Indiana University
CSCI-C212: Introduction to Software Systems (F25) Lab 12
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Exceptions and File I/O

What To Do:

Follow each step carefully. Submit your code to the autograder.

Warning:

You may not use any of the "modern I/O" Java features. All I/O must be done with the style of I/O talked about in section 5.2 and demonstrated in class. If you use generative AI, you will receive a 0 and be reported for academic misconduct. AI has a very particular way that it likes to solve these problems and write test cases for them, so if you're thinking of using it, please don't. Ask for help from your classmates and the UIs.

Seriously. Don't use AI or leverage any other unfair advantages. Solve the problems yourself and ask for help as needed.

Problem 1

Design the `EchoOdds` class, which reads a file of line-separated integers specified by the user (using standard input), and writes only the odd numbers out to a file of the same name, just with the `.out` extension. If there is a non-number in the file, throw an `InputMismatchException`.

For example, if the user types `"file1a.in"` into the running program, and `file1a.in` contains the following:

```
5
100
25
17
2
4
0
-3848
13
```

Then `file1a.out` is generated containing the following:

```
5
25
17
13
```

Another example is, if the user types `"file1b.in"` into the running program, and `file1b.in` contains the following:

```
5
100
25
17
THIS_IS_NOT_AN_INTEGER!
4
0
-3848
13
```

Then the program does not output a file because it throws an exception.

Hint: don't be so eager to immediately rush to opening an output stream of some kind! Remember that, if there's a single invalid number in the input file, you do not create a resulting output file. Instead, read the input and if there is an invalid number, immediately throw the aforementioned exception. Otherwise, *then* open the output stream and echo the odd integers. Doing it in this specific order will ensure that an output file is not erroneously created in the event that an invalid number is parsed.