Exercise 4 (10 points) – can be done in pair or individually
- The first lines of all source files must be comments containing names & IDs of all members. Also create file readme.txt containing names & IDs of all members

- Put all files (source, input, readme.txt) in folder Ex4_xxx where xxx = ID of the group representative. That is, your source files must be in package Ex4_xxx and input files must be read from this path

- The group representative zips Ex4_xxx & submits it to Google Classroom. The other members submit only readme.txt. Email submission is not accepted
===

Modify your source code from Exercise 3 to handle exceptions

1. Handle exceptions when opening file (i.e. file not found). Keep asking user for a valid file name

2. Put the code that reads & splits each line of data in try-catch. If a runtime exception occurs, print exception message and line that causes the exception. Then skip that line and read the next one. <u>Take note of which exception occurs in which situation, as this will be asked in Midterm exam</u>

3. Using code from Exercise 3, sort and print Series objects as before. Due to the exceptions in (2), some of them will be excluded from the output

```
American Dad!,      2O,       353,    yes         O instead of zero
The X-Files,        1l,       218,    no          l instead of one
House,               8,       177                 Missing column
Hawaii Five-O,      10,               no          Missing column
Supernatural,       15,       327,    no, 100     Exceeding column
NYPD Blue           12,       261,    no          Missing comma after name
The Blacklist,      10;       218,    no          Semi-colon instead of comma
NCIS,               20,       4.57,   yes         Double instead of int
King of the Hill,  -13,       259,    no          Invalid input
Friends,            10,       236,    zzz         Invalid input
Gunsmoke,           2O,      -635                 Multiple exceptions
```

Note 1 : Some conditions such as invalid values will not cause runtime exception.
          You have to check these conditions by yourself and throw your own exception

```
if (value < 0)  throw new MyException("Invalid " + value);          // your own class
if (value < 0)  throw new ArithmeticException("Invalid " + value);     // Java class
```

Note 2 : Some conditions such as exceeding column will not cause runtime exception and
          have no effect on the calculation or result. You can just ignore it, i.e. let
          the program read only columns 0-3

```
--- exec-maven-plugin:3.0.0:exec (default-cli) @ solutions ---
java.io.FileNotFoundException: src\main\java\Ex4\series_err.txt (The system cannot find the file specified)
New file name =
serie_error
java.io.FileNotFoundException: src\main\java\Ex4\serie_error (The system cannot find the file specified)
New file name =
serie_error.txt
java.io.FileNotFoundException: src\main\java\Ex4\serie_error.txt (The system cannot find the file specified)
New file name =
series_errors.txt
```

Handle missing file (incorrect file name)

```
java.lang.NumberFormatException: For input string: "2O"
American Dad!,         2O,       353,     yes

java.lang.NumberFormatException: For input string: "11"
The X-Files,          11,       218,     no

java.lang.ArrayIndexOutOfBoundsException: Index 3 out of bounds for length 3
House,                 8,       177

java.lang.NumberFormatException: For input string: "no"
Hawaii Five-O,         10,                no

java.lang.NumberFormatException: For input string: "no"
NYPD Blue             12,       261,     no

java.lang.NumberFormatException: For input string: "10;      218"
The Blacklist,         10;       218,     no

java.lang.NumberFormatException: For input string: "4.57"
NCIS,                  2O,       4.57,    yes

Ex4.InvalidInputException: For input: "-13"
King of the Hill,     -13,       259,     no


Ex4.InvalidInputException: For input: "air"
Friends,               10,       236,     air
```

Use your own exception class
or Java's existing class

```
java.lang.NumberFormatException: For input string: "2O"
Gunsmoke,              2O,      -635
```

Recall termination model

```
Series                Seasons  Airing   Episodes
==================================================
The Simpsons            34      yes        750
Grey's Anatomy          19      yes        420
Lassie                  19      no         591
ER                      15      no         331
Supernatural            15      no         327
Bob's Burger            13      yes        260
Two and a Half Men      12      no         262
Bones                   12      no         246
Chicago Fire            11      yes        239
Frasier                 11      no         264
Will & Grace            11      no         246
Chicago P.D.            10      yes        208
Smallville              10      no         218
Chicago Med              8      yes        163
Futurama                 8      yes        142
Arrow                    8      no         170
Barney Miller            8      no         170


----------------------------------------------------------------------
```