



# **Mid-Term Exam Review**

# Mid-Term Exam Details

- ◊ Exam date : 8 Dec 2022
- ◊ Exam time : 10 am – 12:30 pm
- ◊ Total points - 40
- ◊ Total questions – 4
- ◊ 10 MCQs
- ◊ Closed book/Closed notes

# Lesson-wise Points Distribution

- o MapReduce – 15 points
- o Apache Pig – 8 points
- o Apache Avro – 10 points
- o HDFS & YARN – 7 points

# Topics Covered

## o Lesson 2

- o Daemons in Hadoop 1 and 2 and their jobs
  - o NN, SNN, DN, JT, TT in Hadoop 1
  - o NN, SNN, DN, RM, NM, AM, Containers
- o Data flow basics
- o HDFS Federation
- o NameNode HA
- o MRv1 and MRv2 differences

# Topics Covered

## ◌ Lesson 3 and 4 - MapReduce

- ◌ Signature of Map & Reduce methods
- ◌ Combiner, In-mapper combiner & Partitioner
- ◌ Shuffle/Sort phase
- ◌ How to write MR algorithm to solve a given problem

# Topics Covered

## o Lesson 5 - Avro

- o How to write Schema file and how to create Generic record
- o Built-in sorting
- o How to use AvroJob, AvroKey and AvroValue in code

# Topics Covered

## o Lesson 6 - Apache Pig

### o Pig Latin Operators and Functions

o LOAD, DUMP, STORE, GROUP BY, GROUP ALL, FOREACH GENERATE, FILTER BY, ORDER BY, JOIN, DISTINCT, COUNT

### o Case Sensitivity

# Slides to Read

## o Lesson 2:

o 4 - 21

o 26 - 58

## o Lesson 3:

o 10 - 25

## o Lesson 4:

o 4 - 45

## o Lesson 5:

o 12 - 37

## o Lesson 6:

o 11 - 61



# Exam Rules and Regulations

- o All materials including backpacks, cell phones, class notes, textbooks and past exams must be left at the front of the class. You will not have access to those items during the exam. Failure to do so will result in an NC grade.
- o You must bring your own pens, pencils, erasers & sharpeners.
- o Any form of communication with other students is not allowed during the exam. Every verbal and non-verbal form of communication with another student will result in the loss of one letter grade.
- o In order to get any form of assistance from the proctor, you must raise your hand. No verbal communication is allowed until the proctor gives explicit permission.
- o Once you leave the exam room, there is no reentry.
- o You can request for a postponement of the exam if you are sick. In that case, you must produce a letter from a qualified physician.