Write a Java program which does following:

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Takes an expression to be evaluated and 6 input arrays. Returns sum of evaluated expression

based on grouping.

void evalExpr (string expr, double [] arr1, double [] arr2, double [] arr3, double [] arr4, string [] region, string [] country)

- expr string is of the form: "a1\*a2 + a3/a4" (any combination of variables a1, a2, a3, a4. Operators are +, -, \*, /)

- Arrays arr1, ..., arr4 each contain doubles

- Array region contains names of continents

- Array country contains names of countries

- All arrays have same number of elements (10 million or more)

expr needs to be applied to elements of arrays (arr1, arr2, arr3, arr4). Then result needs

to be grouped (summed up) based on region and country.

Example: If the expression is "a1 + a2 + a3 + a4" and the 6 arrays are:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| arr1 | arr2 | arr3 | arr4 | region | country |
| 1.0 | 2.0 | 3.0 | 4.0 | Asia | India |
| 5.0 | 6.0 | 7.0 | 8.0 | Europe | France |
| 9.0 | 10.0 | 11.0 | 12.0 | Asia | India |
| 13.0 | 14.0 | 15.0 | 16.0 | Europe | Germany |
| 17.0 | 18.0 | 19.0 | 20.0 | Europe | France |

Output of the program would be

Asia India 52.0

Europe France 100.0

Europe Germany 58.0