Coding for Economists

Advanced Session 4

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19 May 2025

Module Files

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Outline

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- Large Data Problems

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- Large Data Problems
- Efficient Format / Operation

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- Efficient Format / Operation
- Efficient I/O

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- Large Data Problems
- Efficient Format / Operation
- Efficient I/O
- Parallel / Distributed Computing

Large Data Problems

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- Memory-Bound

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  - Program takes long time moving files in/out RAM, or crashes due to out of memory

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Advanced 4

Chunked I/O

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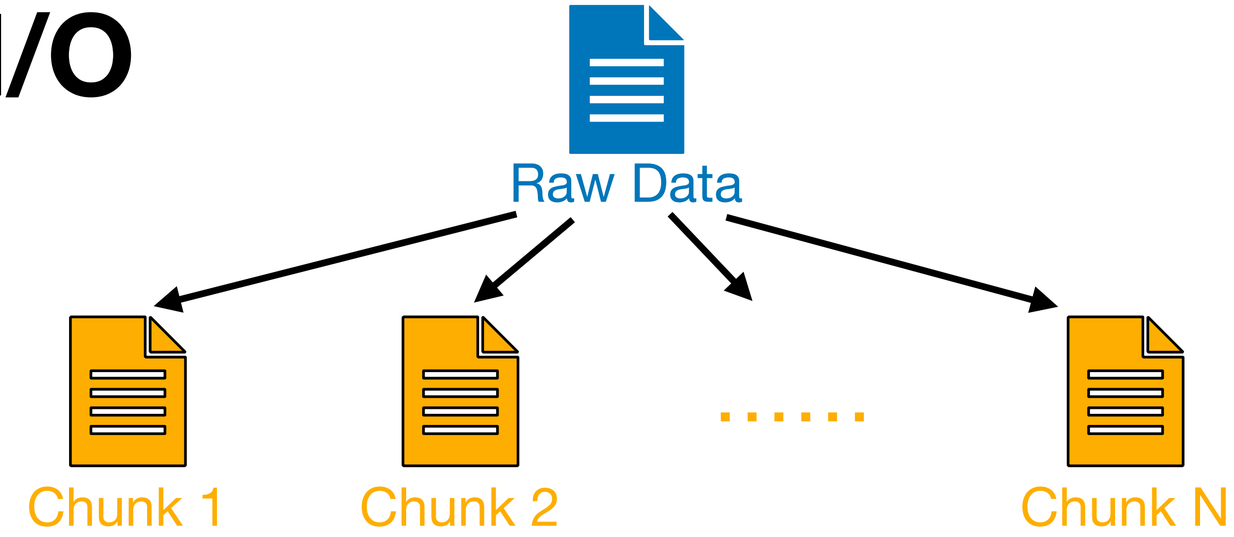
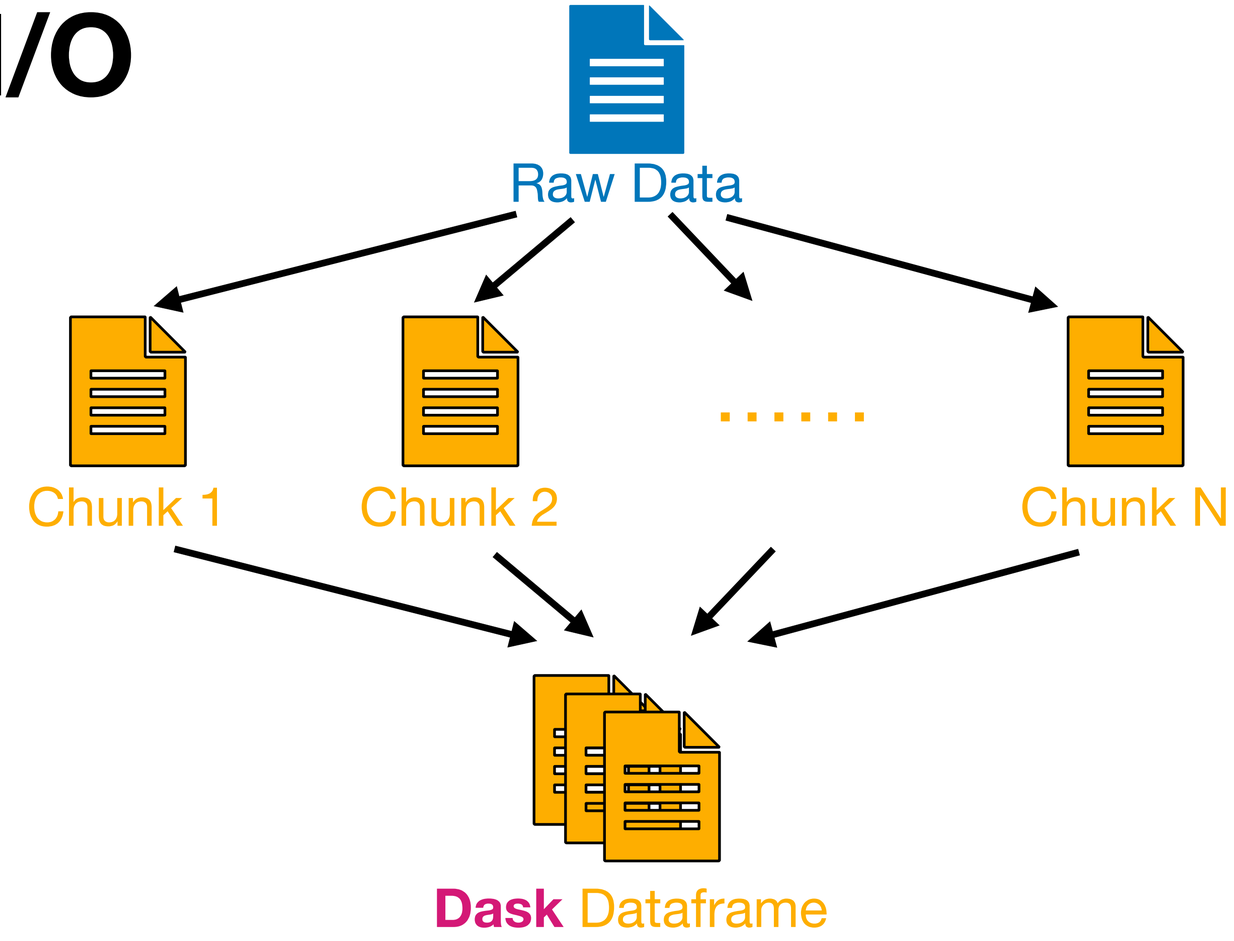
Raw Data

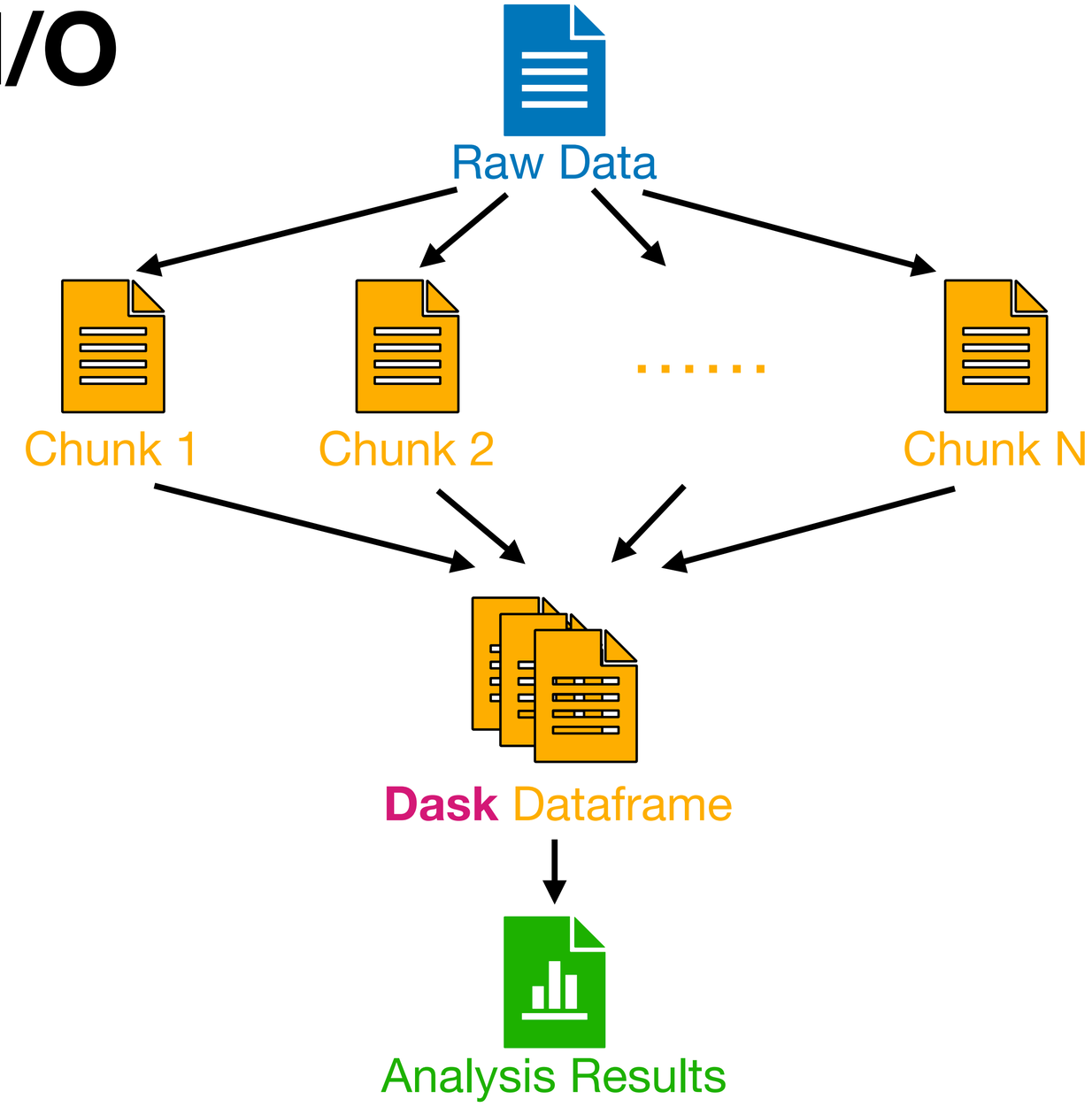
Chunked I/O



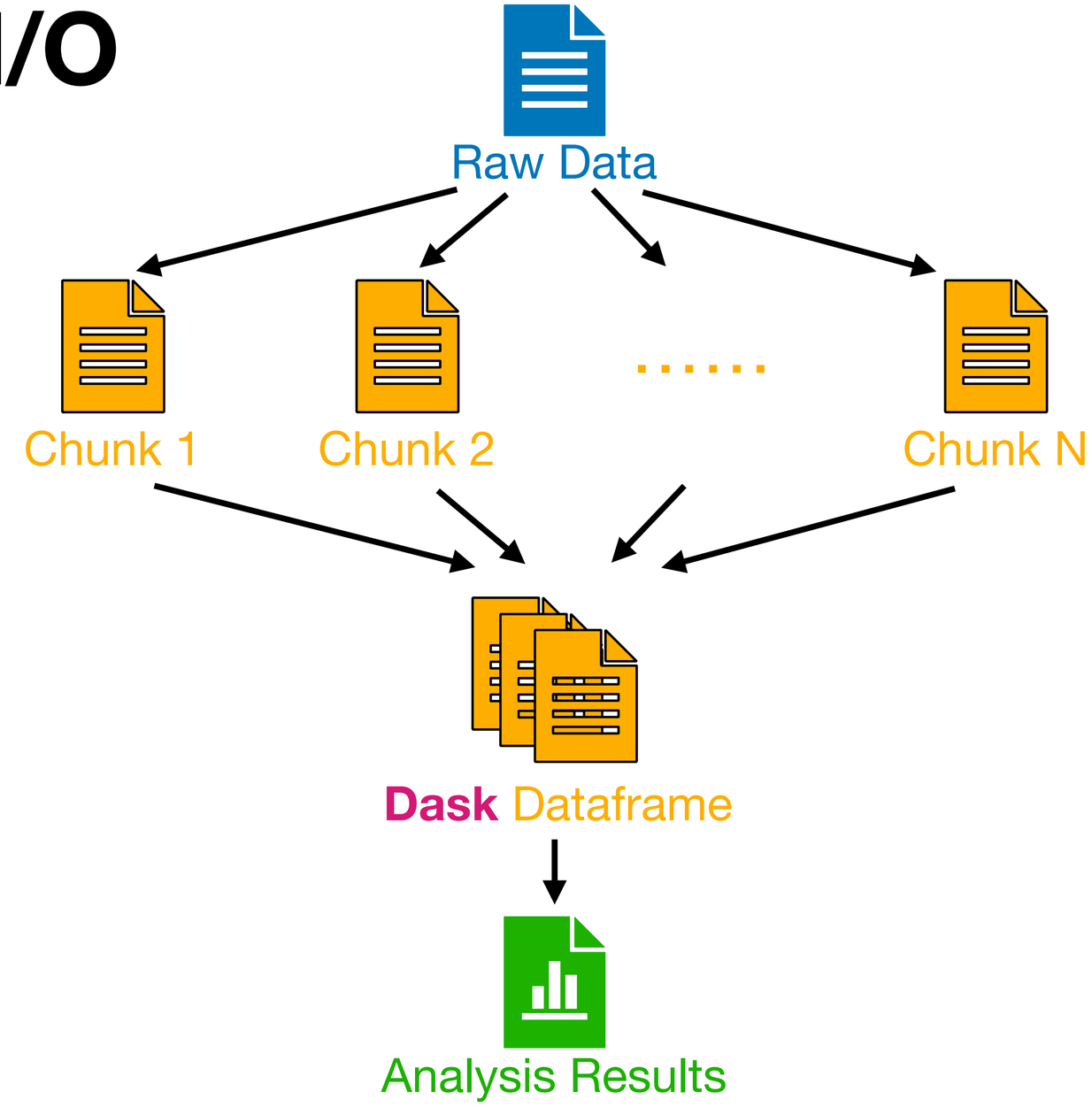
Chunked I/O



Chunked I/O


Raw Data
Chunk 1
Chunk 2
.....
Chunk N
Dask Dataframe
Analysis Results

Chunked I/O



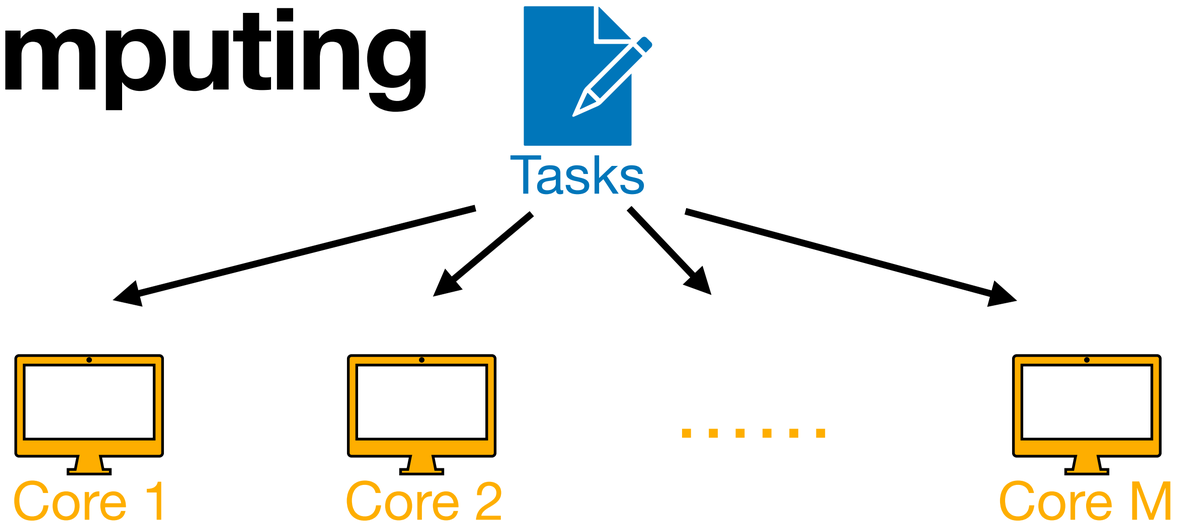
Advanced 4

Parallel Computing

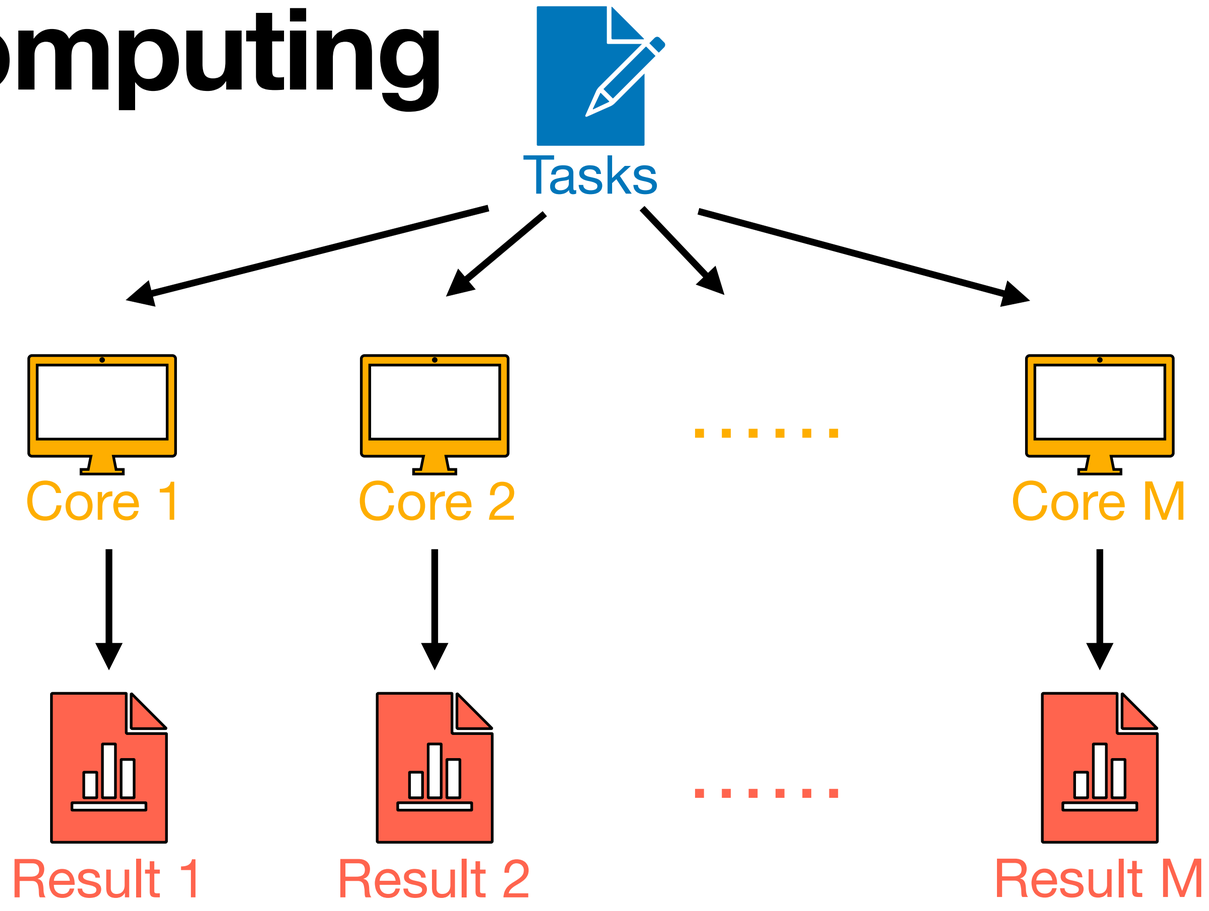
Parallel Computing

Tasks

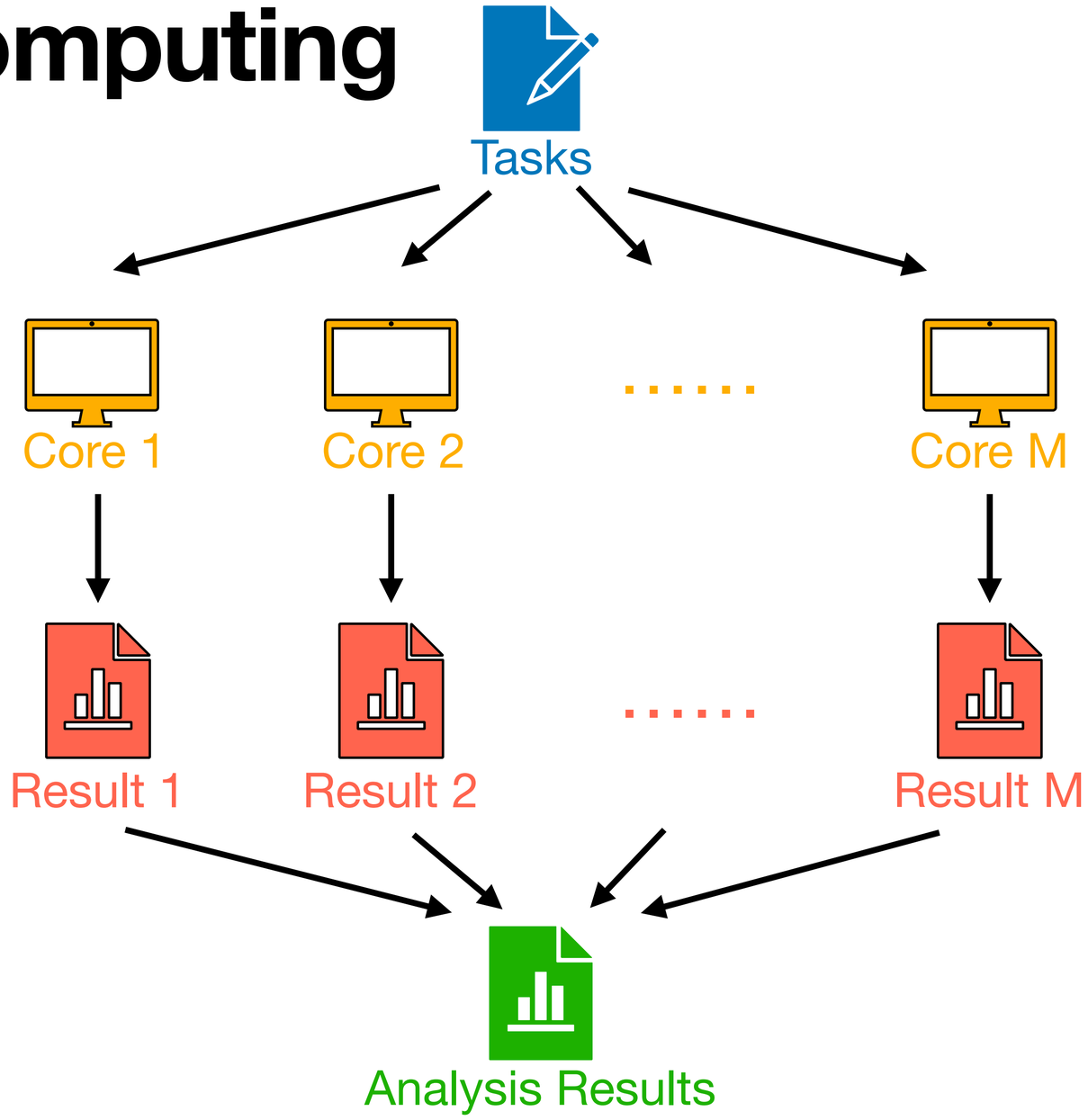
Parallel Computing



Parallel Computing



Parallel Computing



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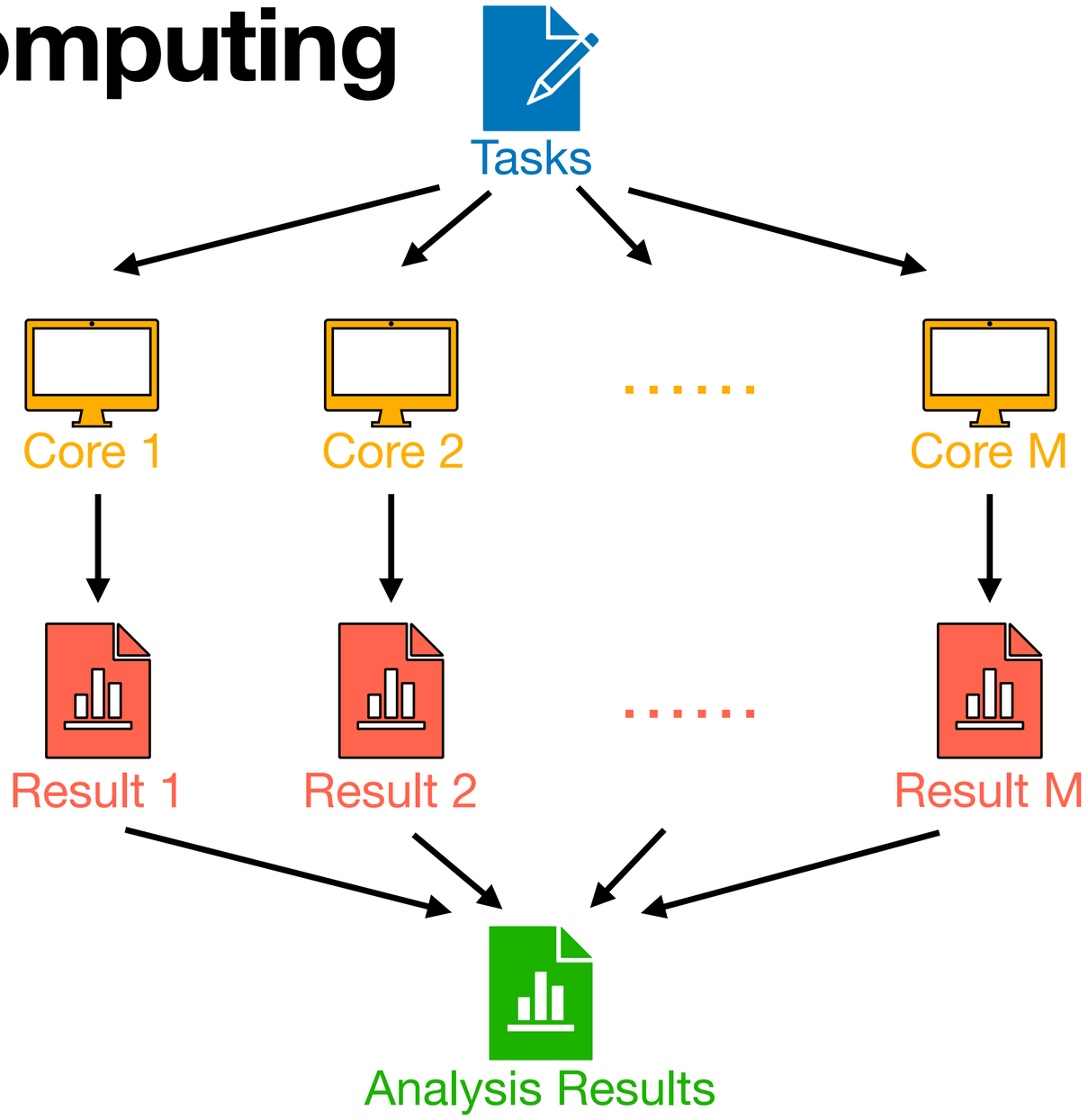

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