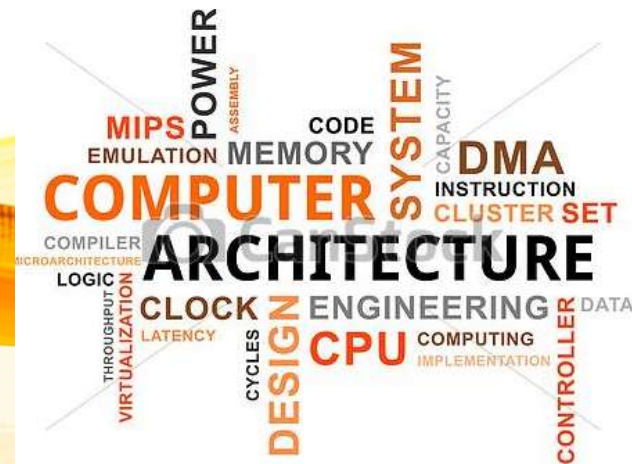


UNIT IV

MEMORY SYSTEM

Basic concepts of Semiconductor RAMs - ROMs – Speed, Size and Cost – Cache memories – Performance consideration – **Virtual memory** – Memory Management requirements – Secondary storage.

Case Study: Memory Organization in Multiprocessors



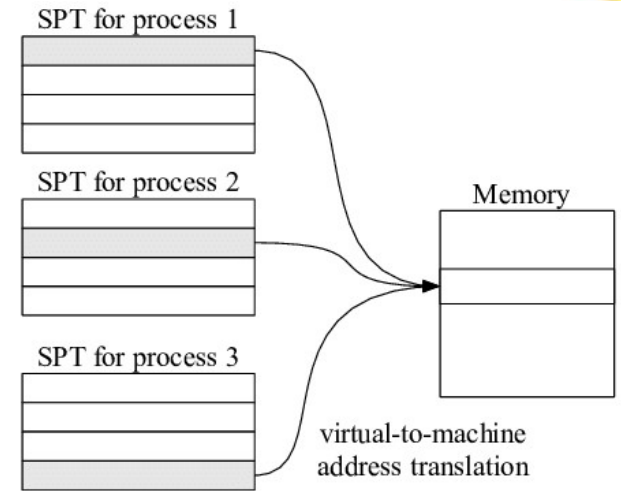
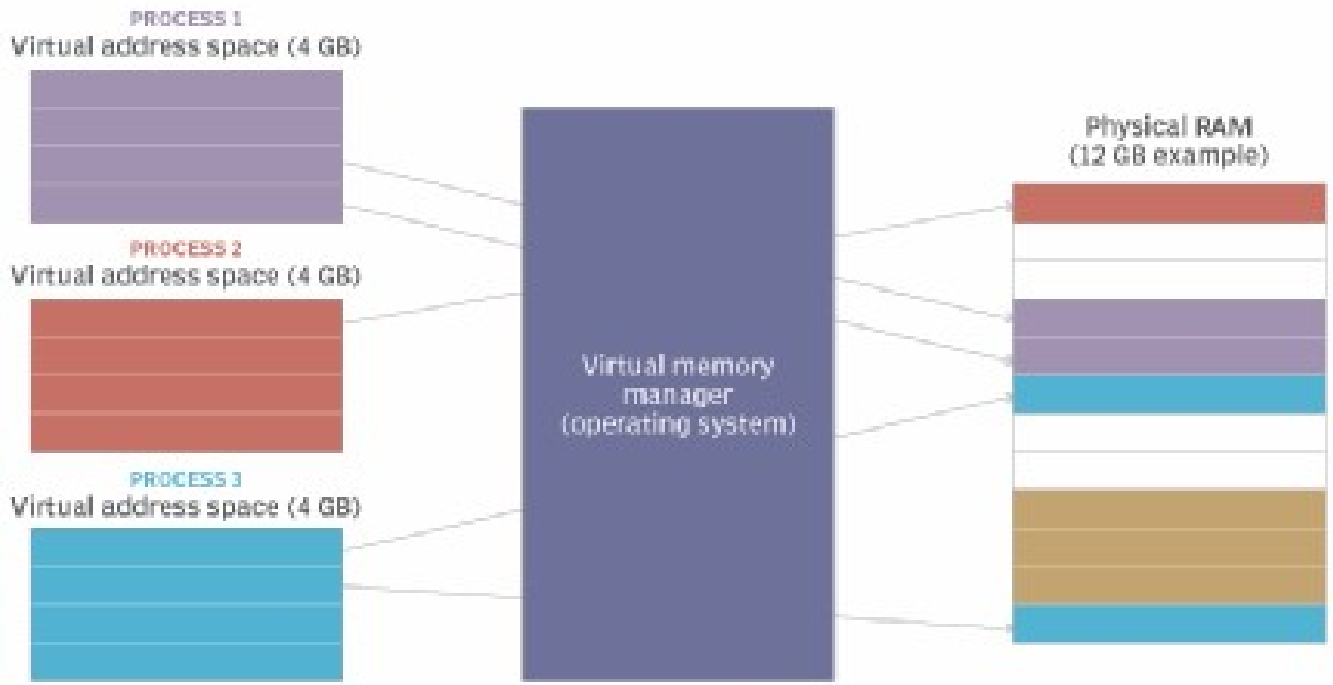
Recap the previous Class





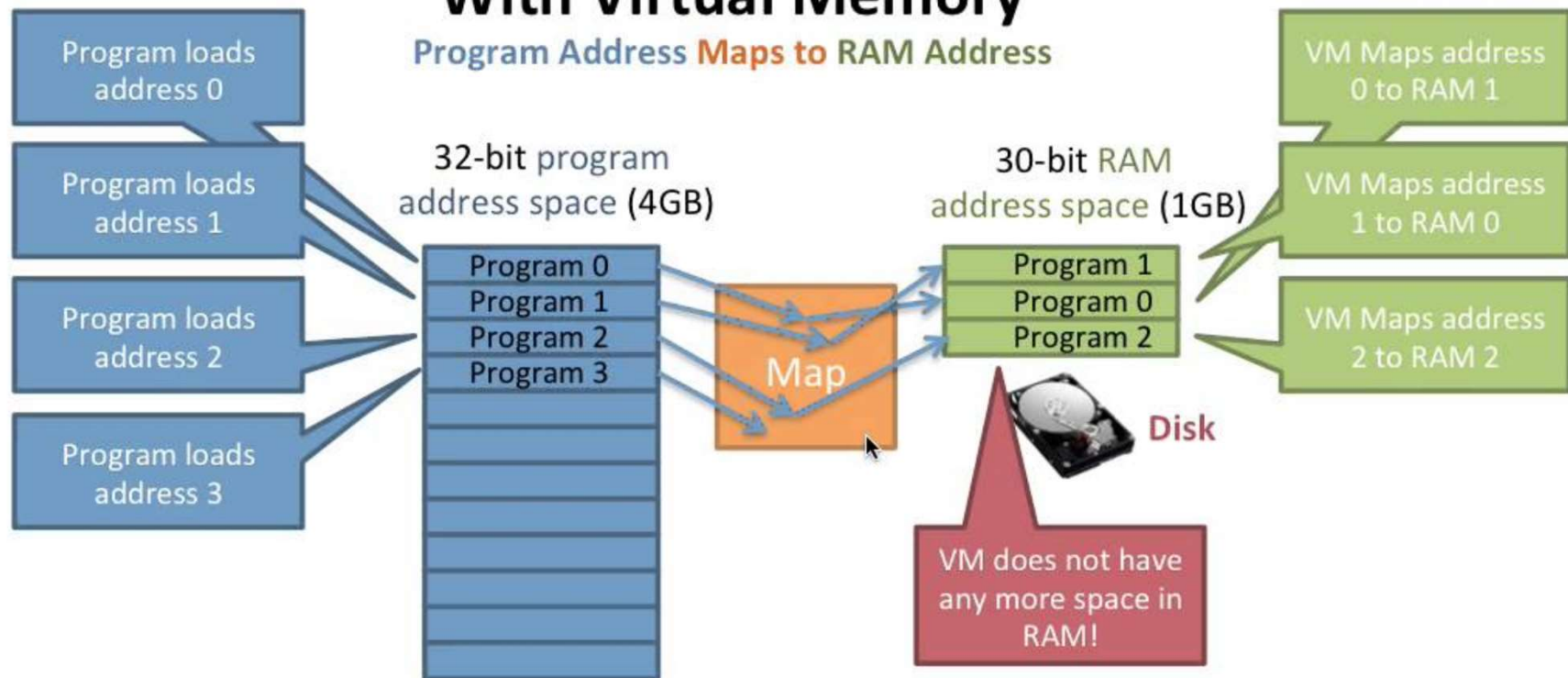
Virtual Memory

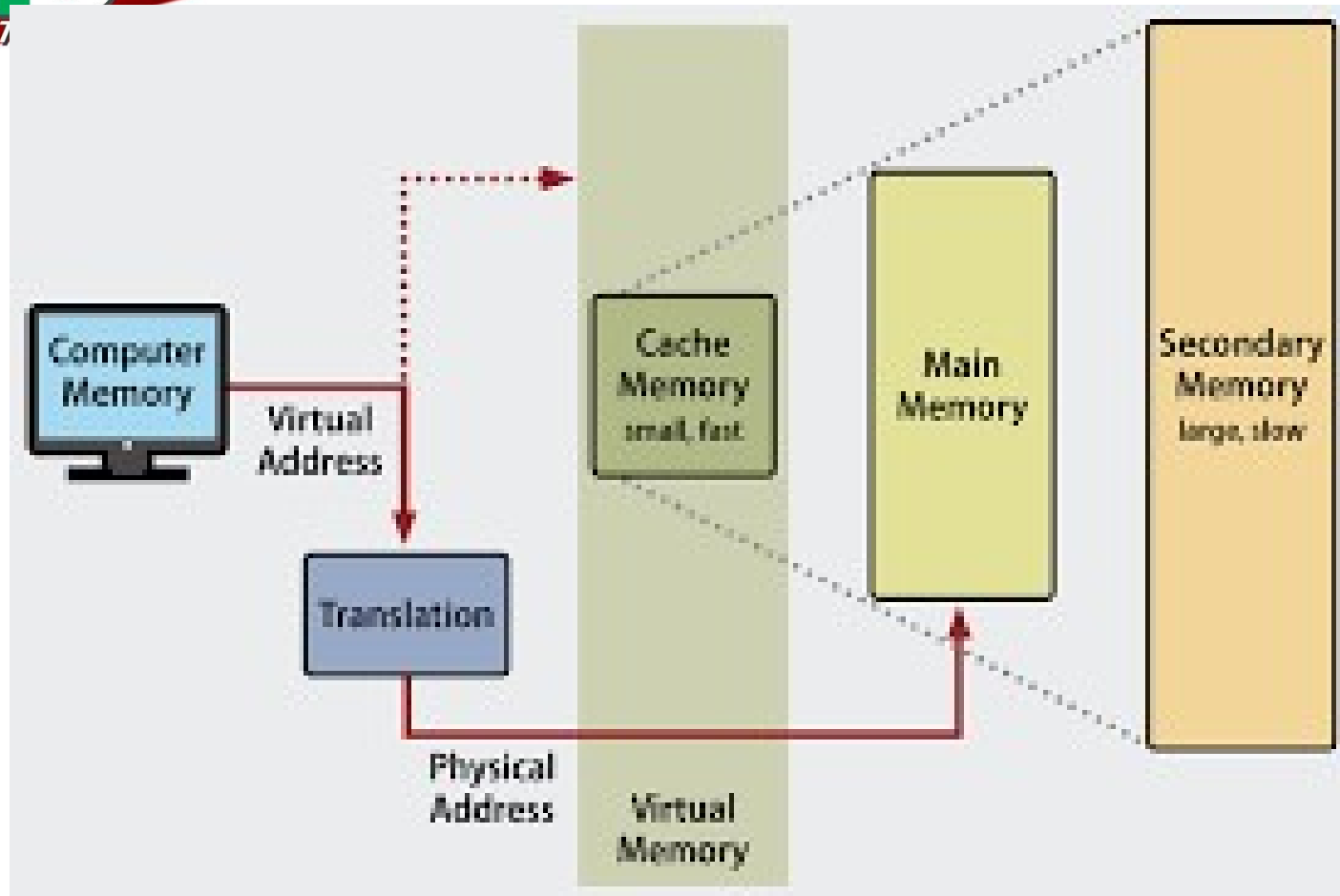
- **Imaginary Memory**, that's not physically there.
- used to provide an **illusion of presence of large main memory** to the programmer
- It represents a technique within an **operating system (OS) for optimizing the speed and efficiency** of your system to provide places to store the data you create and protect your data.



With Virtual Memory

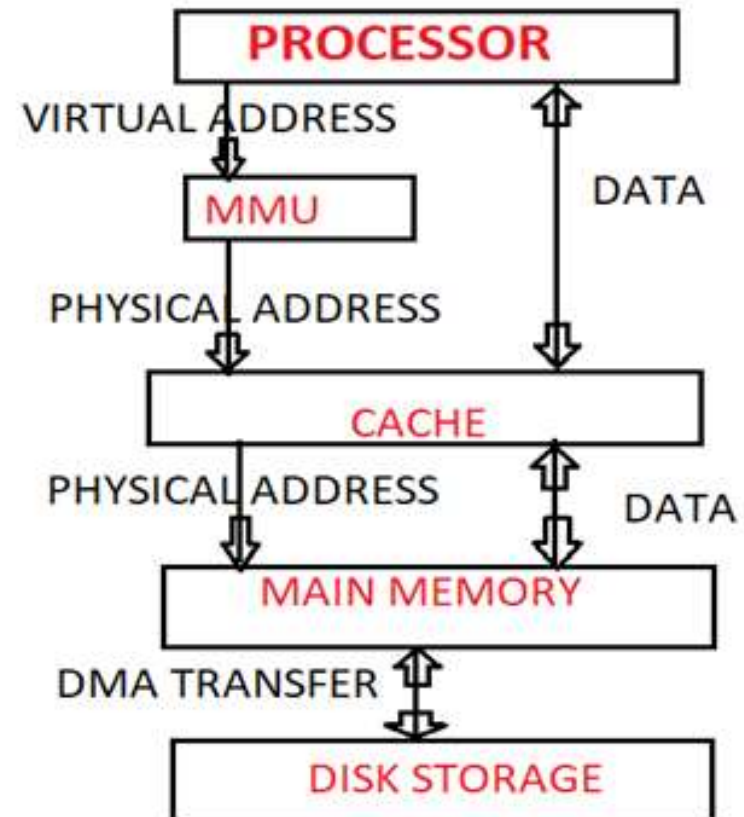
Program Address **Maps to** RAM Address



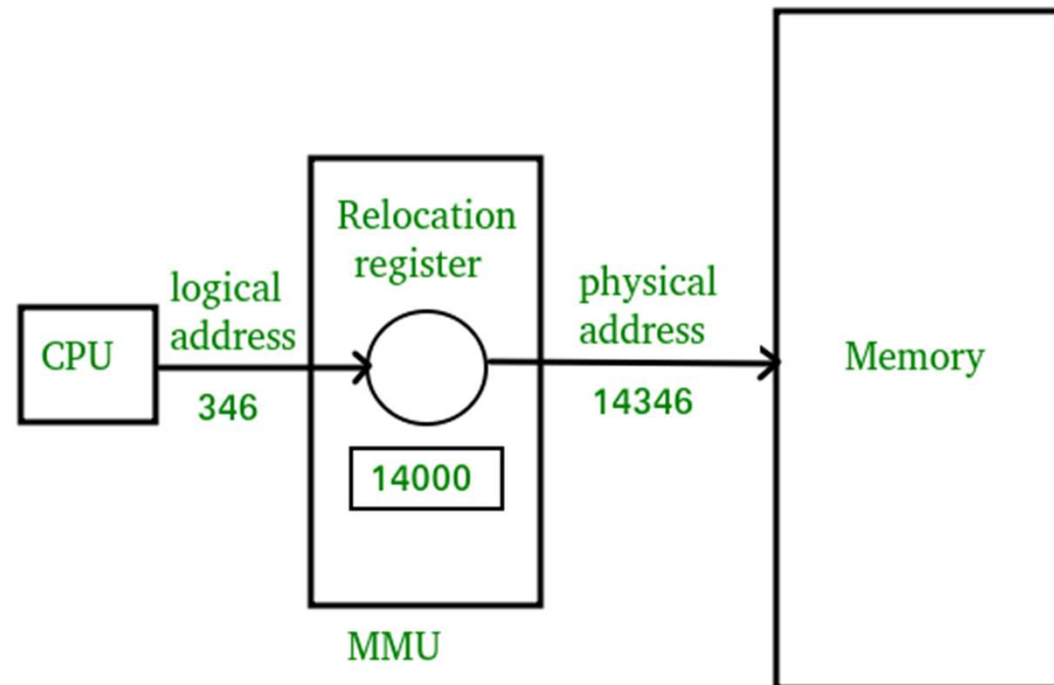


Virtual Memory

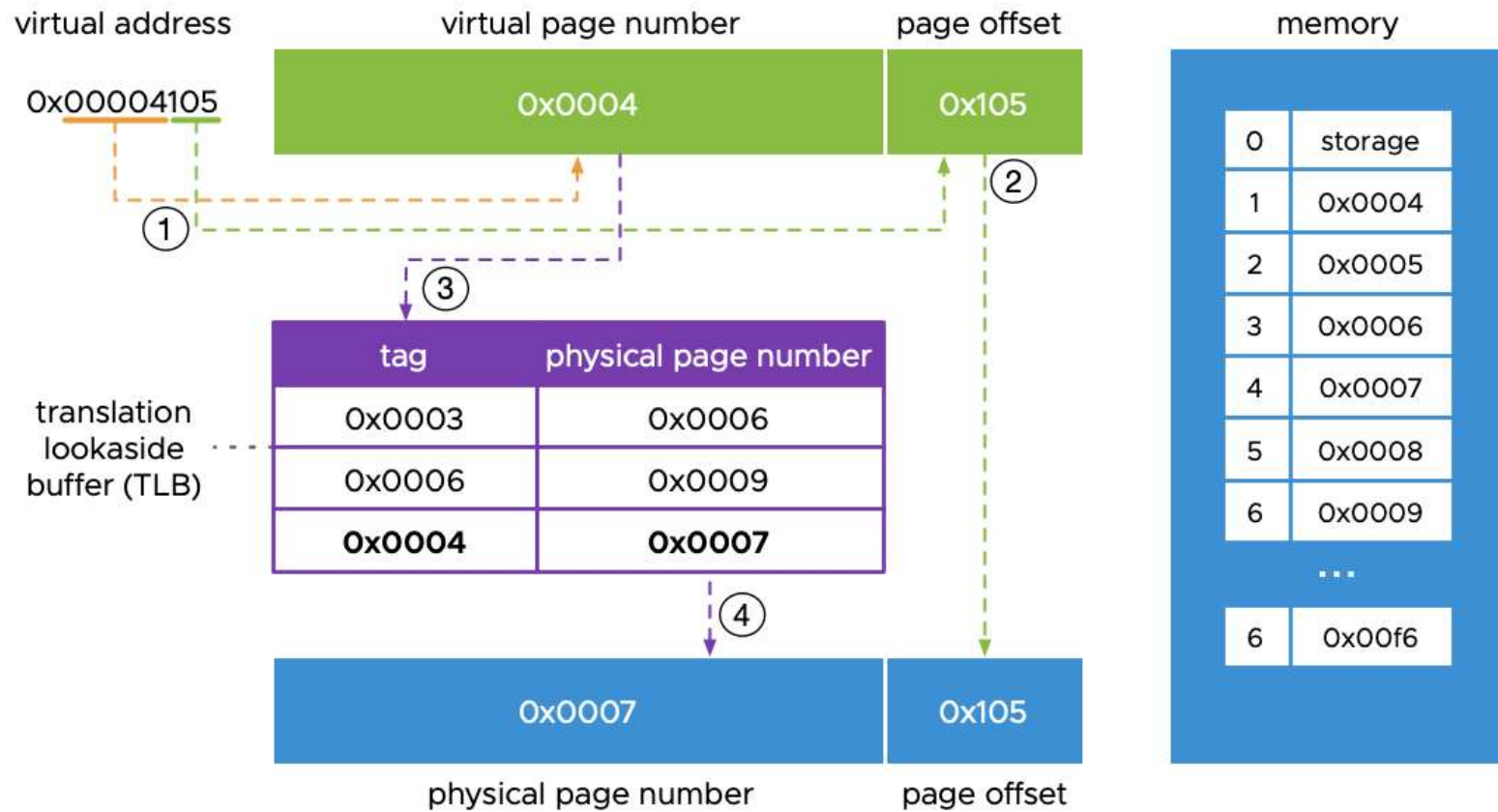
- Techniques automatically move program and data block to the main memory when they are required for execution



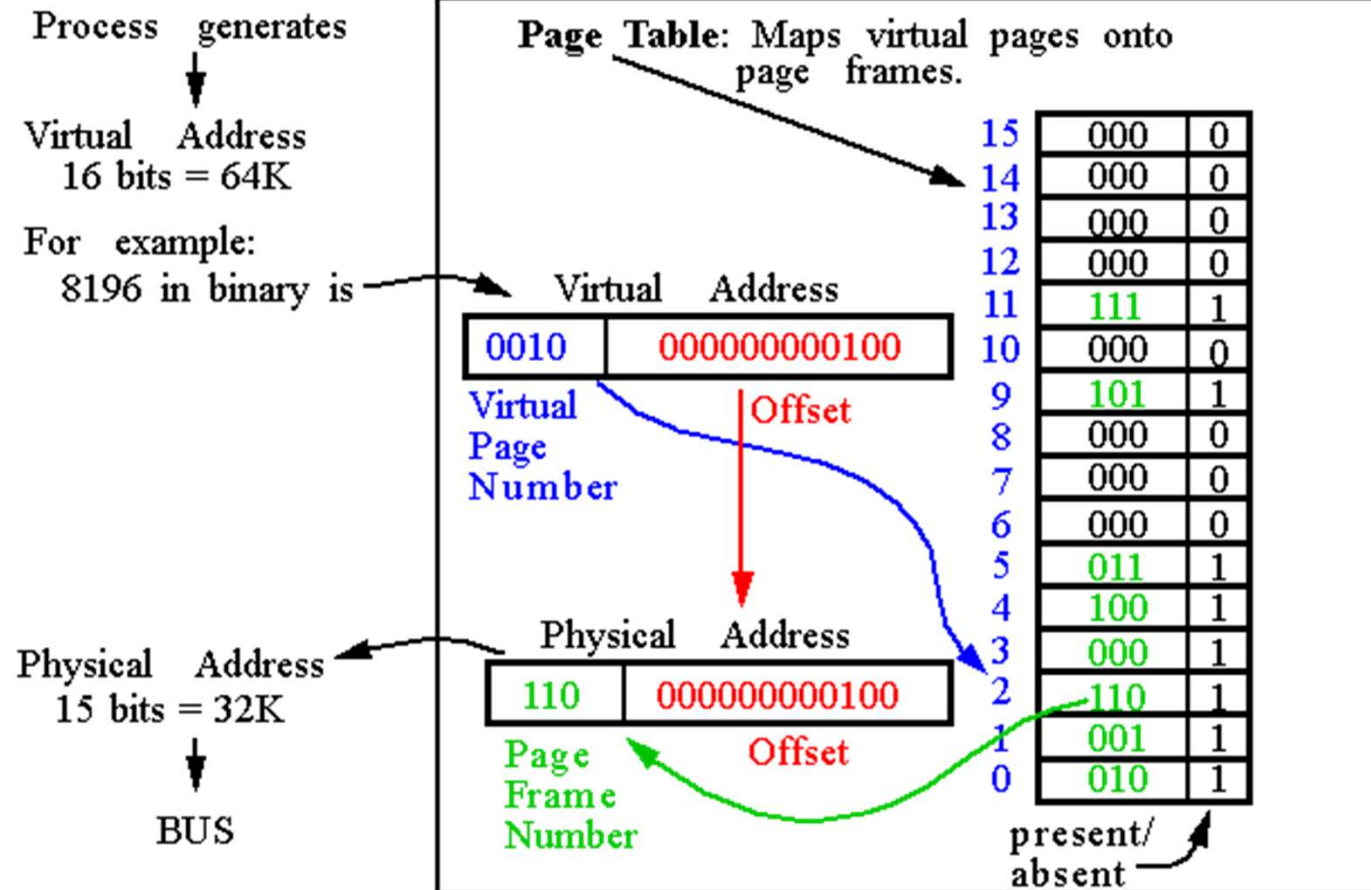
Logical and Physical Address



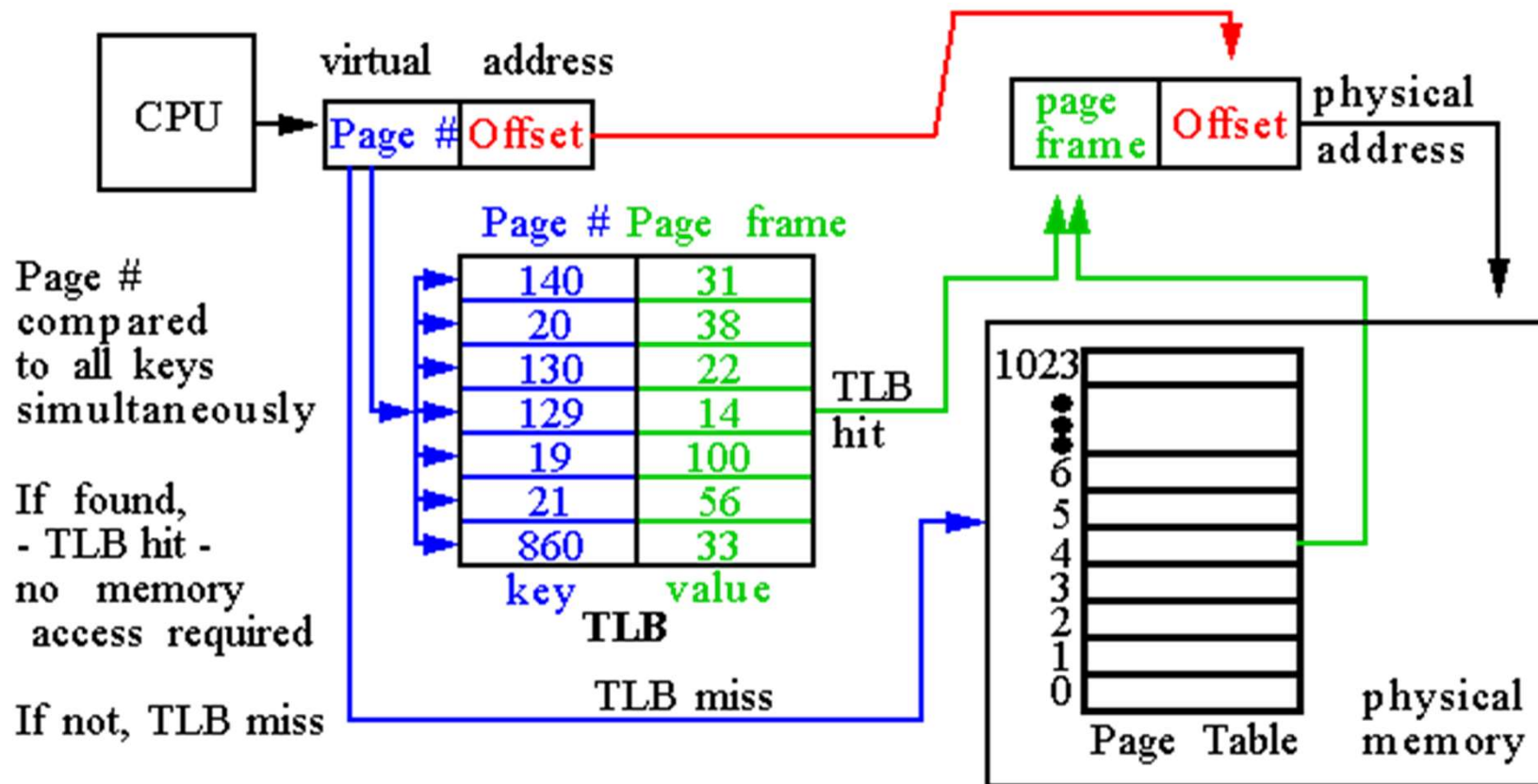
Address Translation



Address Translation



Address Translation





sns
INSTITUTIONS



Thank You