Idea

Virtual Memory
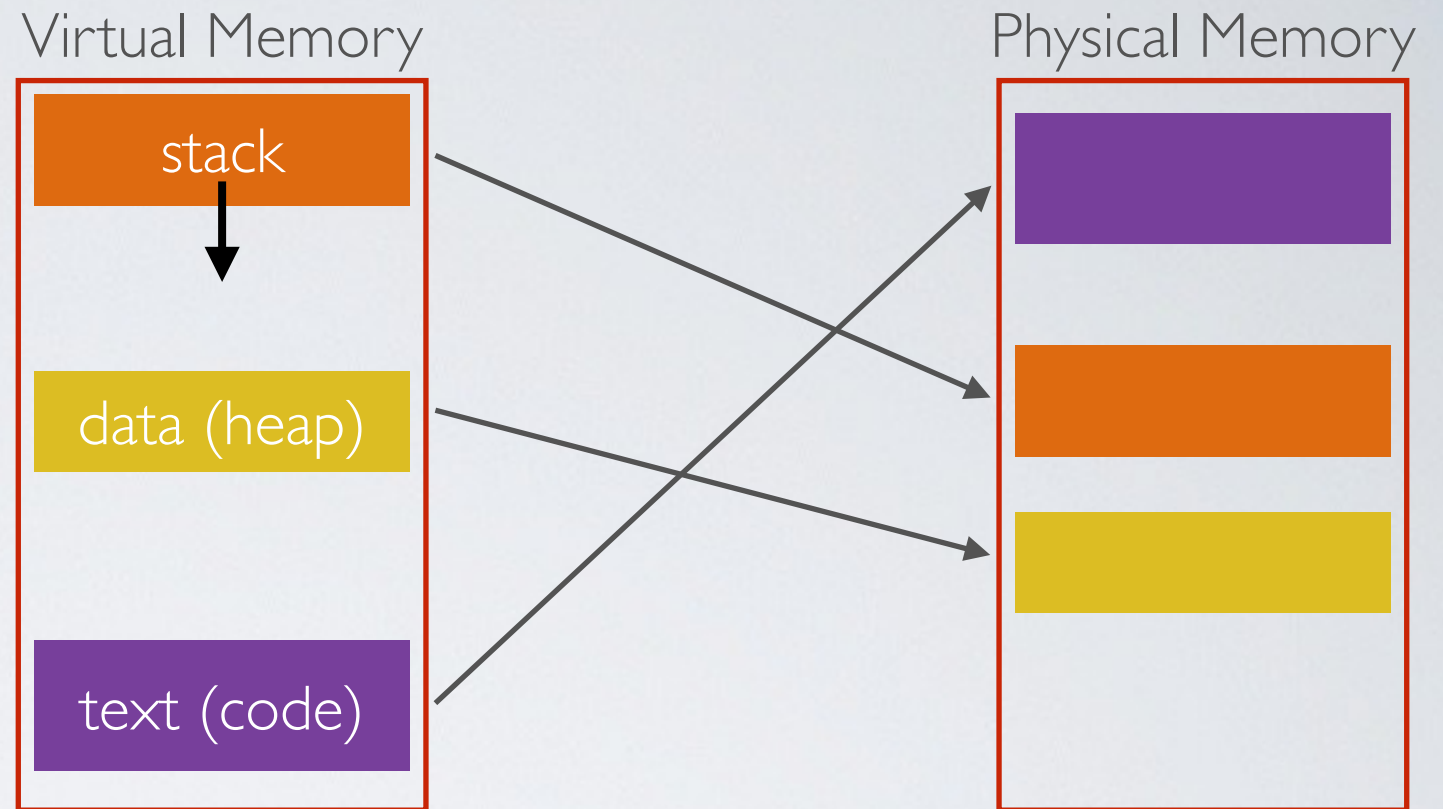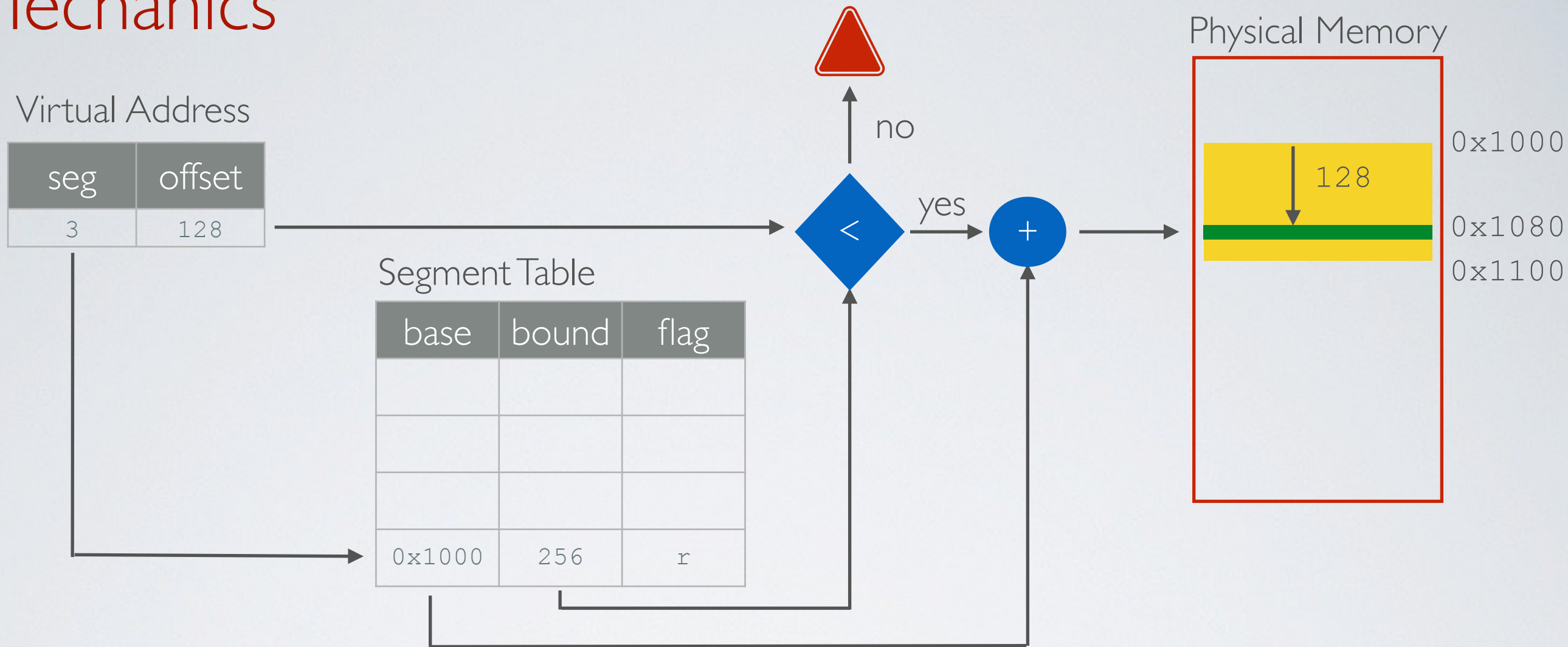
| stack |
| data (heap) |
| text (code) |

Physical Memory

Each process has a collection of multiple base/bound registers

➡ Address space is built from many segments
   (a.k.a segmentation table)

✓ Can share/protect memory at segment granularity

Mechanics

Physical Memory

Virtual Address

seg	offset
3	128

no

yes

$<$ $+$

| 128 |

0x1000

0x1080

0x1100

Segment Table

base	bound	flag
0x1000	256	r

Each virtual address indicates

- a segment index in the table (top bits)

- and an offset (low bits)

➡ x86 stores segment #s in registers (CS, DS, SS, ES, FS, GS)