

INTRODUCTION TO COMPUTER SCIENCE II

LAB 4

Parsing an integer

1 Parsing text into numbers

Consider the following strings:

```
5
1234
Montana
32x48
```

The first two are *textual representations of integers*; the second two are not. All of these could be typed into a program (or read from a file), and sometimes, we want our programs to turn the former type of string into an `int` value on which we can perform arithmetic.

This task—converting a sequence of digit characters into an integer value—is known as *parsing*. We want to create code that can parse such strings, but also **throw exceptions** when a string cannot be parsed in that way.

2 Your assignment

Get the code: Use the following link to download a zip file with a bunch of source code:

<https://bit.ly/AMHCS-2020S-112-14>

The only file in there is `Parser.java`, which we will discuss during lab.

What to do: There are two things you need to complete...

1. Complete the `readInt()` method in the `Parser` class. It should read any decimal integer and return its value as an `int`. If it cannot successfully read a sequence of characters that compose an integer, it should throw a `InvalidIntegerException`.
2. Define the `InvalidIntegerException`, which should be a subclass of the `Exception` class.

3 How to submit your work

Submit your `Parser.java`, and `InvalidIntegerException.java` files via the CS submission system:

`https://www.cs.amherst.edu/submit`

This assignment is due on Sunday, Mar-08, 11:59 pm.