

# National University of Computer and Emerging Sciences, Lahore Campus



Course: BIGDATA  
Program: MS(CS)  
Duration: 15 Minutes  
Paper Date: 22-2-2018

Course Code: CS  
Semester: Spring 2018  
Total Marks:

NAME:  
ROLLNO:

Exam: Quiz 1

Instruction/Notes: Solve the exam in the space provided.

## Question 1:

1. [1 marks] What the difference between the job tracker and name node?

2. [1 mark] Why and how job tracker is replaced in Map Reduce 2

3. [8 marks] Develop an efficient Map reduce algorithm to solve the following problem.

**You are given a log of sensor errors that are generated for a particular date. Your task is to find the errors that have occurred on three or more different sensors, also display the name of the sensor on which that error occurred.**

Input file contains following information: SensorID, Date, ID's of the errors that occurred on given date

Example

```
S1 12-02-09 E1, E2, E3
S2 1-01-12 E2, E3, E9, E10
S1 1-02-11 E1
S4 5-01-12 E1, E2, E3, E10
S7 17-11-12 E2
...
...
```

Output Should be  
E2 S1, S2, S4, S5

