

Assume, that a file `measurement.txt` contains the speed measurements of the passing cars.

<u>rego#</u>	<u>date</u>	<u>speed</u>
PKR856	12-DEC-2018	120
UPS234	17-JAN-2019	190
PKR856	12-FEB-2018	80
PKR856	01-JAN-2019	60
UPS234	21-OCT-2020	200
UPS234	22-OCT-2020	160
...	...	

Assume, that a file `car.txt` contains the technical descriptions of the cars.

<u>rego#</u>	<u>max speed</u>	<u>fuel</u>
PKR856	180	10
UPS234	200	15
...	...	

Assume that both files have been loaded to HDFS.

An objective is to you implement in Java a MapReduce application that finds the cars, that reached its maximum speed at the speed checkpoint.

Implementation of Map phase

A file `measurement.txt` is converted into `<key, value>` pairs where `key = rego# concatenated with speed` and `value = date`.

A file `car.txt` is converted into `<key, value>` pairs where `key = rego# concatenated with max speed` and `value = fuel`.

Implementation of Reduce phase

Reduce phase operates on two sets of `<key, value>` pairs where the keys of pairs coming from a file `measurement.txt` is compared with the keys of pairs coming from a file `car.txt`. If the keys are the same then `rego#` part of a key is written to output.