

# 1 Map Reduce

## Definition 1.1 (Key Value Pairs)

MapReduce is based around Key-Value pairs.

*Example.*

If the input is a text file:

**Key** - Position of a line (Byte # not line # )

**Value** - Text of a line

*Example.*

map:  $(k_1, v_1) \rightarrow \text{List } [(k_2, v_2)]$  reduce:  $(k_2, \text{List}[v_2]) \rightarrow \text{List}[(k_3, v_3)]$