Ox FF FF FF FF Ox FF FF FF FF stack B heap B prog A heap B stack B prog B 0x 00 00 00 00 heap A virtual memory stack A for program B prog B Ox FF FF FF FF 0x 00 00 00 00 stack A heap A prog A 0x 00 00 00 00 virtual memory

for program A

physical memory

Virtual Memory

The OS keeps track of the virtual memory mapping table for each process and translates the addresses dynamically

Another problem

What if we run out of memory because of too many concurrent programs?

- ✓ Swap memory move some data to the disk
- → Managing memory becomes very complex but necessary