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// FIRST PART DESCRIPTION

Mutual Friends Class:

-> Map extends with Mapper function which is used to represents long value text, data, output key & value that Mapper will produce.

-> Reduce extends with reducer function which is used intermediate results and produces the final output.

Map Class:

-> Map Class fucntion which I mainly used for the processing each line of input data.

-> It takes keys, values and Context object as parameters.

-> splits the input line into two parts and extracts the friend1 and a list of friend 2 from the input line.

-> Finally each pair of friends it emits a key-value pair where the key is a combination of friend 1 & 2, value is the list of friend 2s.

Reduce Class:

-> Main use of reduce method it processes the intermediate key value pairs generated by the mapper.

-> By reduce method it maintains a Hashmap to keep track of friends encountered in the input data.

-> For each friend in the list, it checks if the friend is already in the map. If yes, it appends the friend to a StringBuilder (sbuilder). If not, it adds the friend to the map.

-> After processing the all values, it checks if sbuilder is not empty. If it's not empty, it removes the trailing comma and sets the result to be a Text object containing mutual friends. Finally, it writes the result to the output.

I used jar file named mf.jar