

Date: _____

▲ HYUNDAI

Integrate with different data storage systems and processing frameworks, providing flexibility in building data processing pipelines.

7) Extensibility-

The hadoop ecosystem is highly extensible, with a wide range of open-source projects and tools that extend its functionality. These include apache hive for data warehousing, Apache pig for data flow scripting, Apache Hbase for real-time read/write access, and Apache Spark for in-memory processing, among others.

YOU ARE ALWAYS A STUDENT, NEVER A MASTER. YOU HAVE TO
KEEP MOVING FORWARD. - CONRAD HALL

Q4 Hadoop characteristic and features.

- 1) Distributed Computing - Hadoop is designed for distributed computing, allowing it to process large dataset by distributing the workload.
- 2) Scalability - Hadoop is highly scalable, meaning it can easily accommodate growing amounts of data by adding more nodes to the cluster.
- 3) Fault tolerance - Hadoop is fault-tolerance, meaning it can run on ~~linear~~ function even if some of the nodes in the cluster fail. data replication.
- 4) Cost - Effectiveness - Hadoop is built on commodity hardware, meaning it can run on inexpensive, off-the-shelf hardware components. This makes it a cost-effective solution for storing.
- 5) Parallel Processing - Hadoop leverages the map-Reduce programming model for parallel processing of data. This allows it to process data in parallel across multiple nodes in the cluster.
- 6) Flexibility - Hadoop is flexible and can handle various types of data, including structured, semi-structured, and unstructured data. It can also

EVERYTHING HAS TO KEEP MOVING FORWARD IN 'ENDEAVOUR.'
OTHERWISE, IT WILL STAGNATE. - SHAUN EVANS

1) Name node → This is like the central manager of the hadoop ~~billing~~ ^{file} system (HDFS). It keeps track of where all the files are stored in the cluster and manages access to them.

2) Data node → These are the workers of hadoop. They actually store the actual data in the hadoop ^{file} system. Each data node manages the storage of data on the machine it runs on.

3) Resource manager → In a hadoop ~~cluster~~ cluster, Resource Manager is responsible for managing the computing resources available in the cluster.

4) Node manager - Node managers are ~~respon~~ responsible for managing the computing resource (CPU and memory) of individual machines in the cluster.

They report back to ~~the~~ the Resource Manager about available resource and execute tasks assigned to them.

Q what is hadoop?

→ Hadoop is like a popular open-source framework used for distributed storage and processing of large datasets across cluster of computers.

It is design to handle massive amounts of data in a cost-effective and scalable manner.

⇒ Distributed storage →

⇒ MapReduce → 1) Map phase 2) Reduce phase

⇒ Fault Tolerance →

⇒ Scalability →

Q what are hadoop "daemons"?

⇒ In Hadoop, "daemons" are special ~~programs~~ programs or process that run in the background and handle various tasks within the hadoop ecosystem.

Q History of hadoop.

→ The history of hadoop begins in the early ~~2000~~ 2000s at yahoo!, where engineers Doug cutting and mike Cafarella were working on a project to index the web.

In 2006, Doug cutting created an open-source implementation of google's Mapreduce programming model and ~~distributed~~ distributed file system called 'Hadoop'.

→ Named after cutting's son's toy elephant.

→ It became an apache software foundation project in 2008.