## **Practical Plan**

**B.E.** (Comp A) (Semester VII)

**Subject: Big Data Analysis (Practical)** 

Teacher-in-charge: Prof. Ankita Amburle

Subject code: CSL7012

Academic Term: July - October 2022

**Course Outcomes:** 

*Upon completion of this course students will be able to:* 

CSL7012.1 To interpret business models and scientific computing paradigms, and apply software tools for big data analytics.

CSL7012.2 To implement algorithms that uses Map Reduce to apply on structured and unstructured data

CSL7012.3 To perform hands-on NoSql databases such as Cassandra, HadoopHbase, MongoDB, etc.

CSL7012.4 To implement various data streams algorithms.

CSL7012.5 To develop and analyze the social network graphs with data visualization techniques.

### Relationship of course outcomes with program outcomes:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO 11	PO 12	PSO1	PSO2
CSL7012.1	2	2			2								1	
CSL7012.2	2	1			1									
CSL7012.3	2				1									
CSL7012.4	2													
CSL7012.5	2	2	3	1	1	1		1	3	3		1		

#### **CO** Assessment Tools:

Course	Indirect Method (20%)						
Outcomes	Attendance	Lab Performance	Journal Assessment	End Sem Exam	Course exit survey		
CSL7012.1	10%	20%	20%	50%	100%		
CSL7012.2	10%	20%	20%	50%	100%		
CSL7012.3	10%	20%	20%	50%	100%		
CSL7012.4	10%	20%	20%	50%	100%		
CSL7012.5	10%	20%	20%	50%	100%		

CO calculation= (0.8 \*Direct method + 0.2\*Indirect method)

# **Rubrics for assessing Course Outcome with each assessment tool:**

## Laboratory:

Rubrics	Exceed Expectation (EE)	Meet Expectation (ME)	Below Expectation (BE)
On time submission Or completion (2)	Early or on time (2)	One session late (1)	More than one session late (0)
Preparedness (2)	Awareness about experiment to be performed, Knows the basic theory related to the experiment very well. (2)	Managed to explain the theory related to the experiment. (1)	Not aware of the theory to the point. (0)
Skill (4)	Structured and optimum performance (4)	Few steps are not appropriate (2)	Just managed (1)
Output (2)	Got proper output in the Lab turn (2)	Got partial output (1)	Failed to get the output (0)

# **Practical Session Plan**

CLAS				ngineering, Semes	ster VII		
	mic Term		July – October 2	July – October 2022			
Subjec	t		Big Data Analysi	is (CSL7012)			
E	valuation System			Hours	Marks		
		]	Practical Examination				
			Oral Examination		25		
			Term work		25		
			Total		50		
	Time Table	Day	Batch	Ti	me		
		Monday	С	8.45-10	0.45am		
		Monday	D	11.00am	-1.00 pm		
		Thursday	Thursday B		-1.00 pm		
		Friday	Friday A		-1.00 pm		
Title	of Experiments	<u>.</u>					
Sr.	J III	Title	,		Attained COs		
1	Study and Installation of Hadoop.				CSL7012.1		
2	Hadoop HDFS Practical.				CSL7012.1		
3	Write a program t	o implement Word Cou	nt using Map Reduce.		CSL7012.2		
4		-	sing Map Reduce/Pyspark		CSL7012.2		
5	1 0	to insert, search, update, NoSQL Database.	delete and aggregate dat	a	CSL7012.3		
6		d to perform insert, cre	eate, update and delete C	Cassandra	CSL7012.3		
7			ltiplication algorithm usin	ng Map	CSL7012.2		
8	Data stream Algor programminglang	rithm: Implement DGIM uage.	Algorithm using any		CSL7012.4		
9			gorithm using any progran	nming	CSL7012.4		
10		o perform <b>Twitter data/</b>	Healthcare data analysis	using R	CSL7012.5		
11	Write a program i	n python to implement a ) using Map Reduce.	nny one Link Mining algor	rithm	CSL7012.5		
12			pplication using standard	d dataset			
			- <del>-</del>	l .			
Newly	added experiments						
1		nents are new					
	1 *						
Pract	tical Session Pl	an					
Bai	tch	Dates	Dates				
		Duies		Rei	narks		

	allation of Hadoop.	10/00/2007	
A	12/08/2022	12/08/2022	
В	11/8/2022	11/8/2022	
С	10/8/2022	10/8/2022	
D	10/8/2022	10/8/2022	
E <b>xperiment No</b> Hadoop HDFS			
A	26/8/2022	26/8/2022	
В	18/8/2022	18/8/2022	
C	22/8/2022	22/8/2022	
D	22/8/2022	22/8/2022	
E <b>xperiment No</b> Trite a program	to implement <b>Word Count</b>	using Map Reduce.	
A	26/8/2022	26/8/2022	
В	18/8/2022	18/8/2022	
С	22/8/2022	22/8/2022	
D	22/8/2022	22/8/2022	
Experiment No		M D 1 /D 1	
	to sort a list of numbers usin 2/09/2022	02/09/2022	
A B	1/09/2022	02/09/2022	
С	29/08/2022	29/08/2022	
	29/UO/2U22	2 <b>7</b> /U0/2U22	
D	29/08/2022	29/08/2022	
D Experiment No	to insert, search, update,	29/08/2022 delete and aggregate data us	ing <b>MongoDB</b> NoSQL Database.
D Experiment Notes Trite a program A	to insert, search, update, 9/09/2022	29/08/2022  delete and aggregate data us 09/09/2022	ing <b>MongoDB</b> NoSQL Database.
D Experiment Notes a program A B	9/09/2022 8/09/2022	29/08/2022 delete and aggregate data us 09/09/2022 8/09/2022	ing <b>MongoDB</b> NoSQL Database.
D Experiment Novarite a program A B C	2. 5 to insert, search, update, 9/09/2022 8/09/2022 5/09/2022	29/08/2022  delete and aggregate data us 09/09/2022  8/09/2022  5/09/2022	ing <b>MongoDB</b> NoSQL Database.
D Experiment Note That I was a program A B C D	9/09/2022 8/09/2022 5/09/2022 5/09/2022	29/08/2022 delete and aggregate data us 09/09/2022 8/09/2022	ing <b>MongoDB</b> NoSQL Database.
D Experiment Note That I have a program A B C D Experiment Note The I have th	9.5 to insert, search, update, 9/09/2022 8/09/2022 5/09/2022 5/09/2022	29/08/2022  delete and aggregate data us 09/09/2022 8/09/2022 5/09/2022 5/09/2022	
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D Experiment Note That I a program A B C D Experiment Note That I a command A	9.5 to insert, search, update, 9/09/2022 8/09/2022 5/09/2022 5/09/2022 6.6 and to perform insert, creat 9/09/2022	29/08/2022  delete and aggregate data us 09/09/2022 8/09/2022 5/09/2022 5/09/2022 e, update and delete Cassandr 09/09/2022	
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D Experiment Note That I a program A B C D Experiment Note That I a command A B C D Trite a command A B C D D	9.5 to insert, search, update, 9/09/2022 8/09/2022 5/09/2022 5/09/2022 8/09/2022 8/09/2022 5/09/2022 5/09/2022	29/08/2022  delete and aggregate data us 09/09/2022 8/09/2022 5/09/2022 5/09/2022 e, update and delete Cassandr 09/09/2022 8/09/2022	
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D Experiment Note that I have a program A B C D Experiment Note that I have a command A B C D Experiment Note that I have a command A B C D Experiment Note that I have a program A Trite a program	2. 5 to insert, search, update, 9/09/2022 8/09/2022 5/09/2022 2. 6 nd to perform insert, create 9/09/2022 8/09/2022 5/09/2022 5/09/2022 5/09/2022 2. 7 to implement <b>Matrix Multi</b>	29/08/2022  delete and aggregate data us  09/09/2022  8/09/2022  5/09/2022  e, update and delete Cassandr  09/09/2022  8/09/2022  5/09/2022  5/09/2022  plication algorithm using Map I	a (NoSQL) database.
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D Experiment Note that the second sec	2. 5 to insert, search, update, 9/09/2022 8/09/2022 5/09/2022 5/09/2022 2. 6 nd to perform insert, creat 9/09/2022 8/09/2022 5/09/2022 5/09/2022 2. 7 to implement Matrix Multi 16/09/2022 15/09/2022 12/09/2022 12/09/2022	29/08/2022  delete and aggregate data us 09/09/2022 8/09/2022 5/09/2022 e, update and delete Cassandr 09/09/2022 8/09/2022 5/09/2022 5/09/2022 5/09/2022 plication algorithm using Map I 16/09/2022 15/09/2022	a (NoSQL) database.
D Experiment Note A B C D Experiment Note A B C D Experiment Note B C D	2. 5 to insert, search, update, 9/09/2022 8/09/2022 5/09/2022 5/09/2022 2. 6 nd to perform insert, creat 9/09/2022 8/09/2022 5/09/2022 5/09/2022 2. 7 to implement Matrix Multi 16/09/2022 15/09/2022 12/09/2022 12/09/2022	29/08/2022  delete and aggregate data us  09/09/2022  8/09/2022  5/09/2022  5/09/2022  e, update and delete Cassandr  09/09/2022  8/09/2022  5/09/2022  5/09/2022  plication algorithm using Map F  16/09/2022  15/09/2022  12/09/2022	a (NoSQL) database.
D Experiment Note A B C D Experiment Note A B C D Experiment Note B C D	2. 5 to insert, search, update, 9/09/2022 8/09/2022 5/09/2022 5/09/2022 2. 6 nd to perform insert, creat 9/09/2022 8/09/2022 5/09/2022 5/09/2022 2. 7 to implement Matrix Multi 16/09/2022 15/09/2022 12/09/2022 12/09/2022	29/08/2022  delete and aggregate data us  09/09/2022  8/09/2022  5/09/2022  5/09/2022  e, update and delete Cassandr  09/09/2022  8/09/2022  5/09/2022  5/09/2022  plication algorithm using Map F  16/09/2022  15/09/2022  12/09/2022	a (NoSQL) database.
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Experiment Note A B C D Experiment Note B C D B Experiment Note B Experi	2. 5 to insert, search, update, 9/09/2022 8/09/2022 5/09/2022 5/09/2022 2. 6 nd to perform insert, creat 9/09/2022 8/09/2022 5/09/2022 5/09/2022 5/09/2022 15/09/2022 15/09/2022 12/09/2022 12/09/2022 2. 8 Drithm: Implement DGIM A 23/09/2022	29/08/2022  delete and aggregate data us 09/09/2022 8/09/2022 5/09/2022 e, update and delete Cassandr 09/09/2022 8/09/2022 5/09/2022 5/09/2022 5/09/2022 16/09/2022 12/09/2022 12/09/2022 12/09/2022 12/09/2022 12/09/2022	a (NoSQL) database.

Experiment N			
Write a progran	n to implement k-Means algor	rithm using any programming	language.
A	30/09/2022	30/09/2022	
В	29/09/2022	29/09/2022	
С	26/09/2022	26/09/2022	
D	26/09/2022	26/09/2022	
Experiment N	o.10		
Write a program	n to perform <b>Twitter data/He</b>	althcare data analysis using l	R language.
A	14/10/2022	14/10/2022	
В	13/10/2022	13/10/2022	
С	13/10/2022	13/10/2022	
D	13/10/2022	13/10/2022	
Experiment N	o.11		
Write a progran	n in python to implement any	one Link Mining algorithm (	PageRank/HITS) using Map Reduce.
A	21/10/2022	21/10/2022	
В	20/10/2022	20/10/2022	
С	17/10/2022	17/10/2022	
D	17/10/2022	17/10/2022	

Submitted By	Approved By	
Prof. Ankita Amburle	i) Dr. Sujata Deshmukh Sign:	
Sign:	ii) Dr. B. S. Daga Sign:	
	iii) Prof. Merly Thomas Sign:	
	iv) Prof. Monica Khanore Sign:	
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	v) Prof. Roshni Padate Sign:	
	vi) Prof. Kalpana Deorukhkar Sign:	
Date of Submission:	Date of Approval:	