Code Documentation for FunctionCSV Project

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Overview

The purpose of the FunctionCSV project was to create classes and methods that calculate a function and save the x and y values to a csv file. This project has three classes.

How It Works

Exporter

The Factorial class is responsible for saving the x and y values of the calculated function. It has one method:

- createFile
    - Parameters: ArrayList<Integer> xValues – The ArrayList of x values that were used with the function to create the y values, ArrayList<Double> yValues – The ArrayList of y values that were calculated using the function
    - Functionality – Saves the x and y values to a .csv file
    - Returns: Nothing, but prints statements

Function

The Function class contains methods that calculates the answer to a mathematical function and saves the x and y values. This class has two methods:

- logFunction
    - Parameters: int startingValue – The starting x value (inclusive), int finishingValue – The last x value (inclusive)
    - Functionality – Calculates the value of ln(x) and saves the x and y values in ArrayLists
    - Returns: Nothing
- saveFunction
    - Parameters: ArrayList<Integer> xValues – The ArrayList of x values from the function, ArrayList<Integer> yValues – The ArrayList of y values calculated using the function and the x values
    - Functionality – Creates an Exporter object and saves the x and y values from the function into a .csv file

o   Returns: Nothing
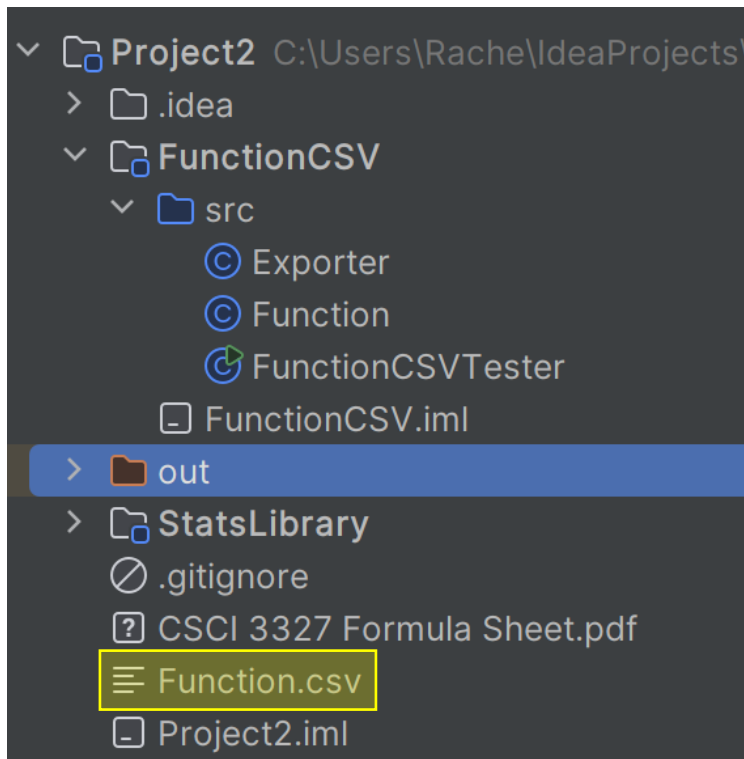
FunctionCSVTester

The FunctionCSVTester class contains the main method and is used to test the methods from the Exporter and Function classes.

Output

The program creates a .csv file called "Function.csv."

Screenshots

Screenshot of the file in the Project2 directory

Some of the contents of the file

```
X,Y,
1,0.0000,
2,0.6931,
3,1.0986,
4,1.3863,
5,1.6094,
6,1.7918,
7,1.9459,
8,2.0794,
9,2.1972,
10,2.3026,
11,2.3979,
12,2.4849,
13,2.5649,
14,2.6391,
15,2.7081,
16,2.7726,
17,2.8332,
18,2.8904,
19,2.9444,
20,2.9957,
21,3.0445,
22,3.0910,
23,3.1355,
24,3.1781,
25,3.2189,
26,3.2581,
27,3.2958,
28,3.3322,
29,3.3673,
30,3.4012,
31,3.4340,
```

Excel Chart of the .csv file