



Python Simulator

Listen

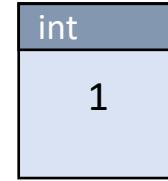
Terminal

```
>>> list_a = [1,2]
```

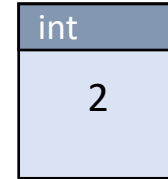
```
>>>
```

- 1 Rechte Seite der Wertzuweisung auswerten und speichern

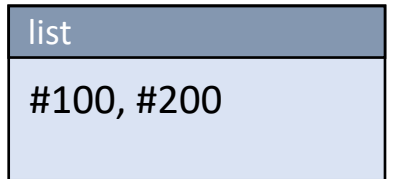
#100



#200



#300



#400

#500

Terminal

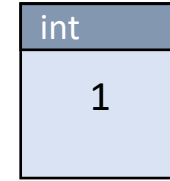
```
>>> list_a = [1,2]
```

```
>>>
```

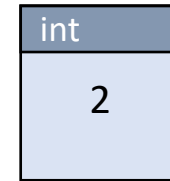
- 1 Rechte Seite der Wertzuweisung auswerten und speichern
- 2 Linke Seite der Wertzuweisung: Namen zuweisen

list_a

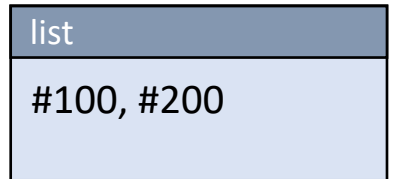
#100



#200



#300



#400

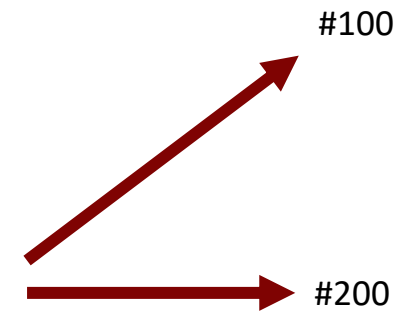
#500

Terminal

```
>>> list_a = [1,2]  
>>>
```

Bemerkt?

Diese Objekte haben keinen Namen und sind daher nur über die Liste "list_a" erreichbar



list_a #300

int
1

int
2

list
#100, #200

#400

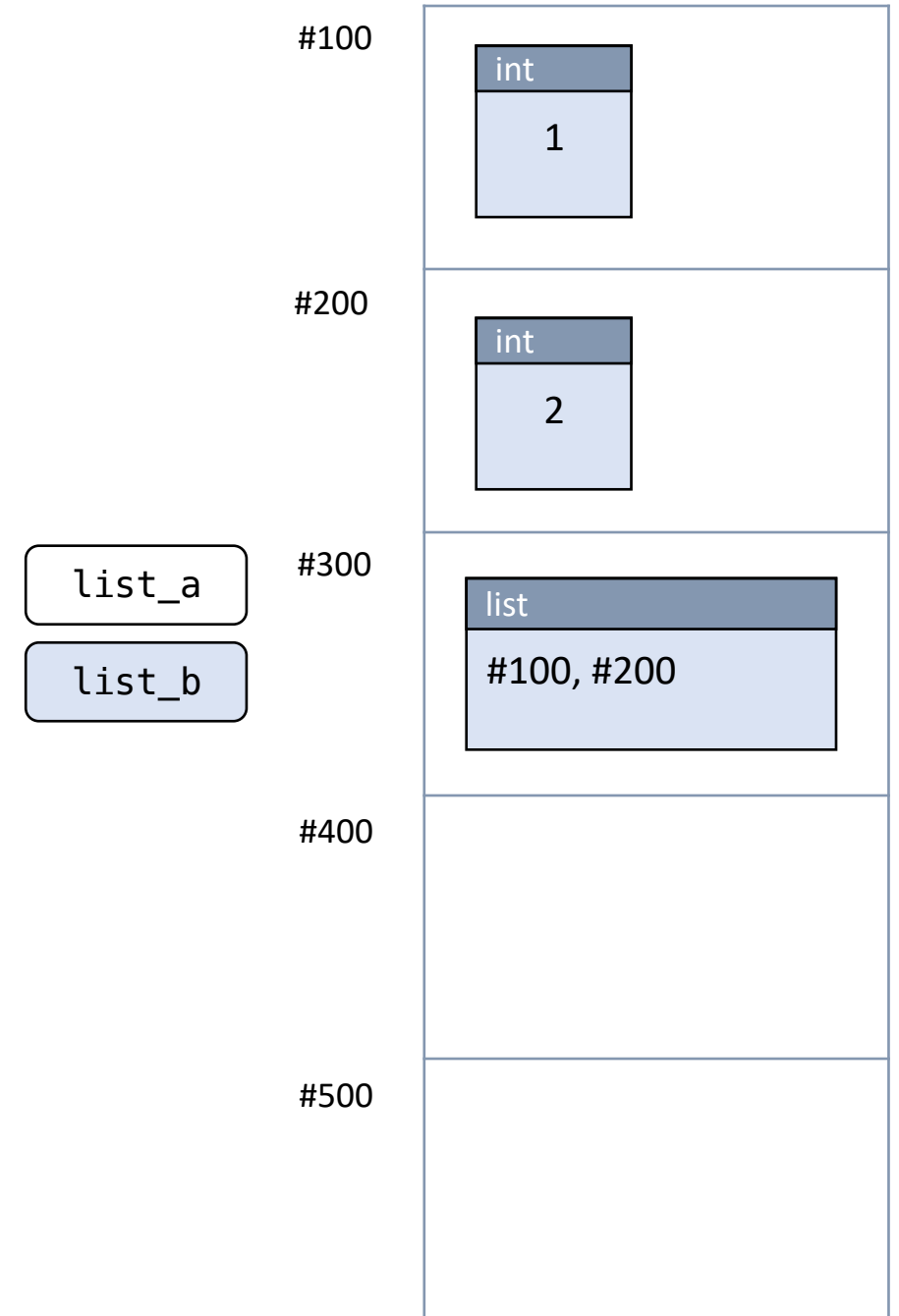
#500

- 1 Rechte Seite der Wertzuweisung auswerten und speichern
- 2 Linke Seite der Wertzuweisung: Namen zuweisen

Terminal

```
>>> list_a = [1,2]  
>>> list_b = list_a
```

- 1 Rechte Seite der Wertzuweisung auswerten (#300)
- 2 Linke Seite der Wertzuweisung: Namen zuweisen



Terminal

```
>>> list_a = [1,2]
>>> list_b = list_a
>>> list_a.append(3)
```

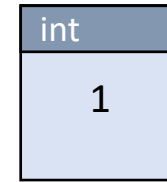
1

Statement ausführen

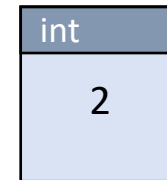
list_a

list_b

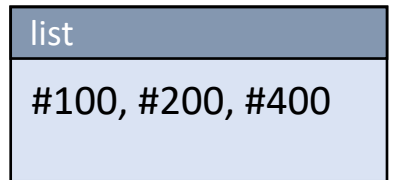
#100



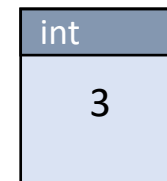
#200



#300



#400



#500

Terminal

```
>>> list_a = [1,2]
>>> list_b = list_a
>>> list_a.append(3)
>>> list_a
[1,2,3]
>>> list_b
[1,2,3]
```

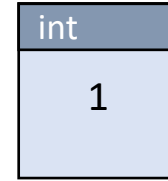
1

Statement ausführen

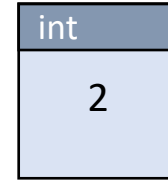
list_a

list_b

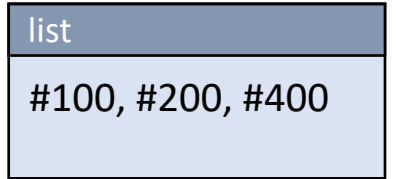
#100



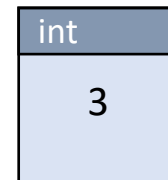
#200



#300



#400



#500

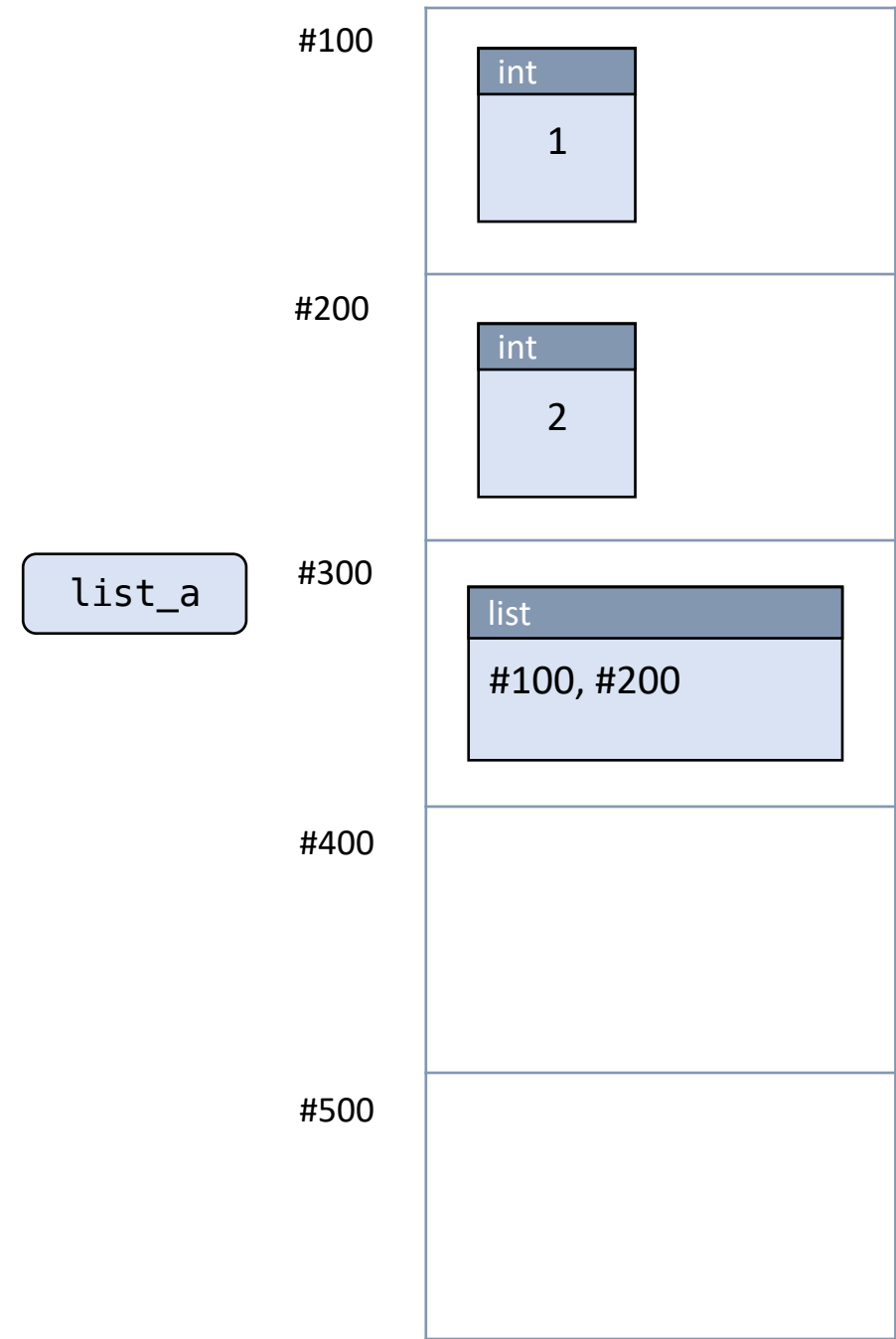


Python Simulator

Listen - II

Terminal

```
>>> list_a = [1,2]
>>>
```

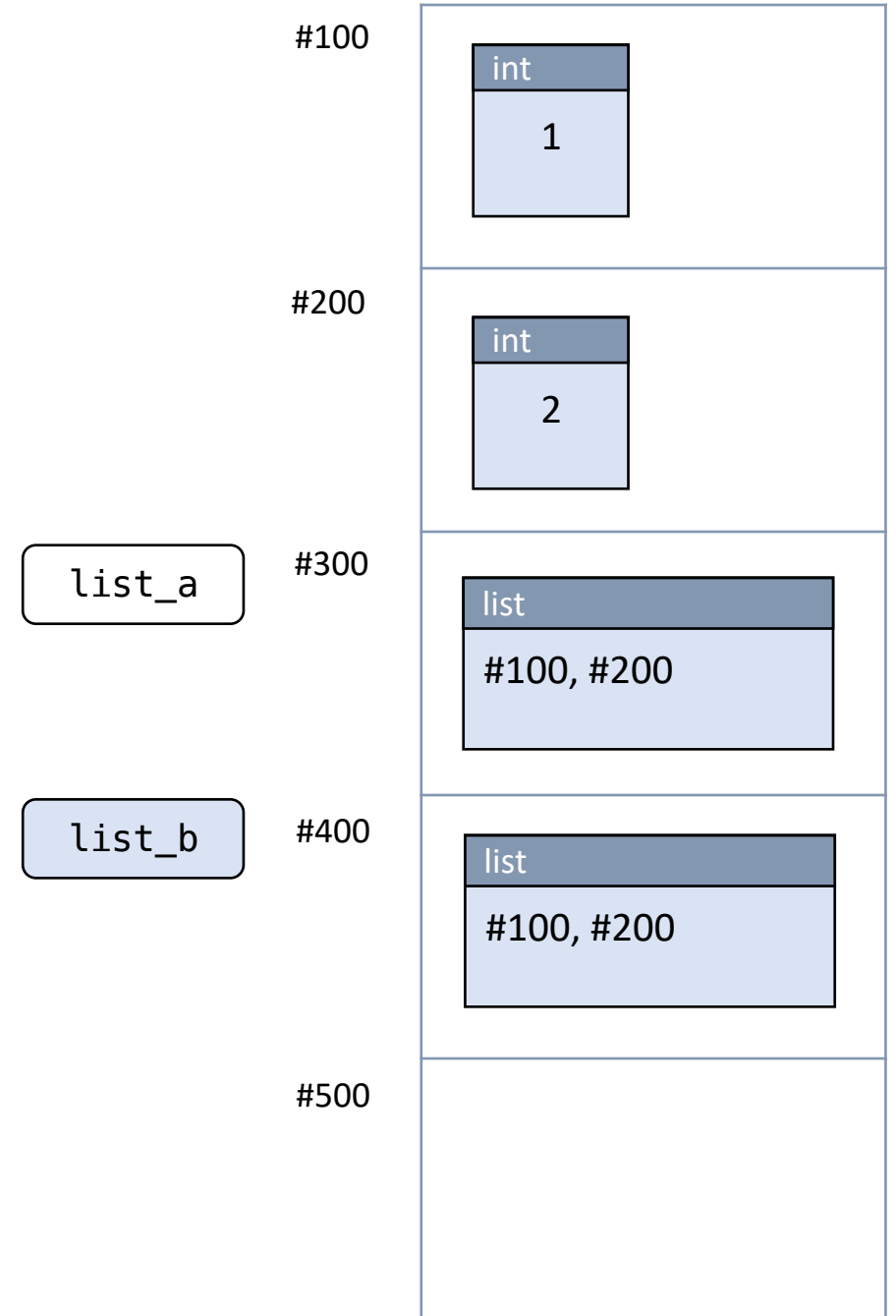


Terminal

```
>>> list_a = [1,2]
>>> import copy
>>> list_b = copy.copy(list_a)
```

1

Statement ausführen

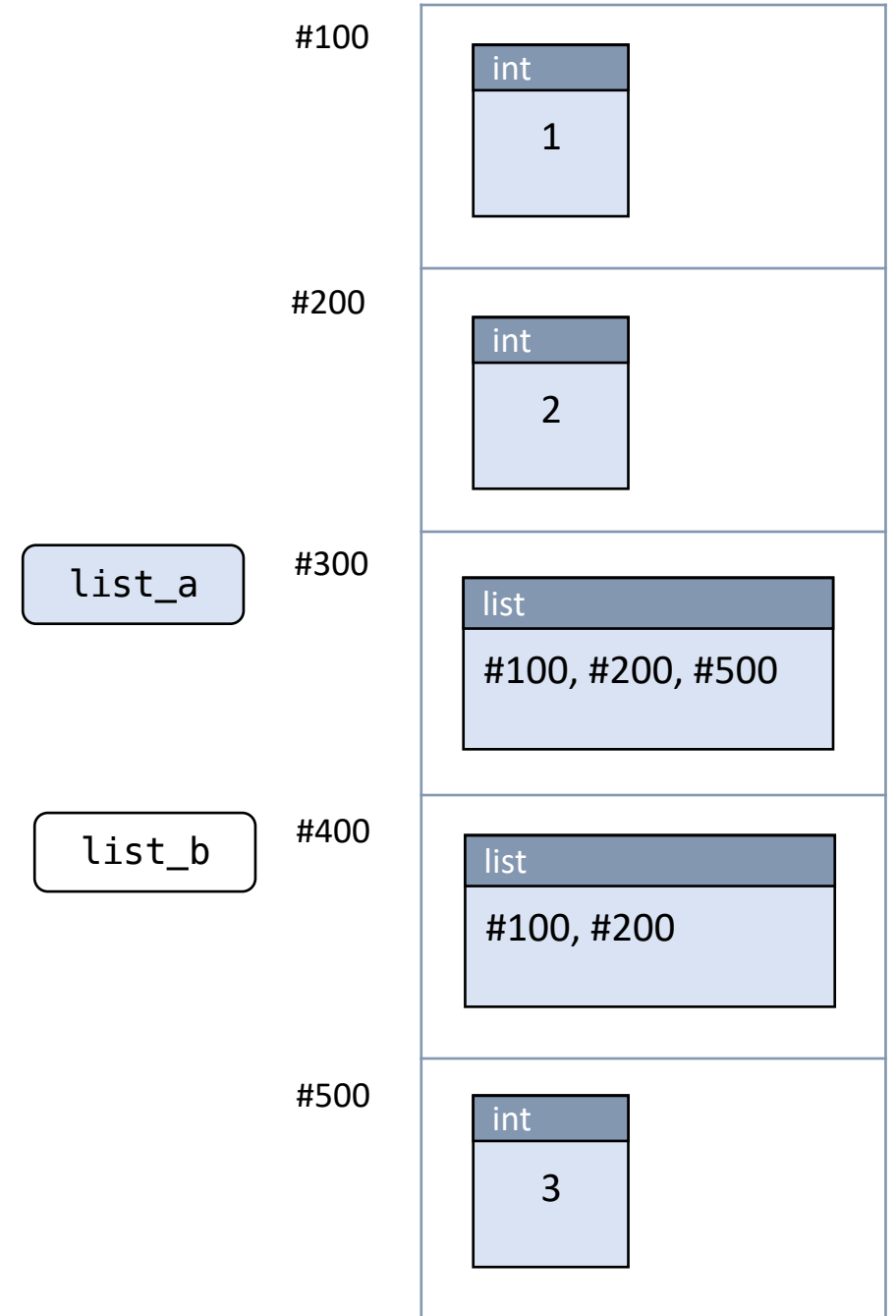


Terminal

```
>>> list_a = [1,2]
>>> import copy
>>> list_b = copy.copy(list_a)
>>> list_a.append(3)
```

1

Statement ausführen



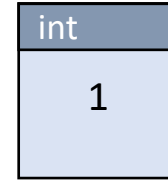
Terminal

```
>>> list_a = [1,2]
>>> import copy
>>> list_b = copy.copy(list_a)
>>> list_a.append(3)
>>> list_a
[1,2,3]
>>> list_b
[1,2]
```

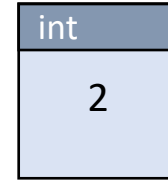
list_a

list_b

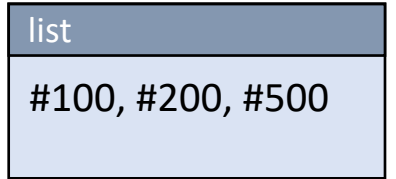
#100



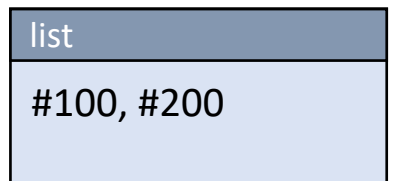
#200



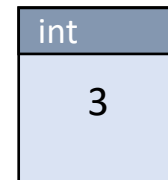
#300



#400



#500



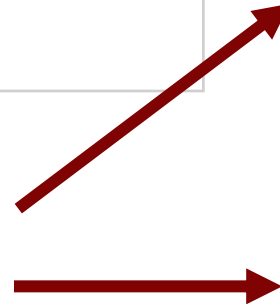
Terminal

```
>>> list_a = [1,2]
>>> import copy
>>> list_b = copy.copy(list_a)
>>> list_a.append(3)
>>> list_a
[1,2,3]
>>> list_b
[1,2]
```

Achtung

copy.copy kopiert NUR die Liste – nicht ihre Elemente

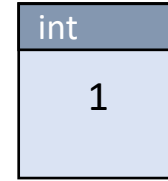
Sollen auch die Elemente kopiert werden, benötigt man copy.deepcopy



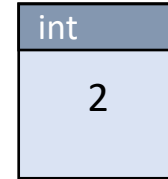
list_a

list_b

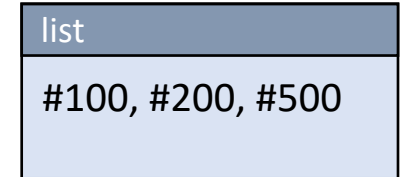
#100



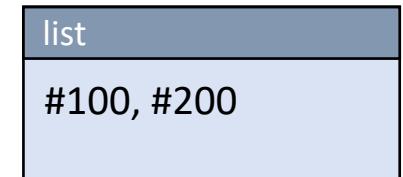
#200



#300



#400



#500

