

Pop Quiz

From `input`, a sequence of objects of type

```
struct PurchaseEvent { string user; string product; int purchase_price };
```

a FlumeJava pipeline computes

- Total money spent by each user (i.e. output is a set of `struct{ string user; int sum}`)
 - Total money spent on each product (i.e. output is a set of `struct{ string product; int sum}`)
1. How many MapReduce (MSCR) operations will be present in the compiled pipeline?
 2. Specify the mapper and reducer functions (pseudocode ok) in each of the MSCR operations.
(feel free to refer to the FlumeJava paper and the MapReduce paper)