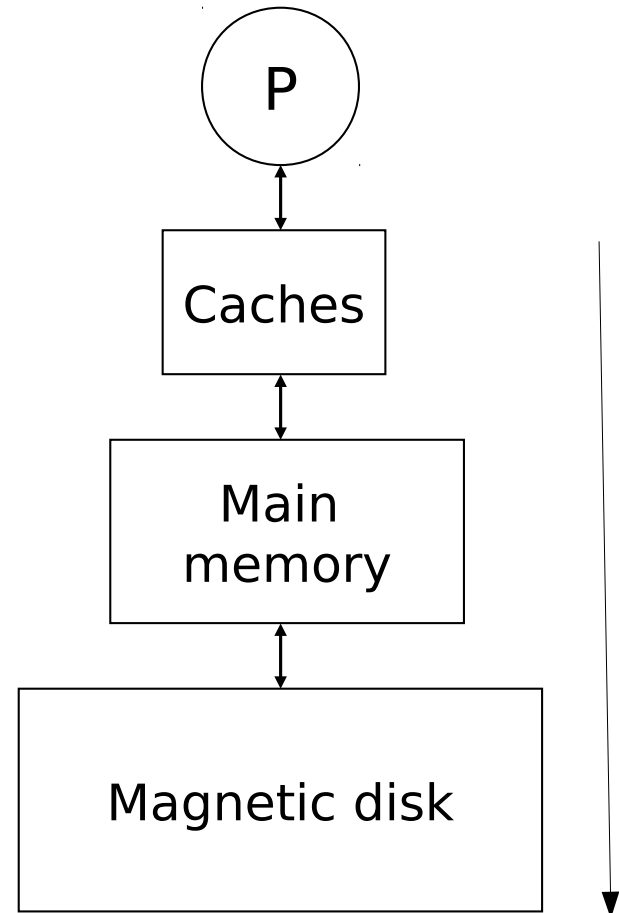


# Tutorial 8

## Caches

# Memory hierarchy

- Consists of multiple levels of memory with different speeds and sizes.
- A level close to the processor is a subset of any level further away.
- Gives the illusion of a memory that is as large as the lowest level, but as fast as the highest level.



# Caches

- Memory is often divided in a hierarchy of memories of different sizes/speeds for cost and efficiency reasons.
  - Without fast caches, CPU speed would be limited by the speed of its memory.
  - The faster a memory, the costlier it is. You therefore normally only have small quantities of very small memory.
- A cache corresponds to a small and very fast memory used to store a subset of commonly accessed items.

End of ebook preview

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