

APCS Problem Set 10: **Strings** and File I/O**3.3 Summary of String Methods**

Refer to the instructions in the online form of this section. (21pts)

| <b>String method</b>                   | <b>Description</b> — what is returned and what the parameters mean     |
|--|--|
| <code>length()</code>                  | For a given string, this method returns...                             |
| <code>charAt(pos)</code>               | For a given string, this method returns...<br><br>...at position “pos” |
| <code>substring(fromPos)</code>        |  |
| <code>substring(fromPos, toPos)</code> |  |
| <code>concat(str)</code>               |  |
| <code>compareTo(s2)</code>             |  |
| <code>compareToIgnoreCase(s2)</code>   |  |
| <code>equals(s2)</code>                |  |

| String method             | Description — what is returned and what the parameters mean |
|---------------------------|---|
| equalsIgnoreCase(s2)      |   |
| indexOf(ch)               |   |
| indexOf(ch, fromPos)      |   |
| indexOf(str)              |   |
| indexOf(str, fromPos)     |   |
| lastIndexOf(ch)           |   |
| lastIndexOf(ch, fromPos)  |   |
| lastIndexOf(str)          |   |
| lastIndexOf(str, fromPos) |   |
| trim()                    |   |

| String method                          | Description — what is returned and what the parameters mean |
|--|---|
| <code>replace(oldChar, newChar)</code> |   |
| <code>toUpperCase()</code>             |   |
| <code>toLowerCase()</code>             |   |

### 8.3 Implementing LipogramAnalyzer

Create the `LipogramAnalyzer` class per the description on Litvin pp225-226.

*Teacher's Initials:* \_\_\_\_\_ (30pts)

### 11.2 File I/O Exercise #1: FileRewinder

In a new project, called `PS10-FileRewinder`, create class `FileRewinder`. Have it perform the following actions.

1. Open up a text file in your program's working directory. (*Note: See online version of the problem set for the footnote text.*)
2. Read the file, one line at a time, saving each line as a `String` object in an `ArrayList<String>`.
3. Write, to a different file in the working directory, the `Strings` in your `ArrayList<String>` in reverse order. (*Again, see online version for footnote.*)

You may create your own input text file or download a prepared one from <http://feromax.com/apcs/problemsets/PS10/downloads/ascii.txt>.

*Teacher's Initials:* \_\_\_\_\_ (20pts)

### 11.3 File I/O Exercise #2: Animals

4. Once you're confident that you can read configuration values from the config file, make your `Animals` class output the following to the screen:

```
<name> is a <height>-foot-tall <animal> that stands on <numfeet> feet.
```

For example, the provided configuration file text should cause `Animals` to print

```
Michael is a 2.5-foot-tall penguin that stands on 2 feet.
```

*Teacher's Initials:* \_\_\_\_\_ (20pts)