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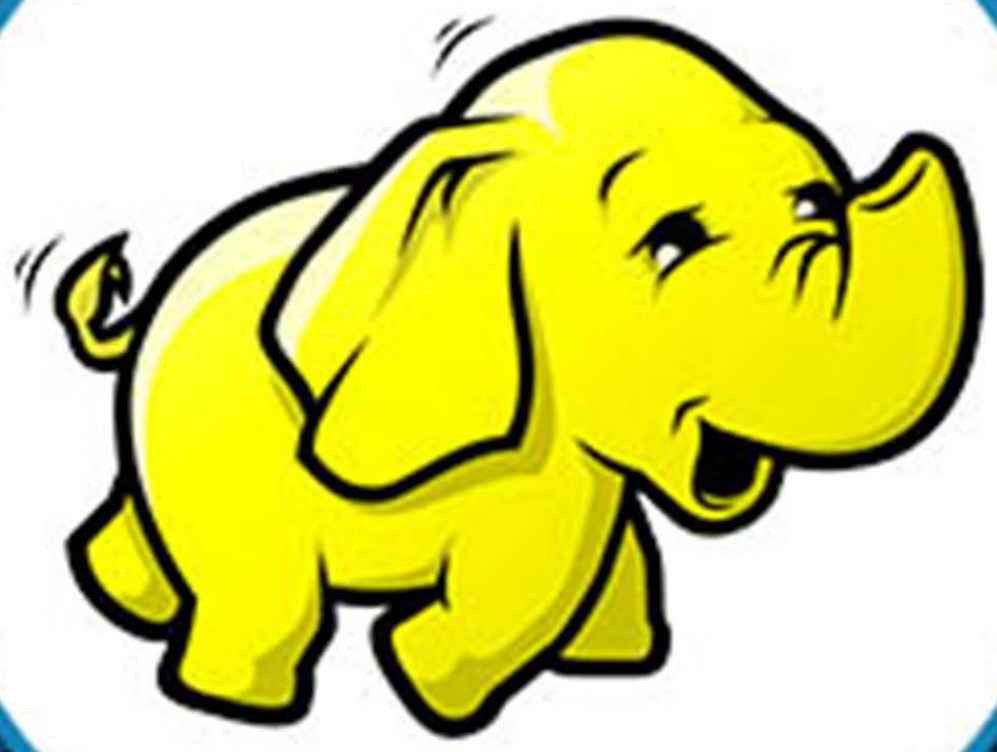

# Core Java + Hadoop

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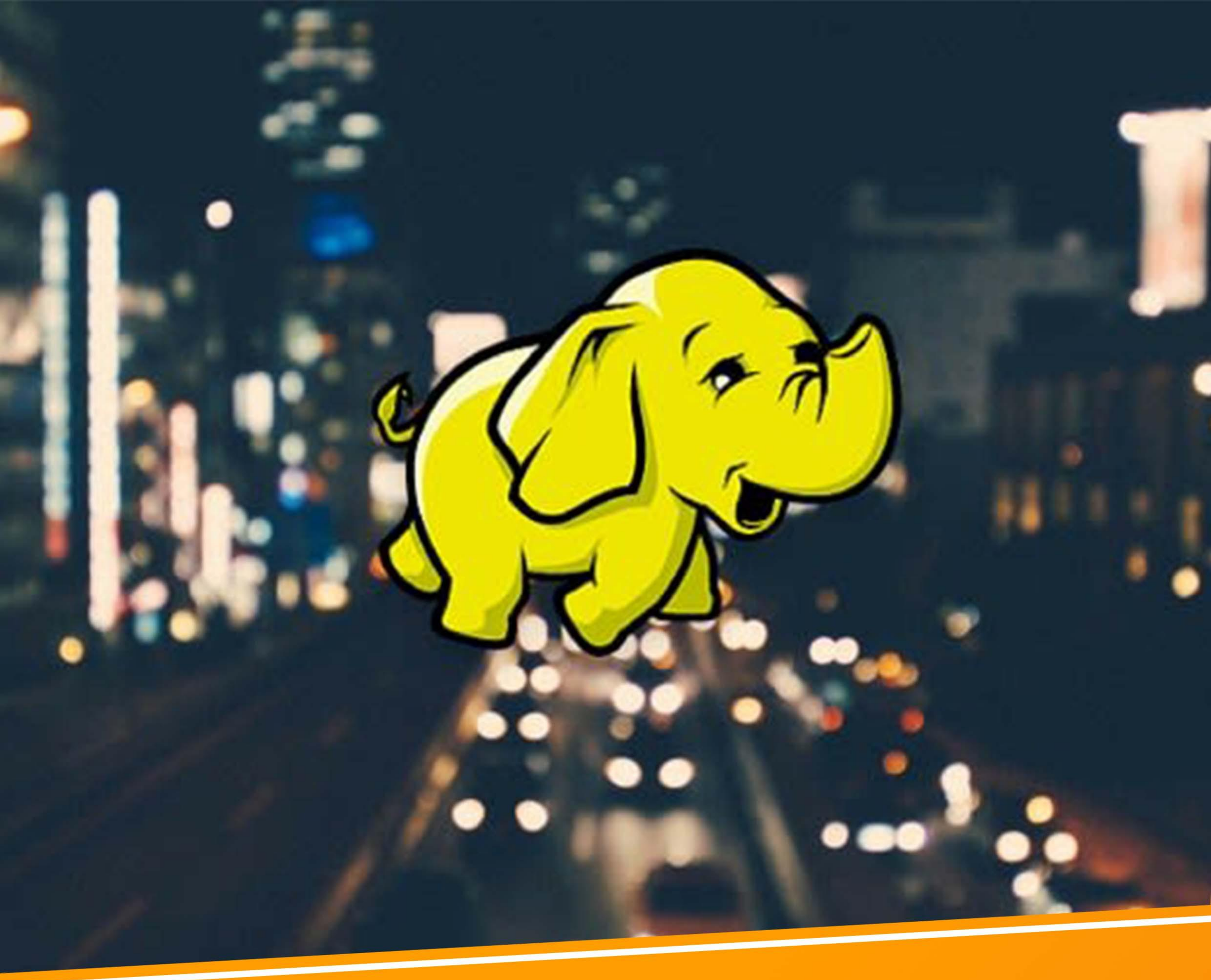

# About Course

Hadoop is an Apache open source framework written in java that allows distributed processing of large datasets across clusters of computers using simple programming models. The Hadoop framework application works in an environment that provides distributed storage and computation across clusters of computers.

# CORE JAVA + HADOOP

## CURRICULUM

## ① INTRODUCTION TO JAVA

Understanding Requirement: Why Java
Why Java is important to the Internet
JAVA on LINUX Platform

## ② JAVA CLASSES AND OOP IMPLEMENTATION

Class Fundamentals
Command Line Arguments
Learning static initializer
Declaration on of Objects
Instance Variable Hiding
Overloading and Overriding of Methods
Understanding of Access Controls
Private, Public and Protected
Learning Nested and Inner Classes
Dynamic method Dispatching
Using Abstract Classes
Using final to prevent Overriding & Inheritance
Garbage Collection

## 3 PACKAGES AND INTERFACES

- Defining a Package
- Understanding CLASSPATH
- Access Protection
- Importing Packages
- Defining and implementing an Interface
- Abstract classes Vs Interfaces
- Genrics
- Annotations

## 4 EXCEPTION HANDLING

- Fundamentals of exception on handling
- Types of exceptions
- Learning exception handlers
- Try and catch
- Multiple catch clauses
- Nested try statements
- Throw, throws and finally

## 5 COLLECTION API

- Collection Overview
- The Collection Interfaces (List, Set, SortedSet)
- The Collection Classes (ArrayList, LinkedList, HashSet, TreeSet)

Accessing a Collection via an Iterator
Working with Maps

## 6 JDBC

Introduction to JDBC
JDBC Drivers
Statements
Metadata
Scrollable & Updatable ResultSet
Batch Updates

## 7 Hadoop

## 8 Understanding Big Data & Hadoop

Analyze Limitation & Solutions of Existing Data Analytics Architecture
What is Hadoop 2.x and its features
What is Hadoop YARN
Understanding Rack Awareness and Load Balancing Concepts

## 9 Hadoop Architecture And HDFS

What is Master & Slave Architecture of Hadoop
Distributed Computing and Parallel Processing

- Replication Factors and Heart Beat in Architecture
- Implement Basic Hadoop Commands on Terminal

## 10 Hadoop MapReduce Framework

- Analyze Different use cases Where MapReduce is Used
- Differentiate Between Traditional way and MapReduce way
- Map Phase and Reduce Phase
- Understand execution Flow of YARN MapReduce Application
- Run A MapReduce Program(Word-Count)

## 11 Introduction To Hadoop Eco-System

- Hive
- Sqoop

## 12 MINI PROJECT

- Covering All The Concepts



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