Name of the student:		**Roll No.**	
Practical Number:	4	**Date of Practical:**	
Relevant CO's	**At the end of the course students will be able to use tools like hadoop and NoSQL to solve big data related problems.**		
Sign here to indicate that you have read all the relevant material provided before attempting this practical			**Sign:**

Practical grading using Rubrics

Indicator	**Very Poor**	**Poor**	**Average**	**Good**	**Excellent**
Timeline (2)	More than a session late (0)	NA	NA	NA	Early or on time (2)
Code design (2)	N/A	Very poor code design with no comments and indentation(0.5)	Poor code design with very comments and indentation (1)	Design with good coding standards (1.5)	Accurate design with better coding satndards (2)
Performance (4)	Unable to perform the experiment (0)	Able to partially perform the experiment (1)	Able to perform the experiment for certain use cases (2)	Able to perform the experiment considering most of the use cases (3)	Able to perform the experiment considering all use cases (4)
Postlab (2)	No Execution(0)	N/A	Partially Executed (1)	N/A	Fully Executed (2)

Total Marks (10)	**Sign of instructor with date**

Practical

Course title: Big Data Analytics
Course term: 2019-2020
Instructor name: Saurabh Kulkarni

Problem Statement: Perform matrix multiplication using one step map-reduce

Theory:Explain the concept of matrix multiplication using one step map-reduce with the help of an example

Code:

code for mapper:

Code for Reducer:

Code for Driver Class:

PostLab:

1. Generate a 100x100 matrix in the format that above map-reduce code understands using suitable programming language
2. Compute execution time for a 100x100 matrix using suitable APIs

Code for postlab question