BIG DATA

Concept Clarity

EXPECTED TOPIC

100%.

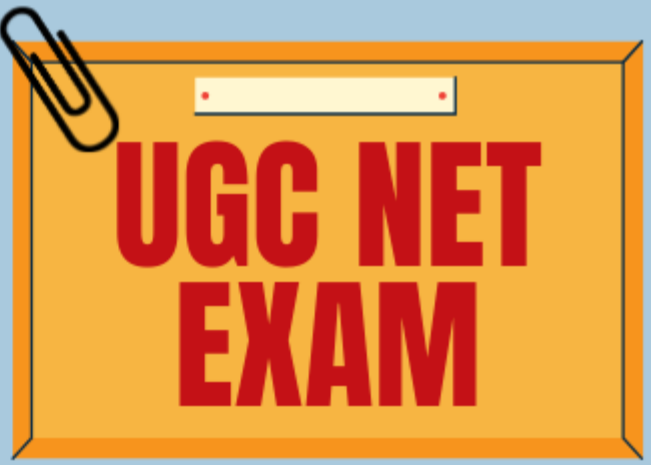
5pm

2021

5 years

MH Set Net → JRF

Name Node, Data Node, Job Tracker, Task Tracker



MUST WATCH FOR UPCOMING EXAM

Day 37 Left – NET 2021

45 days

MHSET- 26 SEP 2021

The **schedule of UGC-NET June 2021** is as follows:

June 2021

Online registration and submission of Application Form (complete in all respect) through NTA Website: https://ugcnet.nta.nic.in	**10 August to 05 September, 2021 (upto 11:50 pm)**
Last date for successful transaction of Examination fee	**06 September, 2021 (upto 11:50 pm)**
Correction in the Particulars in the Application Form (online only)	**07 September to 12 September, 2021**
Downloading of Admit Card from NTA Website	**To be announced later on website**
Dates of Examination	**06 October to 11 October 2021**
Timing of Examination	**First Shift: 09.00 am to 12.00 pm** **Second Shift: 03.00 pm to 06.00 pm**
Website	ugcnet.nta.nic.in, www.nta.ac.in

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https://t.me/RashmiCCS

My class @ 5pm daily on YouTube

Awake, Arise & Stop Not till the Goal Achieved.

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BIG DATA & HADOOP

RAPID REVISION

NOV 2020 UGCNET

like

Q) The data node & name mode is HADOOP are respectively...?

a) Worker & Master Node

b) Master & Worker Node

c) Both Master Node

d) Both Worker Node

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Q) The data node & name mode is HADOOP are respectively...?

a) Worker & Master Node

b) Master & Worker Node

c) Both Master Node

d) Both Worker Node

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INTRODUCTION OF HADOOP

- Hadoop is an open source framework. It is provided by Apache to process and analyze very huge volume of data. It is written in Java and currently used by Google, Facebook, LinkedIn, Yahoo, Twitter etc.
- Hadoop tutorial includes all topics of Big Data Hadoop with HDFS, MapReduce, Yarn, Hive, HBase, Pig, Sqoop etc.

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MODULES OF HADOOP

1. **HDFS:** Hadoop Distributed File System. Google published its paper GFS and on the basis of that HDFS was developed. It states that the files will be broken into blocks and stored in nodes over the distributed architecture.
2. **Yarn:** Yet another Resource Negotiator is used for job scheduling and manage the cluster.
3. **Map Reduce:** This is a framework which helps Java programs to do the parallel computation on data using key value pair. The Map task takes input data and converts it into a data set which can be computed in Key value pair. The output of Map task is consumed by reduce task and then the out of reducer gives the desired result.
4. **Hadoop Common:** These Java libraries are used to start Hadoop and are used by other Hadoop modules.

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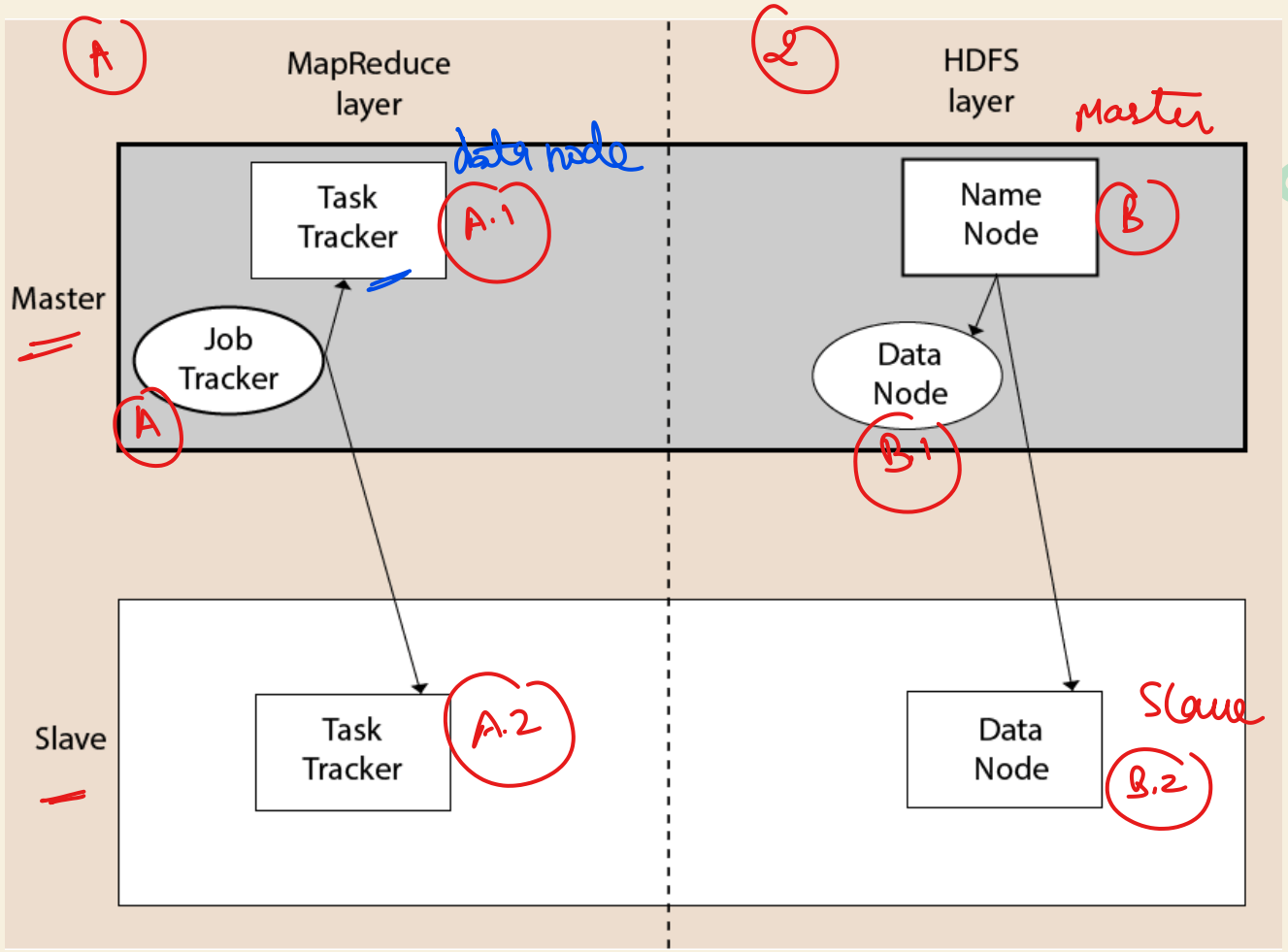
Hadoop Architecture



master
↓ ↑ heartbeat
slave
(response)

2021

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Hadoop Distributed File System

- The Hadoop Distributed File System (HDFS) is a distributed file system for Hadoop. It contains a master/slave architecture. This architecture consist of a single Name Node performs the role of master, and multiple Data Nodes performs the role of a slave.
- The Java language is used to develop HDFS. So any machine that supports Java language can easily run the Name Node and Data Node software.

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Name Node

1. It is a single master server exist in the HDFS cluster.
2. As it is a single node, it may become the reason of single point failure.
3. It manages the file system namespace by executing an operation like the opening, renaming and closing the files.
4. It simplifies the architecture of the system.

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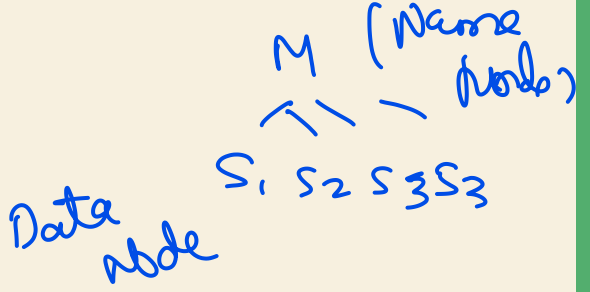
Data Node

1. The HDFS cluster contains multiple Data Nodes.
2. Each Data Node contains multiple data blocks.
3. These data blocks are used to store data.
4. It is the responsibility of Data Node to read and write requests from the file system's clients.
5. It performs block creation, deletion, and replication upon instruction from the Name Node.



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Job Tracker (Master → name node)

1. The role of Job Tracker is to accept the MapReduce jobs from client and process the data by using Name Node.
2. In response, Name Node provides metadata to Job Tracker.

Job Tracker
assign ↓ task
task manager

Task Tracker (Slave → data node)

1. It works as a slave node for Job Tracker.
2. It receives task and code from Job Tracker and applies that code on the file. This process can also be called as a Mapper. Question

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MapReduce Layer

- The MapReduce comes into existence when the client application submits the MapReduce job to Job Tracker. In response, the Job Tracker sends the request to the appropriate Task Trackers. Sometimes, the Task Tracker fails or time out. In such a case, that part of the job is rescheduled.

Job
↓
Task failure

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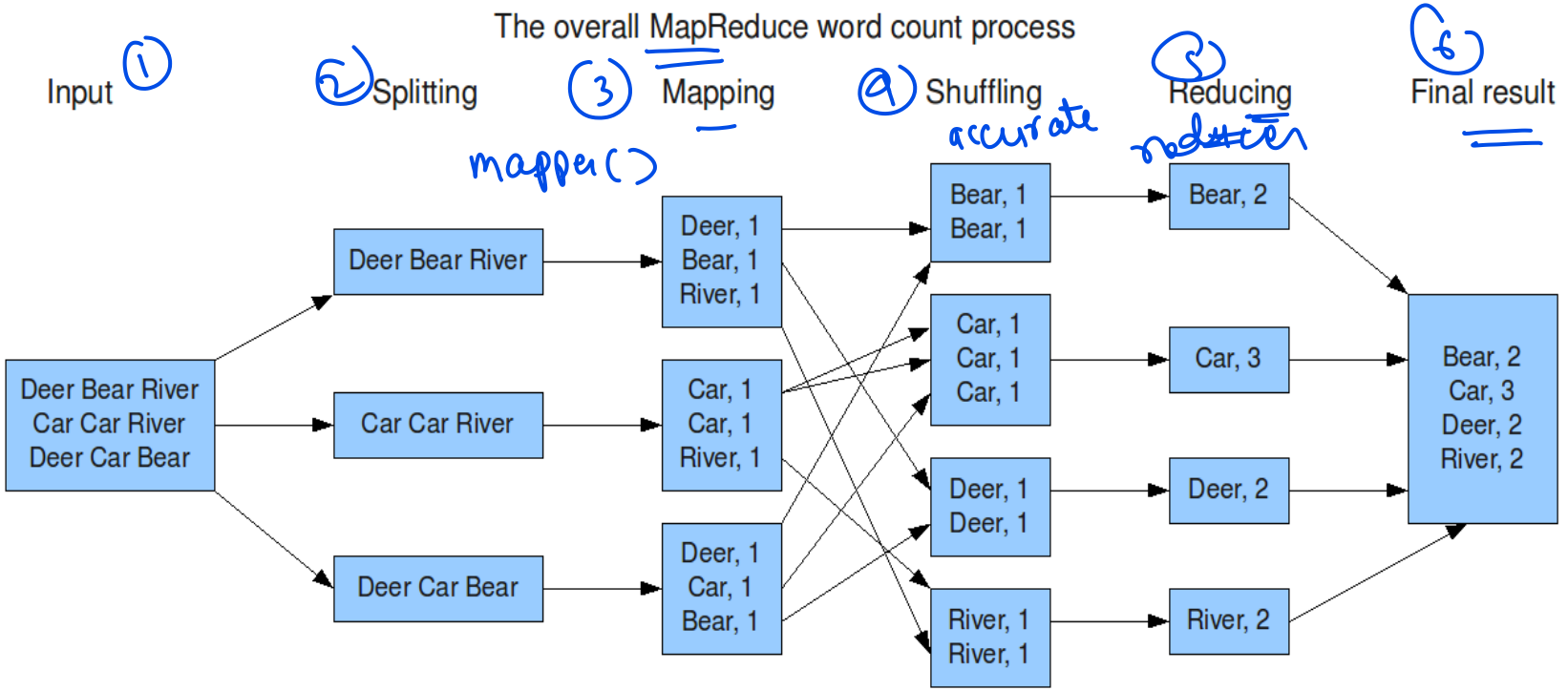
The overall MapReduce word count process
Input
Splitting
Mapping
Shuffling
Reducing
Final result
Deer Bear River
Car Car River
Deer Car Bear
Deer Bear River
Car Car River
Deer Car Bear
Deer, 1
Bear, 1
River, 1
Car, 1
Car, 1
River, 1
Deer, 1
Car, 1
Bear, 1
Bear, 1
Bear, 1
Car, 1
Car, 1
Car, 1
Deer, 1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

45 Days	Complete Revision	UGCNET 2021	SET 2021				
Educator	Start Date	End Date		Educator	Start Date	End Date	
Rashmi				Astha			
AI	18 Aug	22 Aug		CN	18 Aug	22 Aug	
SE	23 Aug	28 Aug		COA	23 Aug	28 Aug	
CG	29 Aug	2 Sep		DLD	29 Aug	2 Sep	
OOPS	3 Sep	6 Sep		OS	3 Sep	6 Sep	
TOC	7 Sep	11 Sep		DSA	7 Sep	11 Sep	
Compiler	12 Sep	15 Sep		Discrete	12 Sep	15 Sep	
LPP	16 Sep	20 Sep		DBMS	16 Sep	20 Sep	

10 Days	Guidance	24 * 7					
Complete Revision	20 Sep	30 Sep					
Doubt Solving	20 Sep	30 Sep					
Time Management							
SUNDAY (Mock Test)	22 Aug	29 Aug	5 Sep	12 Sep	19 Sep	26 Sep	3:00 PM

PAPER-1							
Educator	Start Date	End Date	Pending	Educator	Start Date	End Date	Pending
Rashmi				Astha			
Teaching	18 Aug	22 Aug		DI	18 Aug	22 Aug	
Research	23 Aug	28 Aug		MR	23 Aug	28 Aug	
Communication	29 Aug	2 Sep		LR	29 Aug	2 Sep	
ICT	3 Sep	6 Sep		PDE	3 Sep	6 Sep	
RC	7 Sep	11 Sep		HE	7 Sep	11 Sep	
	12 Sep	15 Sep			12 Sep	15 Sep	
	16 Sep	20 Sep			16 Sep	20 Sep	

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2019
2020
Prev paper 2021

6 mock test → 10 Unit
40 Q 40

a
b
c
d

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pdf

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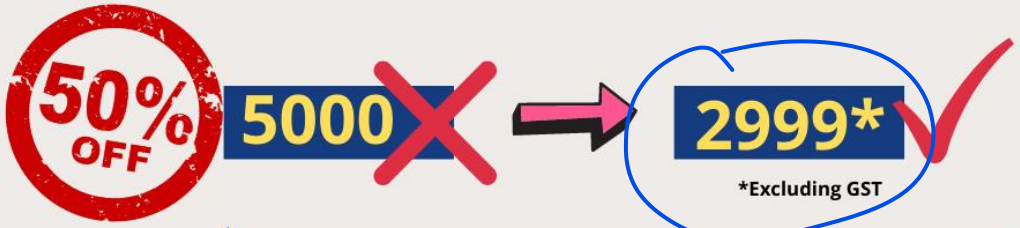

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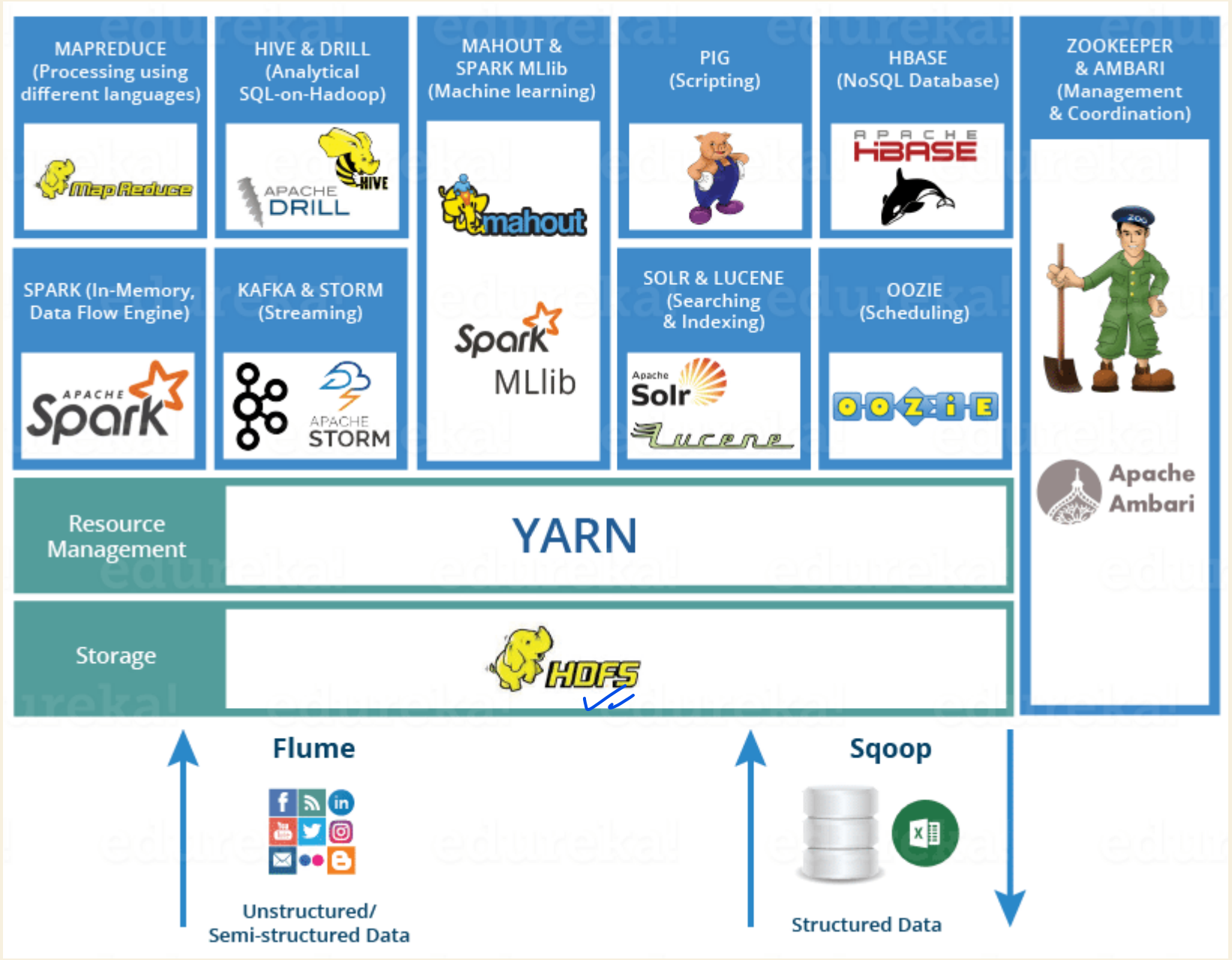

Spa →

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2020 (3)

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