Hadoop MapReduce "from scratch"

2019 Nov.

Presentation of the Project

Yixiao FEI

2019 Nov.

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Big Data


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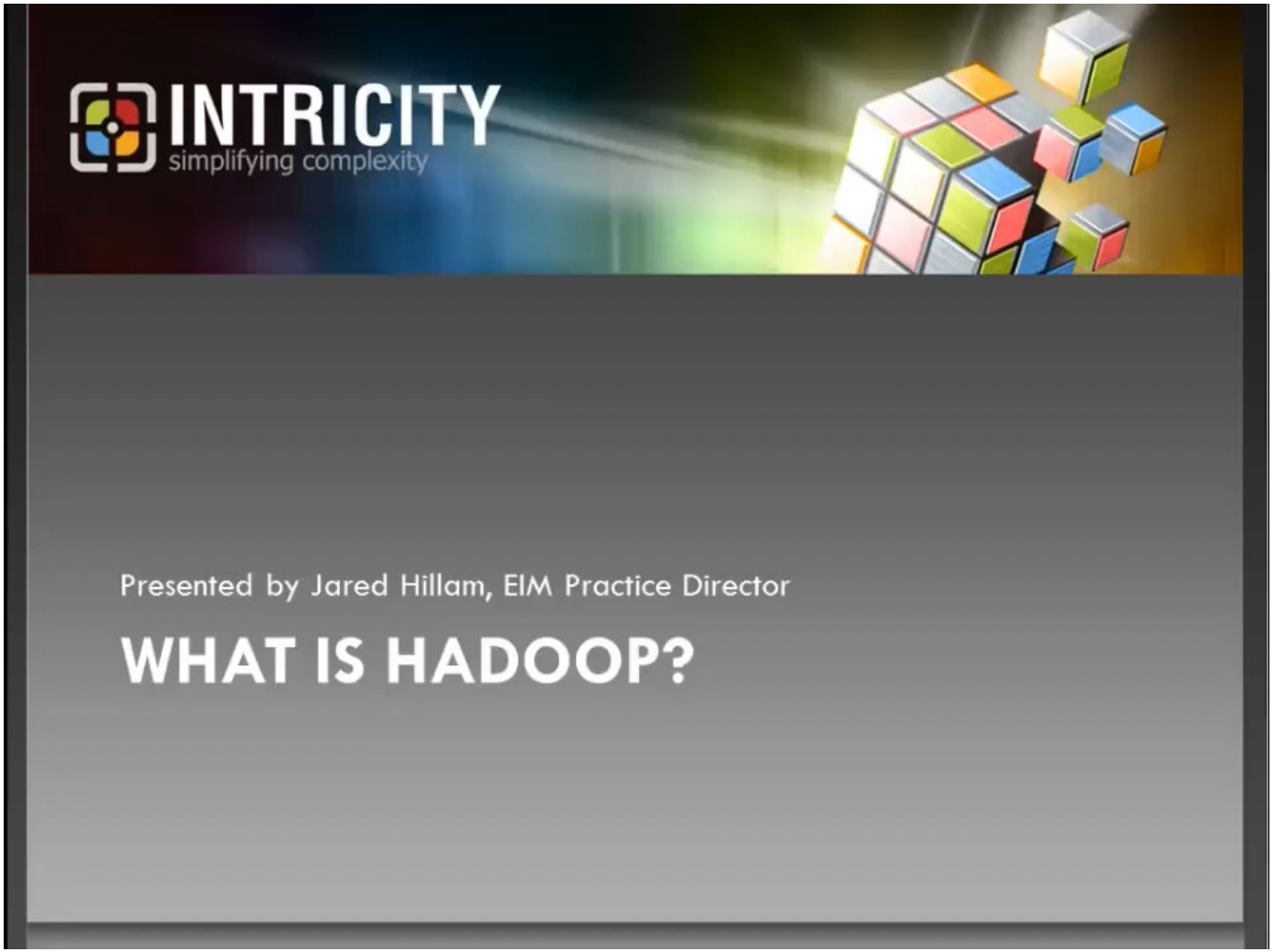
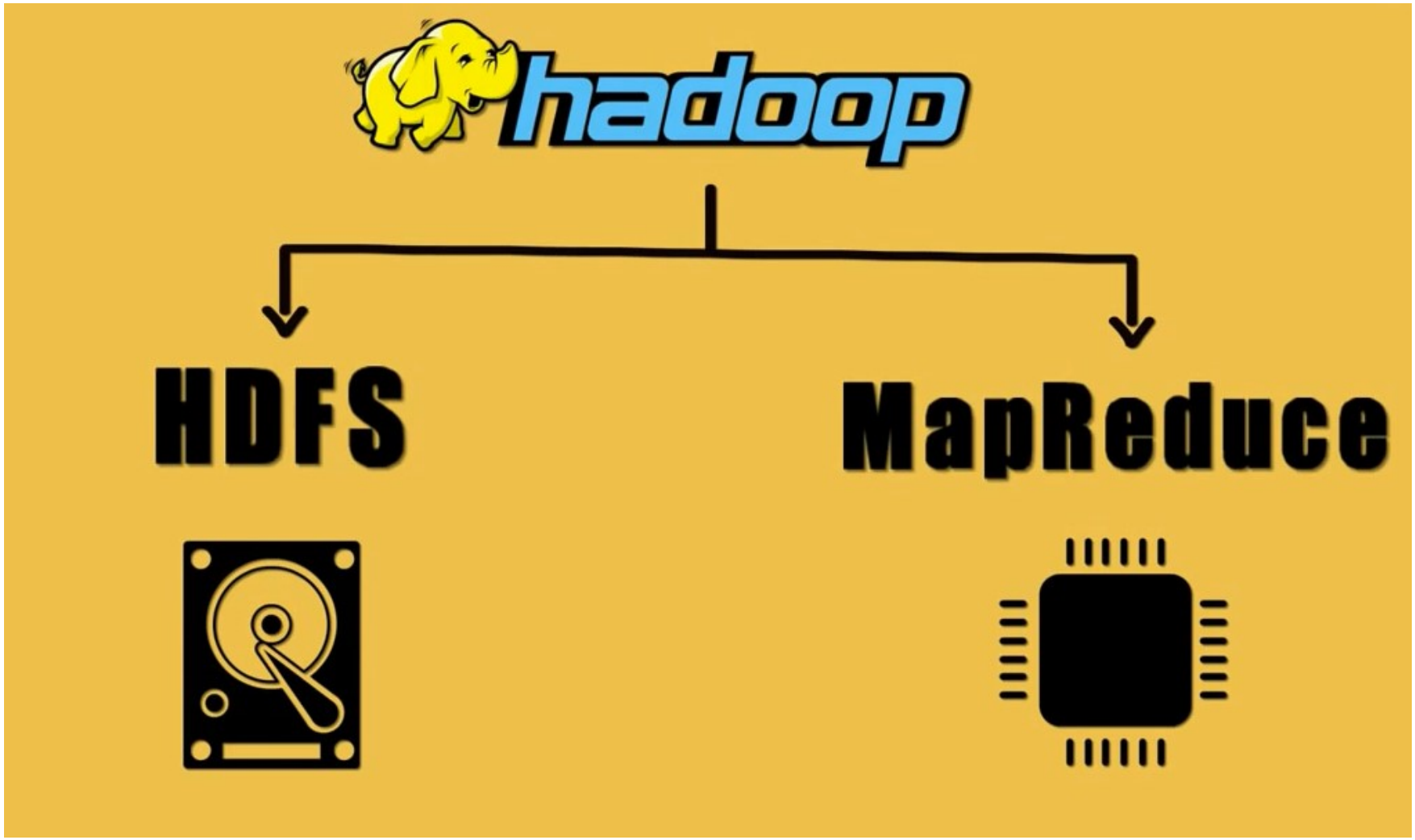
Hadoop

- Apache Hadoop is a collection of open-source software utilities that facilitate using a network of many computers to solve problems involving massive amounts of data and computation. It provides a software framework for distributed storage and processing of big data using the MapReduce programming model.

Hadoop


INTRICITY
simplifying complexity
Presented by Jared Hillam, EIM Practice Director
WHAT IS HADOOP?

Hadoop



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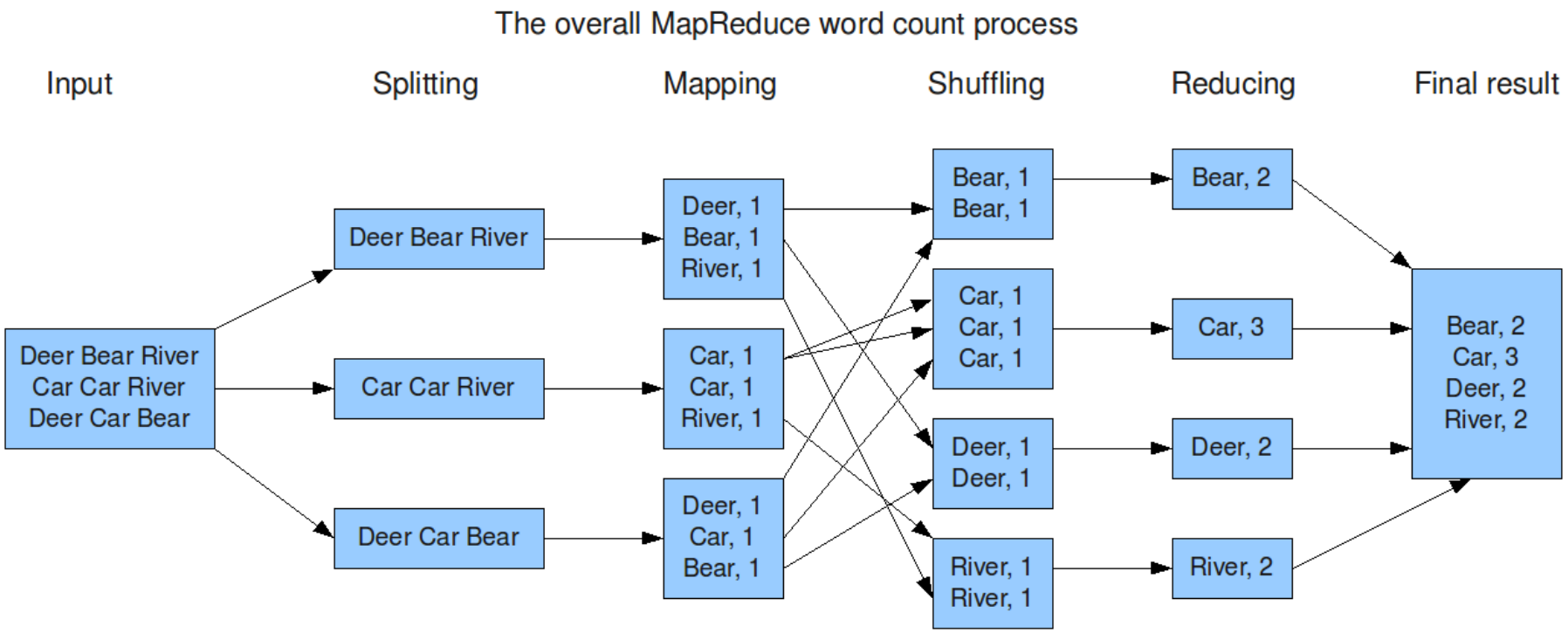
Hadoop Cluster

MapReduce


The overall MapReduce word count process
Input
Splitting
Mapping
Shuffling
Reducing
Final result
Deer Bear River
Car Car River
Deer Car Bear
Deer Bear River
Car Car River
Deer Car Bear
Deer, 1
Bear, 1
River, 1
Car, 1
Car, 1
River, 1
Deer, 1
Car, 1
Bear, 1
Bear, 1
Bear, 1
Car, 1
Car, 1
Car, 1
Deer, 1
Deer, 1
River, 1
River, 1
Bear, 2
Car, 3
Deer, 2
River, 2
Bear, 2
Car, 3
Deer, 2
River, 2

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Word Count

- Trivial Method
- MapReduce
- Experiments

Important Notes

- Work: 3 people/group
- Deadline: 12:00, 24 Dec. 2019
- Filename: MP-GroupNumber.zip (eg. IM-Group1.zip) including:
    1) source code
    2) compiled runnable Jar and a Readme file
    3) report (your names and IDs)
- TA’s contact : destiny_fyx@outlook.com

Evaluation

- Functionality (50%), Report (20%), Presentation(30%)
- Delay of submission will cost 30% of points per day
- The report includes at least:
  - ✓ System diagram
  - ✓ Function description
  - ✓ How to build/run (some demo)
  - ✓ Experiment (comparison and reflection)
  - ✓ Good written ability

No Tolerance for Plagiarism

Things that might Help

- Eclipse
- Maven
- Docker
- Linux Commands
- Git

Thanks !