RDD

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What is RDD?

- An abstraction called resilient distributed datasets.

- Source: Spark: Cluster computing with working sets (2010, Zaharia et al)

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- An abstraction called resilient distributed datasets.
- A read-only collection of objects partitioned across a set of machines that can be rebuilt if a partition is lost.

- Source: Spark: Cluster computing with working sets (2010, Zaharia et al)

Problem with Hadoop Map/Reduce

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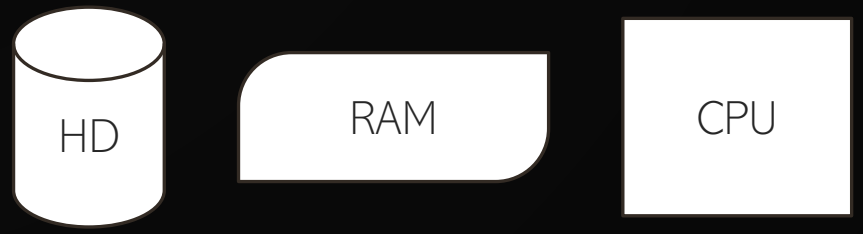

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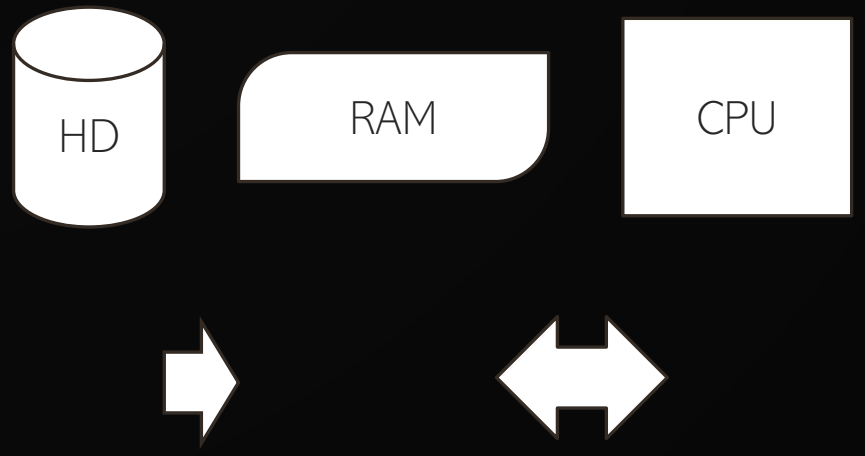

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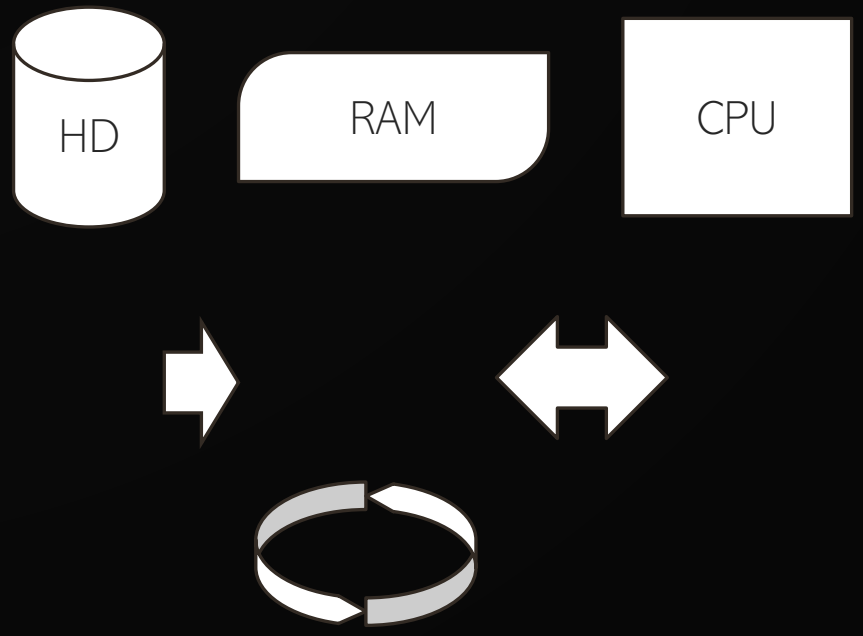

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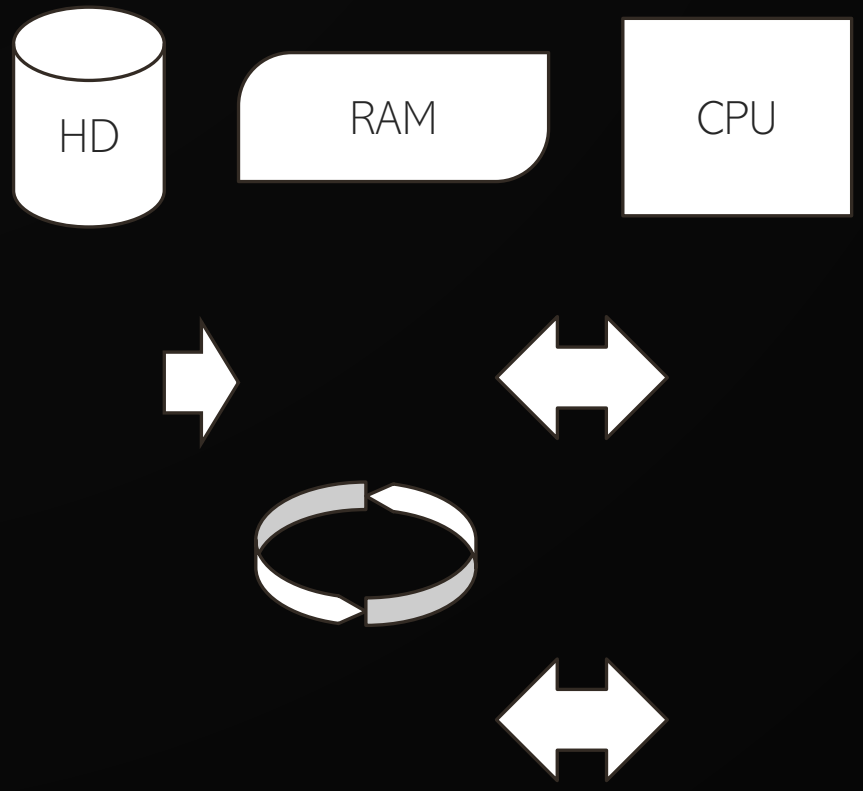

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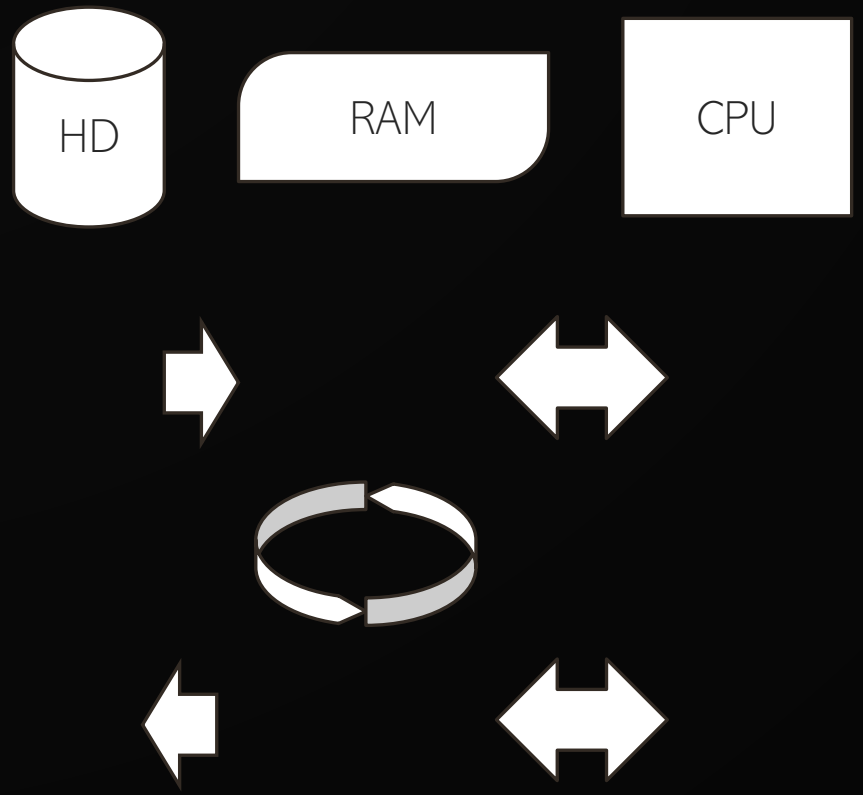

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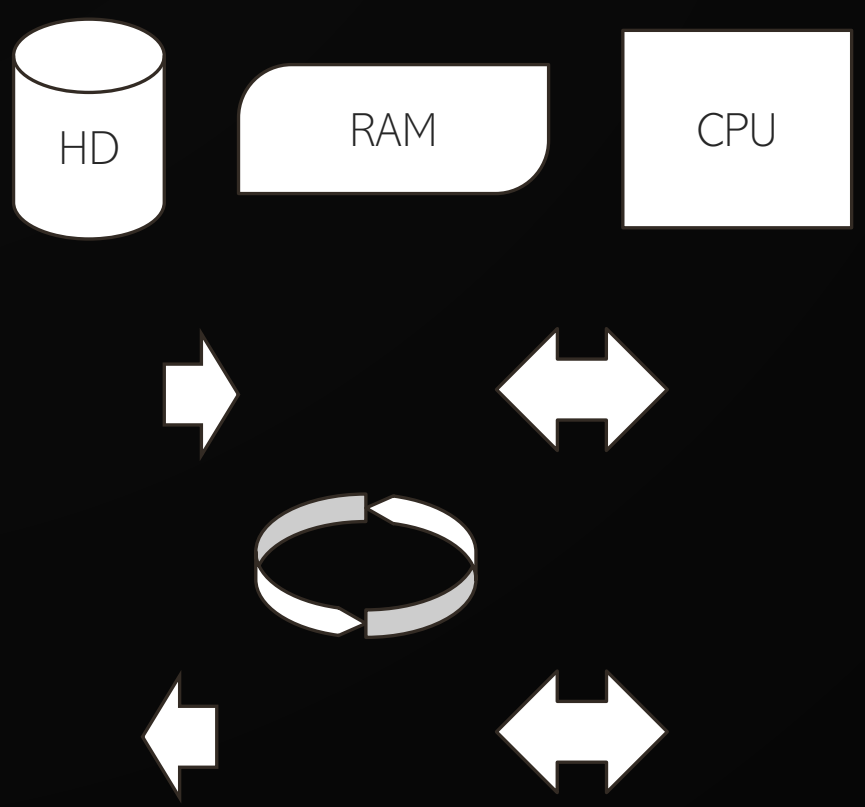

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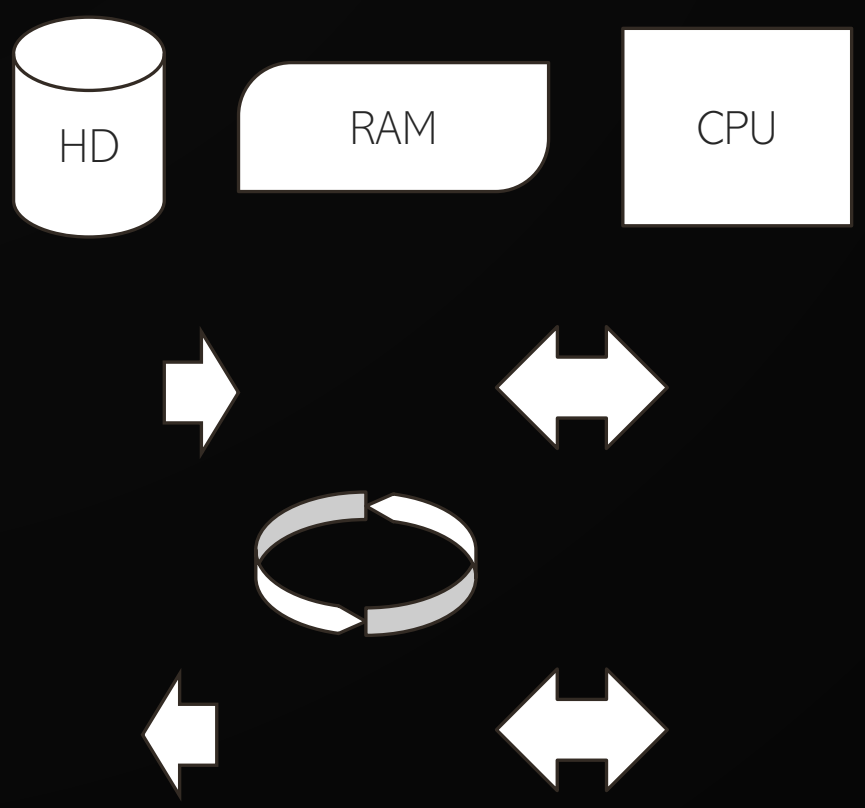

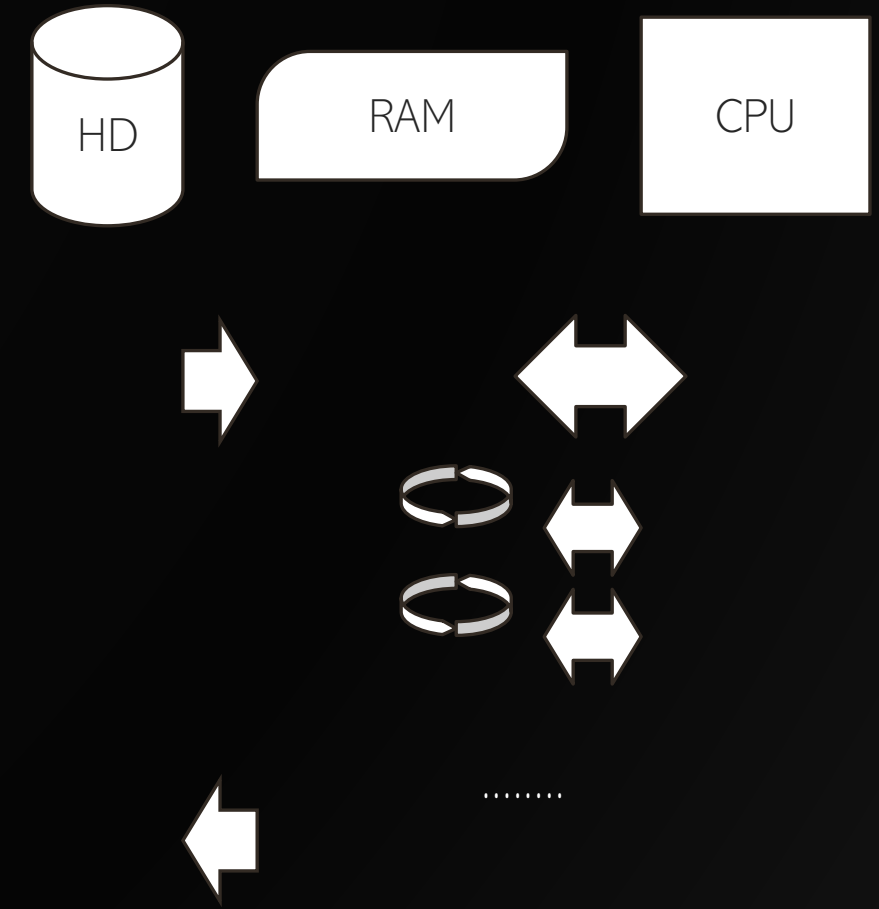

Spark RDDs

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- Use cases:
  - Interactive data analysis
  - Iterative ML
  - Graph processing
  - Streaming

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- By now, almost everyone uses DataFrames
  - Higher level
  - Usually more performant
  - More user-friendly
- RDDs are *theoretically* still relevant if you want more control on your dataset