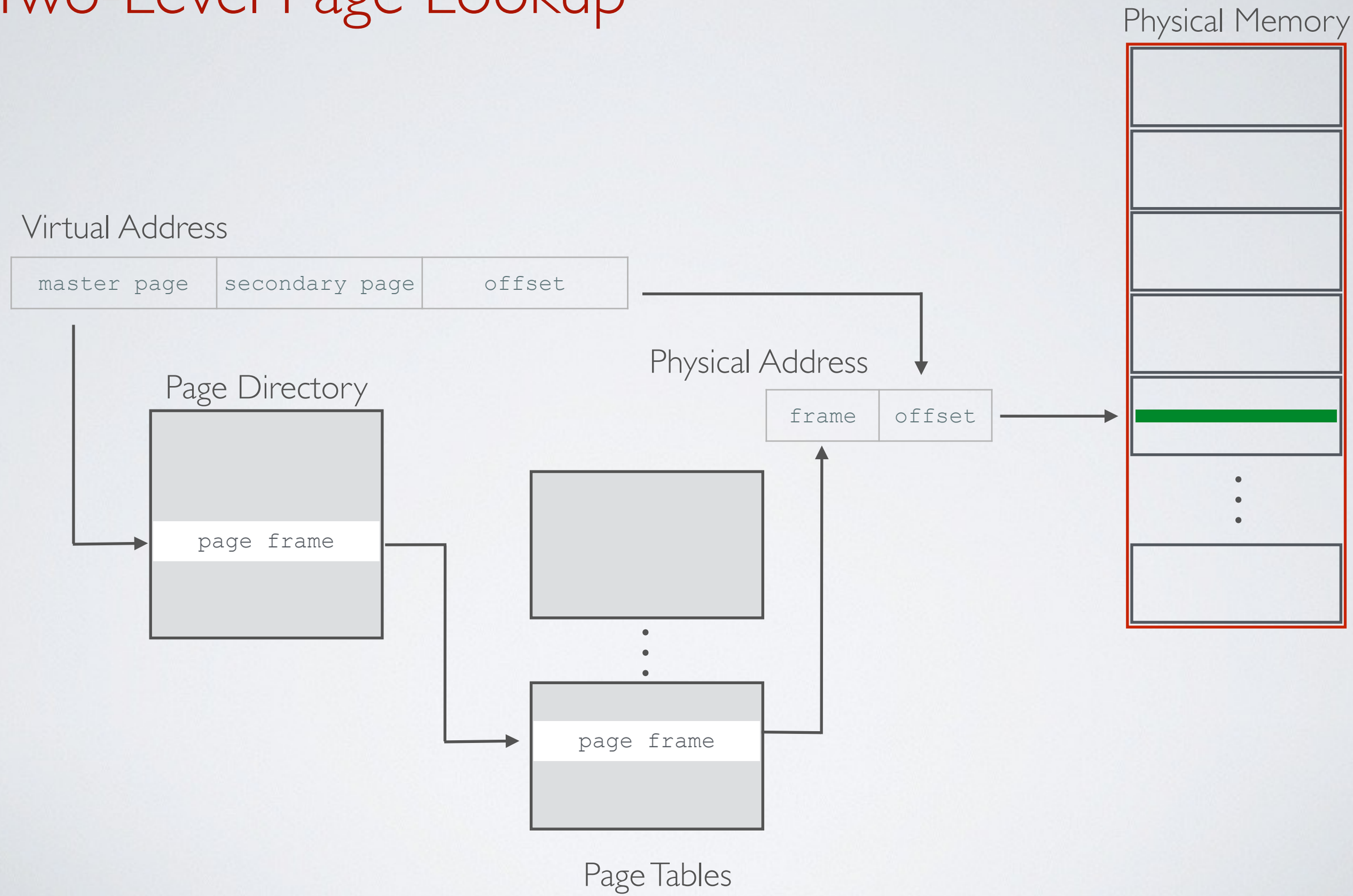
Two-Level Page Lookup



32 bits address space, 4K pages, 4 bytes/PTE

- How many bits in offset? 4K
  so the virtual address requires requires **12 bits for the offset**

- We want the Page Directory to fit in one page
  4K/4 bytes = 1K possible entries
  so the virtual address requires **10 bits for the Page Directory index**

- We also want each Page Table to fit in one page
  so the virtual address requires **10 bits for the Page Table index**

➡ 10 + 10 + 12 = 32 bits address
  This is why 4K page size is recommended