(Click here for PDF version.)

Assignment

The CSV file **exportdata.csv** has information on the export products of countries; you can download a .zip folder with this and other export data files here. In particular it has three column headers labeled **Country**, **Exports**, and **Value (dollars)**. The **Country** column represents a country from the world, the **Exports** column is a list of export items for a country, and the **Value (dollars)** column is the dollar amount in millions of their exports in the format of a dollar sign, followed by an integer number with a comma separator every three digits from the right. An example of such a value might be "$400,000,000".

The CSV file **exports_small.csv** is a smaller version of the file above with the same columns that you may find helpful in testing your program. We show a picture of it here.

	A	B	C
1	Country	Exports	Value (dollars)
2	Germany	motor vehicles, machinery, chemicals	$1,547,000,000,000
3	Macedonia	tobacco, textiles	$3,421,000,000
4	Madagascar	coffee, vanilla, shellfish	$864,800,000
5	Malawi	tea, sugar, cotton, coffee	$1,332,000,000
6	Malaysia	semiconductors, wood	$231,300,000,000
7	Namibia	diamonds, copper, gold, zinc, lead	$4,597,000,000
8	Peru	copper, gold, lead, zinc, tin, coffee	$36,430,000,000
9	Rwanda	coffee, tea, hides, tin ore	$720,000,000
10	South Africa	gold, diamonds, platinum	$97,900,000,000
11	United States	corn, computers, automobiles, medicines	$1,610,000,000,000
12			

Write the following program. Be sure to see the sample program in this lesson's videos.

1. Write a method named **tester** that will create your CSVParser and call each of the methods below in parts 2, 3, 4, and 5. You would start your code with:

```
FileResource fr = new FileResource();
CSVParser parser = fr.getCSVParser();
```

Each time you want to use the parser with another method, you will need to reset the parser by calling fr.getCSVParser() again to get a new parser.

```
parser = fr.getCSVParser();
```

2. Write a method named **countryInfo** that has two parameters, **parser** is a **CSVParser** and **country** is a String. This method returns a string of information about the country or returns "NOT FOUND" if there is no information about the country. The format of the string returned is the country, followed by ": ", followed by a list of the countries' exports, followed by ": ", followed by the countries export value. For example, using the file **exports_small.csv** and the country Germany, the program returns the string:

```
Germany: motor vehicles, machinery, chemicals: $1,547,000,000,000
```

3. Write a void method named **listExportersTwoProducts** that has three parameters, **parser** is a **CSVParser**, **exportItem1** is a String and **exportItem2** is a String. This method prints the names of all the countries that have both **exportItem1** and **exportItem2** as export items. For example, using the file **exports_small.csv**, this method called with the items "gold" and "diamonds" would print the countries

```
Namibia
South Africa
```

4. Write a method named **numberOfExporters**, which has two parameters, **parser** is a **CSVParser**, and **exportItem** is a String. This method returns the number of countries that export **exportItem**. For example, using the file **exports_small.csv**, this method called with the item "gold" would return 3.

5. Write a void method named bigExporters that has two parameters, parser is a CSVParser, and amount is a String in the format of a dollar sign, followed by an integer number with a comma separator every three digits from the right. An example of such a string might be "$400,000,000". This method prints the names of countries and their Value amount for all countries whose Value (dollars) string is longer than the amount string. You do not need to parse either string value as an integer, just compare the lengths of the strings. For example, if bigExporters is called with the file exports_small.csv and amount with the string $999,999,999, then this method would print eight countries and their export values shown here:

```
Germany $1,547,000,000,000
Macedonia $3,421,000,000
Malawi $1,332,000,000
Malaysia $231,300,000,000
Namibia $4,597,000,000
Peru $36,430,000,000
South Africa $97,900,000,000
United States $1,610,000,000,000
```

Link to FAQ page for this course: http://www.dukelearntoprogram.com/course2/faq.php

Mark as completed