

**Lecture**

# **Aliasing**





## Aliasing

**Same memory address  
can be accessed  
using different names**

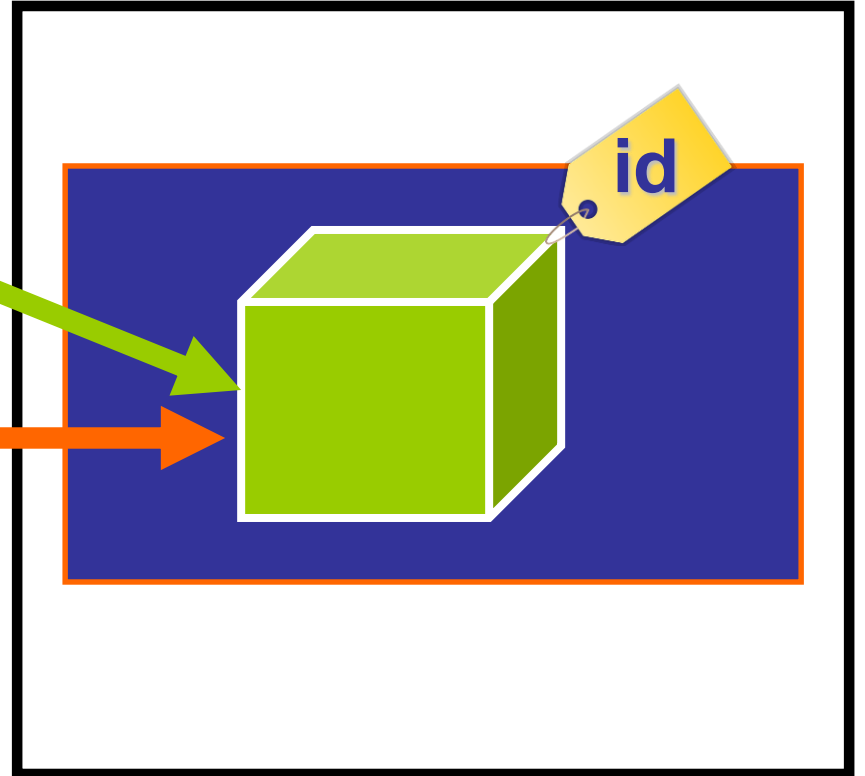


## Aliasing

```
>>> a = [6, 2, 6, 2]
```

```
>>> b = a
```

## Memory





## Aliasing

```
>>> a = [6, 2, 6, 2]  
>>> b = a
```

```
>>> id(a)  
59005384  
>>> id(b)  
59005384
```



## Aliasing

```
>>> a = [6, 2, 6, 2]
>>> b = a
>>> id(a)
59005384
>>> id(b)
59005384
```

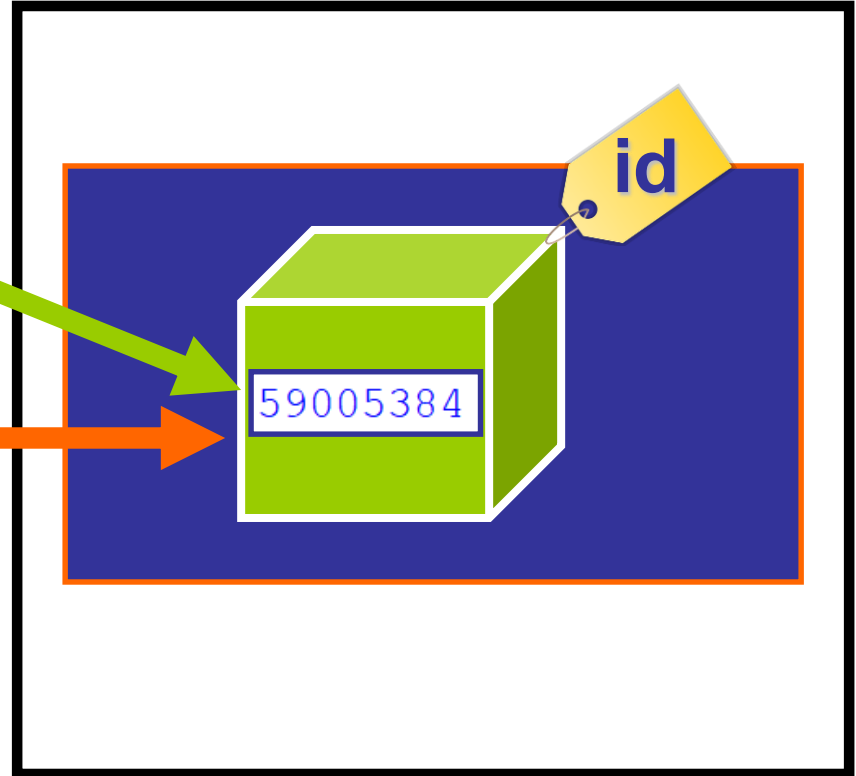


## Aliasing

```
>>> a = [6, 2, 6, 2]
```

```
>>> b = a
```

## Memory





# Aliases





## Aliasing

**$\neq$  name , = object**







## Aliasing

```
>>> a = [6, 2, 6, 2]
>>> b = a
>>> c = b
>>> d = c
>>> id(a)
52768584
>>> id(b)
52768584
>>> id(c)
52768584
>>> id(d)
52768584
```



## Aliasing

```
>>> a = [6, 2, 6, 2]
>>> b = a
>>> c = b
>>> d = c
>>> id(a)
52768584
>>> id(b)
52768584
>>> id(c)
52768584
>>> id(d)
52768584
```



## Aliasing

```
>>> a = [6, 2, 6, 2]
>>> b = a
>>> c = b
>>> d = c
>>> id(a)
52768584
>>> id(b)
52768584
>>> id(c)
52768584
>>> id(d)
52768584
```



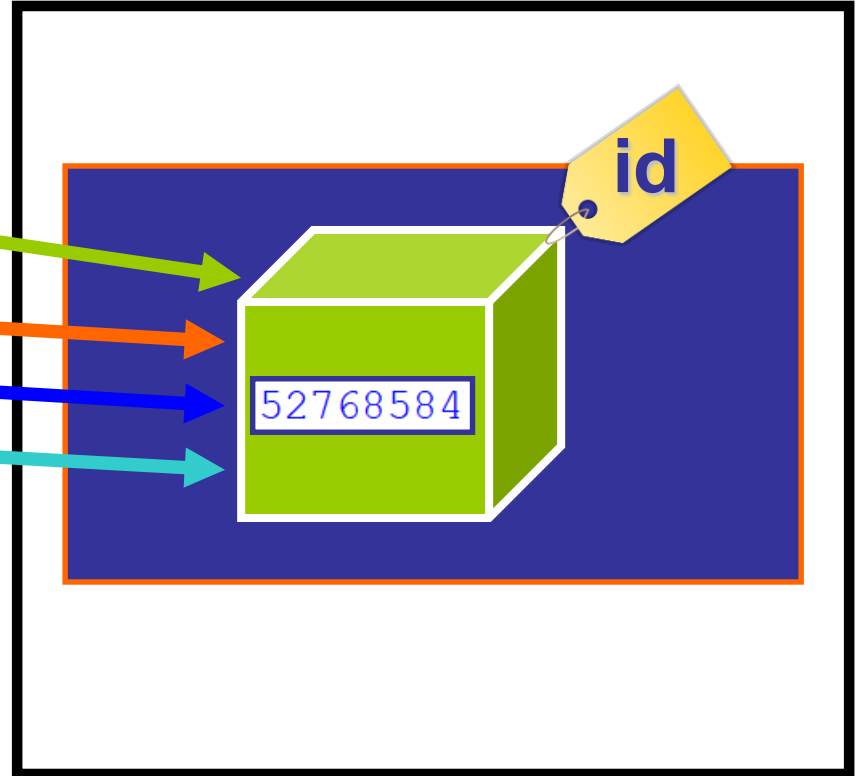
Same id



## Aliasing

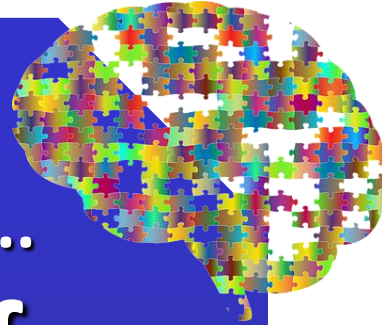
```
>>> a = [6, 2, 6, 2]  
>>> b = a  
>>> c = b  
>>> d = c
```

## Memory



Think about...

# Risks of Aliasing





## Now... An Example

