Assignment 9/1001$_2$/11$_8$/9$_{16}$ Version: **2.0**
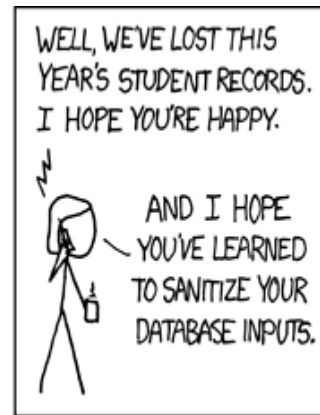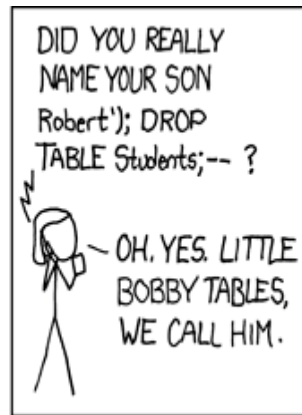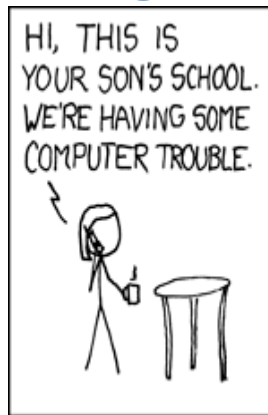# Last Updated: 3/9/2021 9:55 AM

Binary

Ones Comp

Twos Comp

Strings

Write a class that features a series of String methods

There is a file called StringPractSkeleton.zip on the website

Download the StringPractice Skeleton from website

Expand the Skeleton in your account

Look for the file called StringMethods.java

Each of the methods is **"stub coded",** which means the name and inputs and return values are set up but the **details are missing**.

You must finish them one by one.

You can test them using the Graphical User Interface. By clicking the buttons, you will see if your result is correct!!

To finish the compareTo, you will need to add some code to the Frame

1. Have the user enter a song title. Count the number of words in the song title

2. Build a String of Pascal's Triangle according to the number of rows input
o   Examples;

Input 4:

```
                1
            1       1
        1       2       1
    1       3       3       1
```

Input 5:

```
                1
            1       1
        1       2       1
    1       3       3       1
1       4       6       4       1
```

For #'s 3 and 4, you will be connecting to the internet to download the html text of a web site. A method inside StringMethods.java called openURL will handle this for you!!!

3. Given a typical html file, write a method that returns the title of the page
   Most pages have a title
   (If no title is found, please return "No Title" so the GUI can display the appropriate message

4. Given a typical html file, write a method that returns an array of strings, each array element contains one of the hyperlinks on the page

public String[] findLinks(String page)
NOTE: You will have to count the links first to set the array size or return an ArrayList to properly handle the exact number of links(requires change to Frame if you want to return an ArrayList)

For the page

<https://sites.google.com/a/shenschools.org/augustbiology/home>

as of 3/9/2021 You should get 24 links
NOTE: I go to the next > which are why mine are so long, should probably just go to the next "/" and then they would be shorter

"https://sites.google.com/a/shenschools.org/augustbiology/" id="sites-chrome-userheader-logo"

"https://sites.google.com/a/shenschools.org/augustbiology/" dir="ltr" id="sites-chrome-userheader-title"

"/a/shenschools.org/augustbiology/home/ap-biology" jotId="wuid:gx:4c33d97c7387afb8" class="sites-navigation-link"

"/a/shenschools.org/augustbiology/home/ap-biology/course-information" jotId="wuid:gx:52f7b0a22cfcd683" class="sites-navigation-link"

"/a/shenschools.org/augustbiology/home/ap-biology/ap-biology-homework" jotId="wuid:gx:7c53d220cbc0b865" class="sites-navigation-link"

"/a/shenschools.org/augustbiology/home/ap-biology/resources" jotId="wuid:gx:d6611b161753f7d" class="sites-navigation-link"

"/a/shenschools.org/augustbiology/home/ap-biology/resources/class-notes" jotId="wuid:gx:353a05b289e432b9" class="sites-navigation-link"

"/a/shenschools.org/augustbiology/home/regents-biology-living-environment" jotId="wuid:gx:795586925338595a" class="sites-navigation-link"

"/a/shenschools.org/augustbiology/home/regents-biology-living-environment/course-information" jotId="wuid:gx:2455e156bcf84054" class="sites-navigation-link"

"/a/shenschools.org/augustbiology/home/regents-biology-living-environment/homework" jotId="wuid:gx:2e21d84598922722" class="sites-navigation-link"

"/a/shenschools.org/augustbiology/home/regents-biology-living-environment/regents-biology-resources" jotId="wuid:gx:6dedbbdd943585ec" class="sites-navigation-link"

"/a/shenschools.org/augustbiology/home/regents-biology-living-environment/regents-biology-resources/class-notes" jotId="wuid:gx:3698265d10556b34" class="sites-navigation-link"

"/a/shenschools.org/augustbiology/home/regents-biology-living-environment/regents-biology-resources/labs" jotId="wuid:gx:4205162af3e9a965" class="sites-navigation-link"

"/a/shenschools.org/augustbiology/home/regents-biology-living-
    environment/regents-biology-resources/review"
    jotId="wuid:gx:243a3f00439ddd26" class="sites-navigation-link"
"/a/shenschools.org/augustbiology/home/regents-biology-living-
    environment/regents-biology-resources/worksheets"
    jotId="wuid:gx:e7536ee576e1ea7" class="sites-navigation-link"
"mailto:augugabr@shenet.org"
"http://www.shenet.org" target="_blank" rel="nofollow"
"/a/shenschools.org/augustbiology/home/ap-biology" dir="ltr"
"/a/shenschools.org/augustbiology/home/regents-biology-living-environment"
    dir="ltr"
"mailto:augugabr@shenet.org" target="_blank"
"http://sites.google.com/site"

_____

For the page

https://racketlounge.com/history-of-tennis/
as of 3/9/2021 You should get 26 links

"https://racketlounge.com"
"https://racketlounge.com/tennis/" class="menu-link elementor-item"
"https://racketlounge.com/pickleball/" class="menu-link elementor-item"
"https://racketlounge.com/squash/" class="menu-link elementor-item"
"https://racketlounge.com/racquetball/" class="menu-link elementor-item"
"https://racketlounge.com/table-tennis/" class="menu-link elementor-item"
"https://racketlounge.com/badminton/" class="menu-link elementor-item"
"https://racketlounge.com/tennis/" class="menu-link elementor-item"
"https://racketlounge.com/pickleball/" class="menu-link elementor-item"
"https://racketlounge.com/squash/" class="menu-link elementor-item"
"https://racketlounge.com/racquetball/" class="menu-link elementor-item"
"https://racketlounge.com/table-tennis/" class="menu-link elementor-item"
"https://racketlounge.com/badminton/" class="menu-link elementor-item"
"https://racketlounge.com/category/tennis/" rel="category tag"
"https://www.topcourt.com/n/ROUBEN-2XKFYA6WNW" target="_blank"
    rel="nofollow" class="elementor-button-link elementor-button elementor-size-
    md" role="button"
"https://www.olympic.org/news/a-brief-history-of-tennis" rel=""
"https://www.topcourt.com/n/ROUBEN-2XKFYA6WNW" target="_blank"
    rel="noopener"
"https://www.topcourt.com/n/ROUBEN-2XKFYA6WNW" target="_blank"
    rel="nofollow"

"https://www.topcourt.com/n/ROUBEN-2XKFYA6WNW" target="_blank"
   rel="nofollow" class="elementor-button-link elementor-button elementor-size-
   md" role="button"
"https://hi.switchy.io/TB" target="_blank"
"https://racketlounge.com/best-tennis-ball-machines/" rel="prev"
"https://racketlounge.com/best-ping-pong-paddles/" rel="next"
"https://racketlounge.b-cdn.net/about-us/"
"https://racketlounge.b-cdn.net/contact/"
"https://swiy.io/topcourt" target="_blank" class="elementor-button-link
   elementor-button elementor-size-md" role="button"
https://malcare.com?src=BA42AD&utm_source=mcbadge&utm_medium=usersite&
   utm_campaign=badge target="_blank"

5. Allow a user to enter two strings, print out the result of the first compareTo'd the second

6. Prompt the user for an alpha-numeric password.

   a. Then decide if the password is at least 6 characters. If the password is less than 6 characters, give the user an error message. If the password is greater than or equal to 6 characters and has at least one non alpha, return true and a happy face will appear in the GUI

   b. Also confirm that at least one of the characters is non alphabetical (symbol or number) HINT: **Character.isLetter(text.charAt(i))** is helpful here!!!!

   c. If the character is not sufficient length or doesn't contain at least one non-alphabetical character, then sad face (you just need to return false)

Project Name	AP Student String SolutionNB
Class 1 Name	StringApp
Class 2 Name	StringMethods
Class 3 Name	StringFrame

Rubric	
Song Title	20
Pascal's Triangle	35
Get the Title	20

Get the Links	**40**
Compare To	10
Password Checker	**15**
Comments (finish any unfinished pre or post conditions) and add comments to your String Methods	10
TOTAL	**150**

*Recursion*Linear Search*Binary Search*Grid World Case Study*File Processing *nlogn*Hangman*