⇒ t

s[4:4] ⇒ empty string

string slicing

```
S = 'python'
```

0 1 2 3 4 5  
-6 -5 -4 -3 -2 -1

String[start\_index : stop\_index]

→ will be excluded

S[ : ]

default start index: 0

default stop index: length of the string

string slicing

S = 'python'

The diagram shows the string 'python' with its characters indexed. Positive indices are written above the characters: 'p' is 0, 'y' is 1, 't' is 2, 'h' is 3, 'o' is 4, and 'n' is 5. Negative indices are written below the characters: 'p' is -6, 'y' is -5, 't' is -4, 'h' is -3, 'o' is -2, and 'n' is -1. A red box is drawn around the characters 'pytho', which correspond to indices 1 through 5 (or -5 through -2).

String[start\_index : stop\_index]

→ will be excluded

S[-5:-2]

default start index: 0

default stop index: length of the string

default slicing direction: towards right side

string slicing

`S = 'python'`

Indices: 0 1 2 3 4 5 (above 'python')  
-6 -5 -4 -3 -2 -1 (below 'python')

String[start\_index : stop\_index]

→ will be excluded

`S[-1:-6]` ⇒ empty

default start index: 0

default stop index: length of the string

default slicing direction: towards right side

string slicing

`S = 'python'`

The diagram shows the string 'python' with its characters indexed. Positive indices are written above the characters: 'p' is 0, 'y' is 1, 't' is 2, 'h' is 3, 'o' is 4, and 'n' is 5. Negative indices are written below the characters: 'p' is -6, 'y' is -5, 't' is -4, 'h' is -3, 'o' is -2, and 'n' is -1. A black box highlights the characters 't', 'h', and 'o' (indices 2 to 4). A blue arrow points from the end of the string towards the right, indicating the direction of slicing.

`String[start_index : stop_index]`

→ will be excluded

`S[2:-1]`

default start index: 0

default stop index: length of the string

default slicing direction: towards right side



string slicing

S = 'python'

Index	0	1	2	3	4	5
Letter	p	y	t	h	o	n
Index	-6	-5	-4	-3	-2	-1

String[start\_index : stop\_index]

→ will be excluded

S[-5:]

default start index: 0

default stop index: length of the string

default slicing direction: towards right side