

Computer Systems - CPU

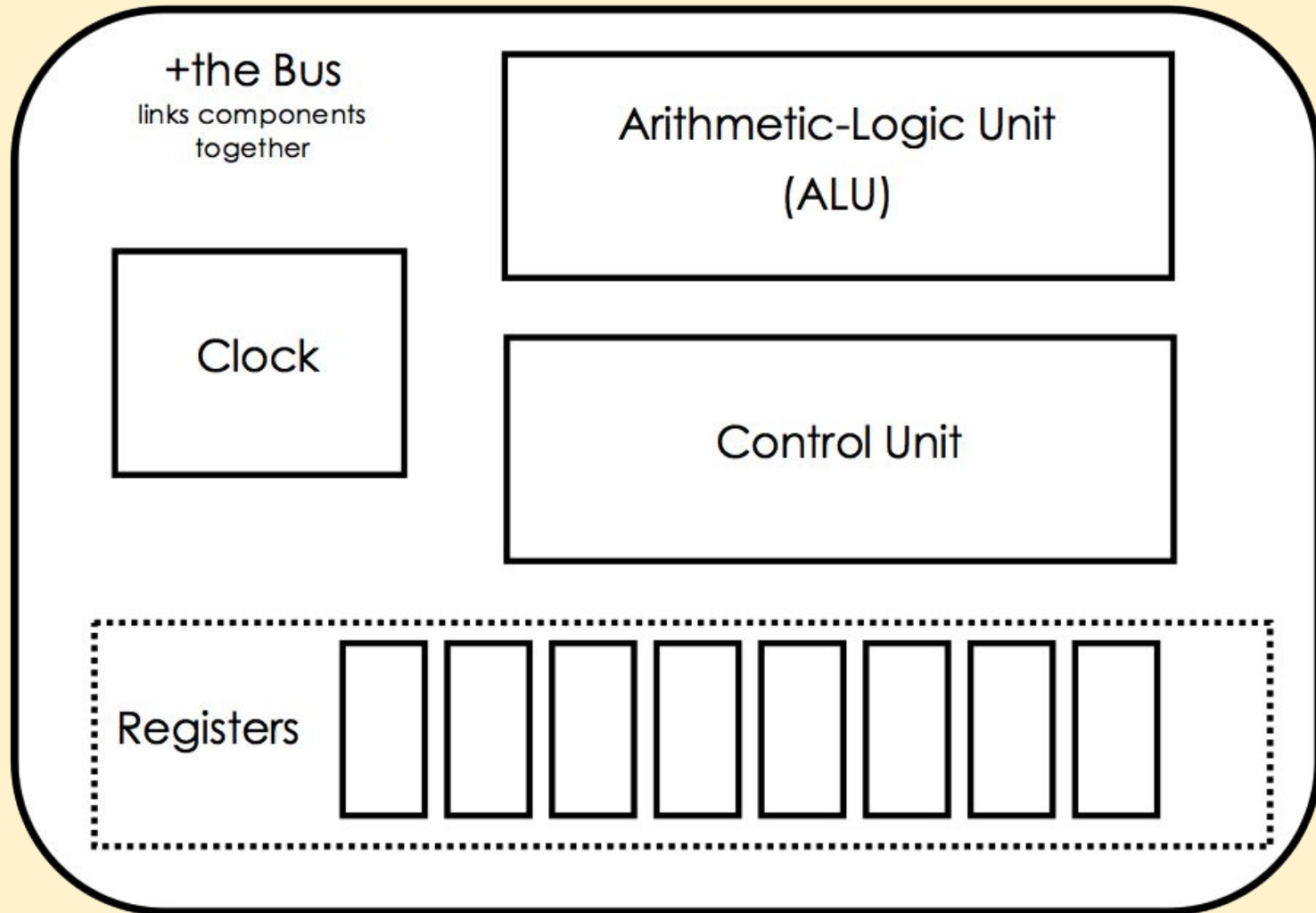
CPU - Central Processing Unit: the component of a computer system where data processing takes place

The von Neumann architecture sets out a model for the way the CPU is organised which is essentially unchanged

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Modern CPUs have five key components

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Control Unit: directs what the CPU does and controls the order that processes happen in

Arithmetic-Logic Unit: deals with maths (e.g. theMark + 20) and comparison between values (e.g. IF theMark > 80)

Clock: sends regular electronic pulses. Each pulse triggers the next action for the CPU. Measured in MHz or GHz

Register: small, specialised and very quick memory in the CPU used to store data and instructions currently being used

Bus: wires linking components together to allow data/signals to be transmitted between them

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The CPU uses **main memory** (essentially **RAM**) to operate
Data and program instructions are moved into and out of
the CPU from RAM



