**edX**      **CornellX: ENGRI1210x The Computing Technology Inside Your Smartphone**

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In this module we learn about caches, a key processor performance component. We'll discuss cache memory technologies such as SRAM and DRAM, consider how caches speed up performance, and explore direct-mapped and associative cache organizations.

By the end of this module you will be able to:

- Describe the differences between the speed of processors and different types of memories.

- Describe how including a cache modifies the processor pipeline.

- Describe how a cache exploits temporal and spatial locality.

- Explain the operation of a memory access when using caches.

- Differentiate between direct-mapped, set associative, and fully associative caches.

## INTRODUCING CACHES

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