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& Commerce

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M S Ramaiah College of Arts, Science and Commerce
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Ref: MSRCASC/CSc/20-21/015

Date: 26/5/2021

CIRCULAR

Department of Computer Science

The department is conducting a skill enhancement webinar on "Hadoop – Big Data" for all the 2nd year students of BCA on 31st May 2021 in virtual mode. The link will be shared to you all. Registration is free and students are requested to login 10 minutes earlier to the scheduled time. The program starts at 1.00 pm. The resource person is Mr Krity Nandan from J P Morgan Chase and CO who is an alumnus.

d Of The Department Of Computer Science.
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Webinar 2021

Skill Enhancement Webinar on "Hadoop- Big Data"

Organized by
Department of Computer Science
Ramaiah College of Arts, Science and Commerce, Bengaluru-560054

31st May 2021

Patrons

Dr. M. R. Jayaram	Chairman-GEF
Sri. M.R. Janakiram	Director- GEF
Sri. M. R. Kodandaram	Director- GEF
Sri. B. S. Ramaprasad	Chief Executive- GEF (Engg. & GS)
Sri. G Ramachandra	Chief of Finance- GEF(Engg. & GS)
Dr A Nagarathna	Principal - MSRCASC

Speaker

Mr. Krity Nandan Chanda

Project Manager,
J P Morgan Chase & CO

Topic:

"Hadoop- Big Data"

Time : 1.00 PM

Organizing Committee Members

Dr. Prathiba V Kalburgi
Assistant Professor & Head, CS
Dr. A Malathi Palani
Assistant Professor
Mrs. Haripriya G S
Assistant Professor
Mrs. Suma C
Assistant Professor
Mrs. Srividya R
Assistant Professor
Mrs. Dhanasree Vaishali
Assistant Professor

Event Coordinator : Mrs Suma C

Link to Join:

Please find below Google meet details for the Session:

https://meet.google.com/bqu-qkbc-bvr

Department of Computer Science

Report On Skill Enhancement Webinar

Title: Hadoop – Big Data
Date: 31/5/2021
Participants: BCA students
Number of Students: 33
Event Co-Ordinators: Mrs Suma C

Objectives:

The main objective of big data can obtain, store, transform and analyse large amounts of data to solve specific problems. A data driven approach to understanding a business. One can build predictive data models and detect future trends. Devices of the future will be built entirely on big data

He explained two scenarios:

- Any global bank today has more than 100 Million customers doing billions of transactions every month.

- Social network websites or E-Commerce websites track customer behavior on the website and then serve relevant information / product.

He explained Traditional systems find it difficult to cope up with this scale at required pace in cost-efficient manner. This is where Big data platforms come to help.

He described Hadoop comes handy when we deal with enormous data. It may not make the process faster, but gives us the capability to use parallel processing capability to handle big data. He defined Hadoop is a complete eco-system of open source projects that provide us the framework to deal with big data

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3. In case of long query, imagine an error happens on the last step. You will waste so much time making these iterations.
4. Difficulty in program query building

He also described how Hadoop solves all of these issues:

1. **High capital investment in procuring a server with high processing capacity:** Hadoop clusters work on normal commodity hardware and keep multiple copies to ensure reliability of data. A maximum of 4500 machines can be connected together using Hadoop.

2. **Enormous time taken:** The process is broken down into pieces and executed in parallel, hence saving time. A maximum of 25 Petabyte (1 PB = 1000 TB) data can be processed using Hadoop.

3. **In case of long query, imagine an error happens on the last step. You will waste so much time making these iterations:** Hadoop builds back up data-sets at every level. It also executes query on duplicate datasets to avoid process loss in case of individual failure. These steps make Hadoop processing more precise and accurate.

4. **Difficulty in program query building:** Queries in Hadoop are as simple as coding in any language. You just need to change the way of thinking around building a query to enable parallel processing.

He concluded with an increase in the penetration of internet and the usage of the internet, the data captured by Google increased exponentially year on year. Google implemented a programming model called MapReduce, which could process this 20000 PB per day. Google ran these MapReduce operations on a special file system called Google File System (GFS). Sadly, GFS is not an open source. Doug cutting and Yahoo! reverse engineered the model GFS and built a parallel Hadoop Distributed File System (HDFS). The software or framework that supports HDFS and MapReduce is known as Hadoop. Hadoop is an open source and distributed by Apache.

He also explained when not to use this technology.

1. Low Latency data access: Quick access to small parts of data

2. Multiple data modification: Hadoop is a better fit only if we are primarily concerned about reading data and not writing data.

3. Lots of small files: Hadoop is a better fit in scenarios, where we have few but large files.
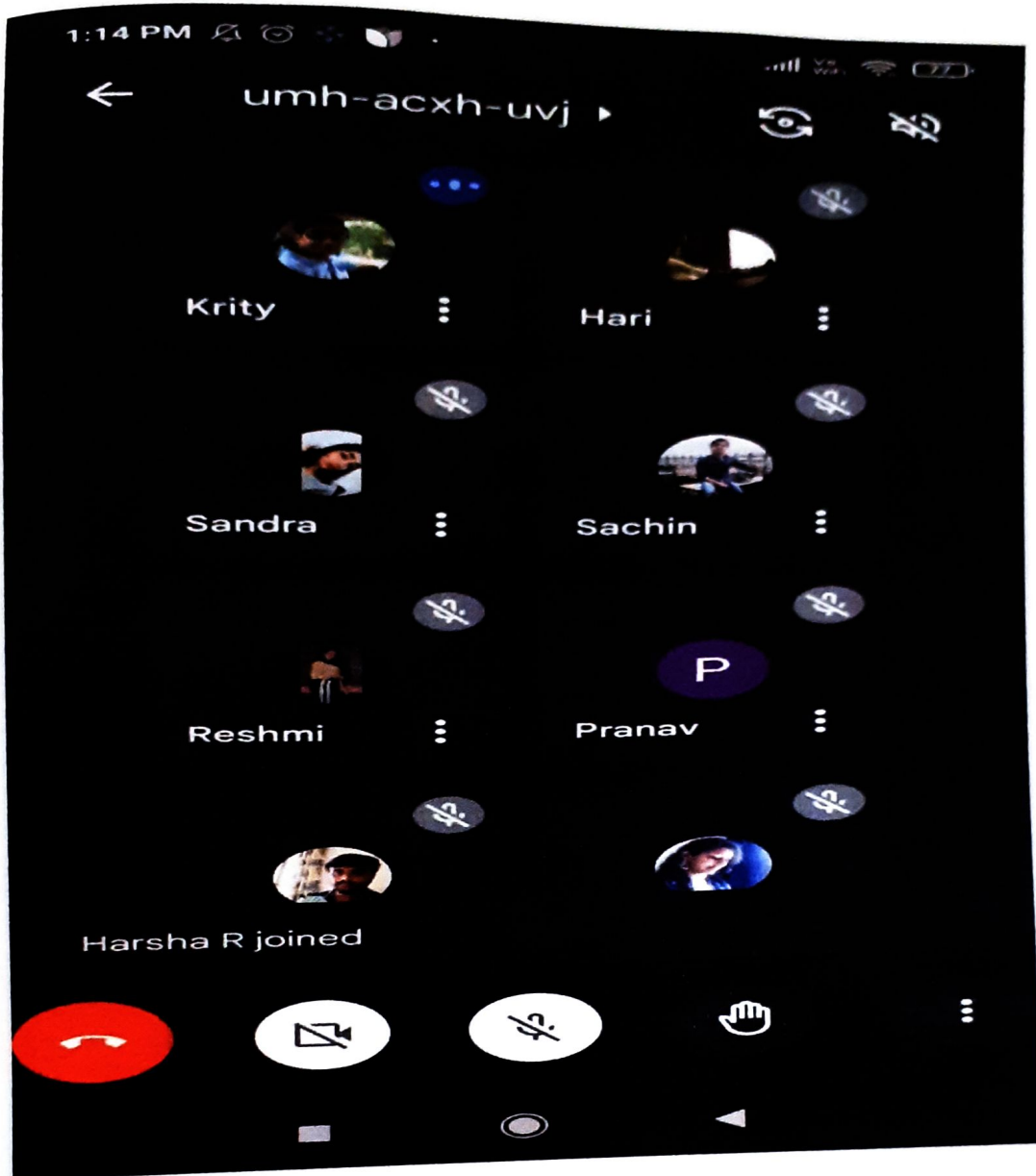
Outcomes:

- Understand Big Data and Hadoop ecosystem
- Work with Hadoop Distributed File System
- Write MapReduce programs and implementing HBase

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Department of BCA
Skill Enhancement Program - Hadoop Big Data 31-05-2021

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