

type no
semantics

void *

Void

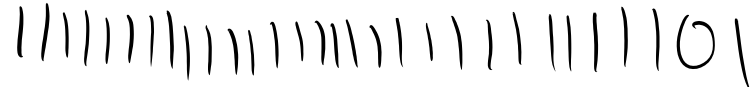
f() {

%eax

}

x = f()

(casting) 



int x = (int) -3.7

implicit casting

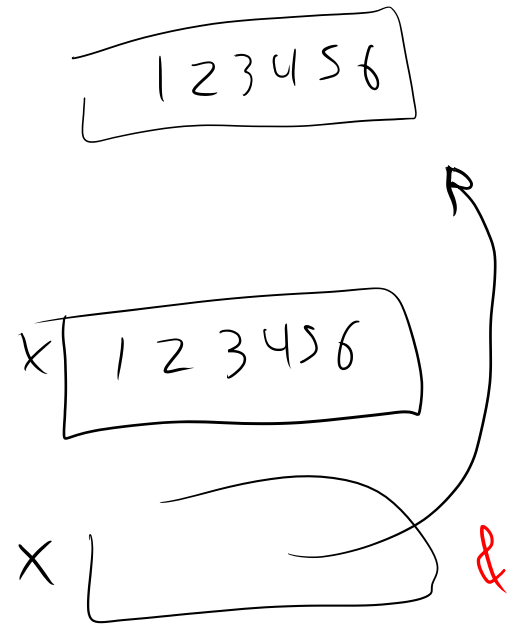
long y = (long) x
 ↑
 sign extend

y = (long) (unsigned) x

Progr. smarter than Compiler

int * x = (int *) 123456;

→ int y = *x;



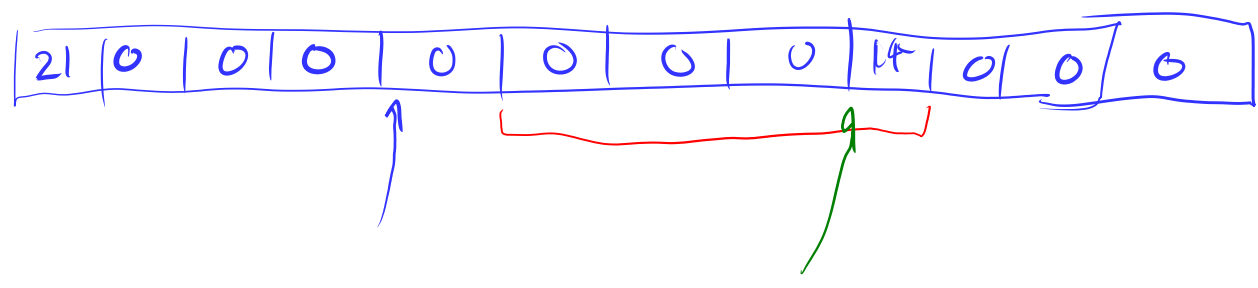
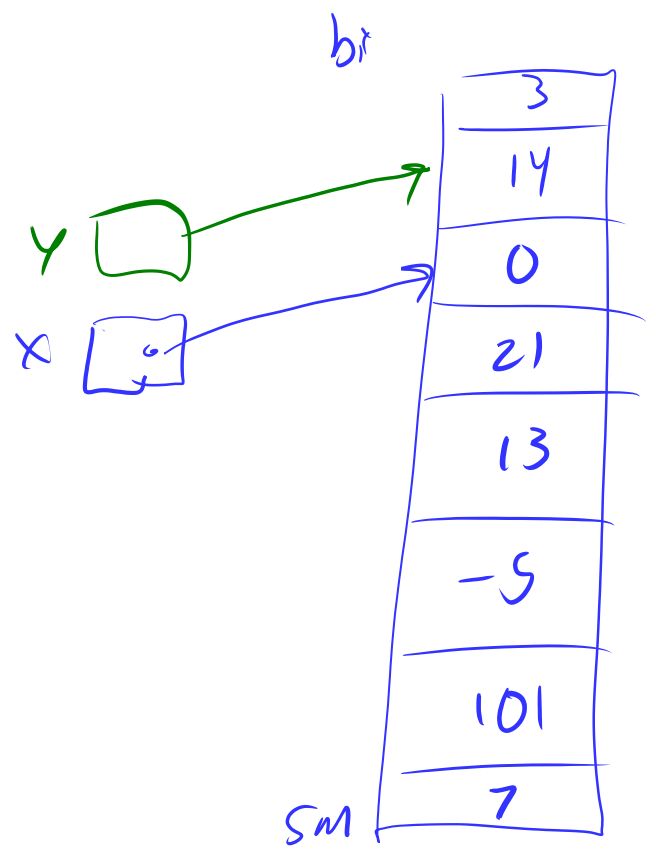
implementation defined behaviour
• size of (int)

undefined behaviour

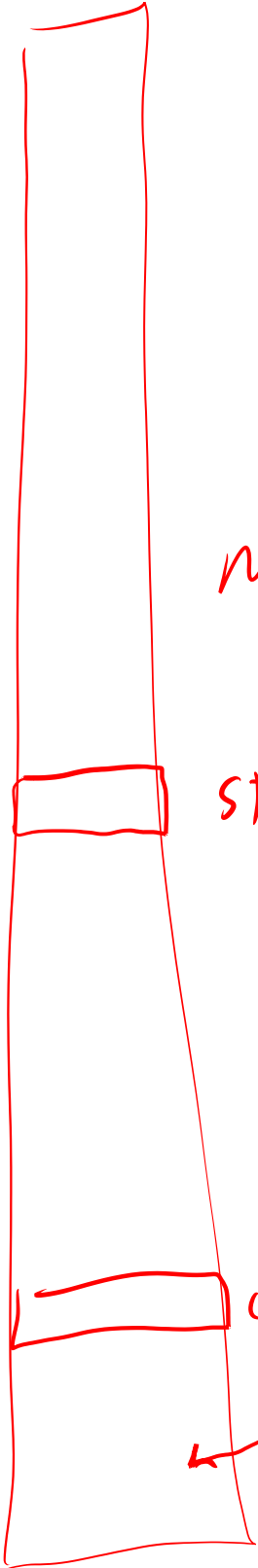
int *x = . . .

int *y = x + 1
4 bytes

$14 \cdot 2^{24}$



FFFF



memory

stack

Segment

code



*

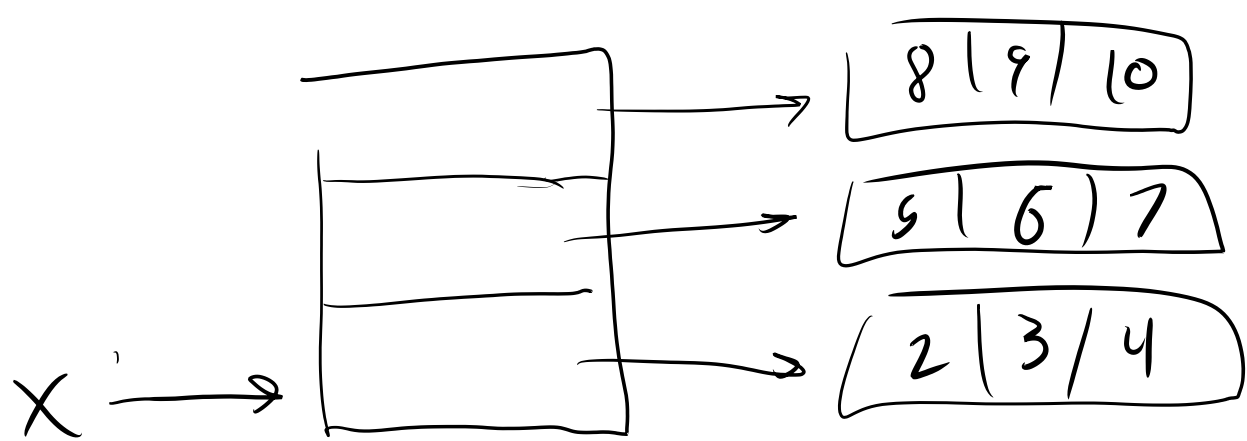
00000



impl. def padding

padding





$$x[0][0] \quad - \quad 2$$

$$x[1][0] \quad - \quad 5$$

$$(*x)[1] \quad - \quad 3$$

$$*(x[1]) \quad - \quad 5$$

$$*x[1] \quad - \quad 5$$

$$**x \quad - \quad 2$$

but do not write this!

array — contiguous (no padding!)

```
int x[50];
```

```
sizeof(x) == 200
```

arrays become ptr to first element often

```
x[5] = 11
```

```
typedef char * s;
```

```
s x[50]
```