CmpE 150 Introduction to Computing, Fall 2018
Project 1—Due:02/11/2018, 9am

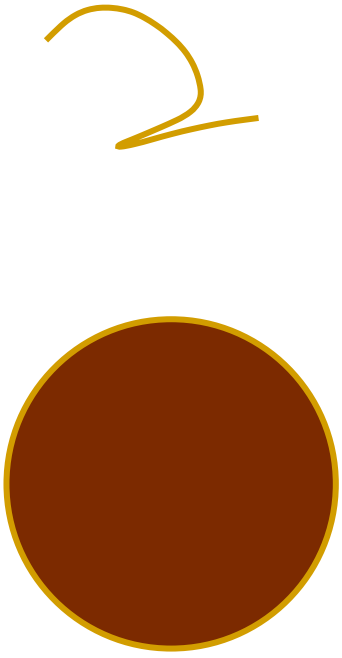
You will write a Java program to implement the ASCII cocktail glasses below using two parameters **glassSize** as the size of the cocktail glass and **strawPos** as the position of the straw. One example run is given below, other example runs are at the bottom of this file. Please read the assignment description before beginning to write any code.

glassSize = 3**, strawPos** = 4

```
o
 o
  o
   o
\******/
 \****/
  \**/
   --
   ||
   ||
   ||
```

```
o
 o
  o
   o
\   o  /
 \****/
  \**/
   --
   ||
   ||
   ||
```

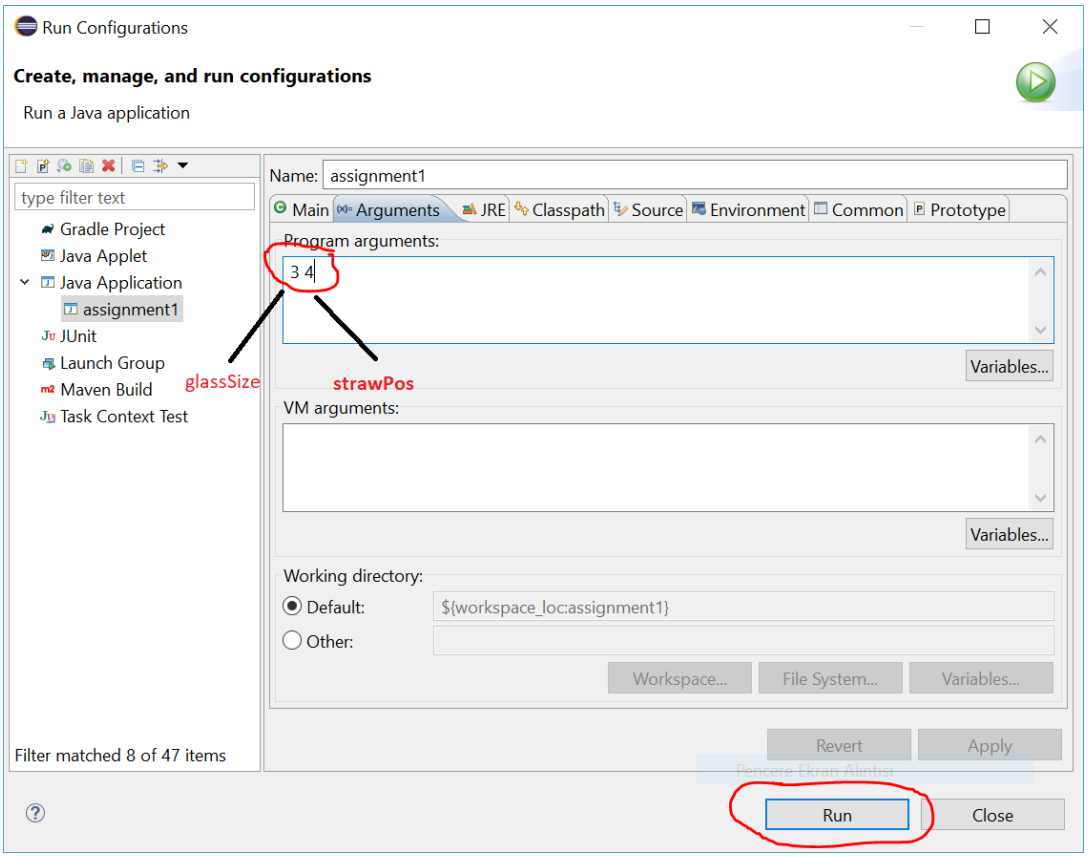
```
o
 o
  o
   o
\   o  /
 \   o/
  \**/
   --
   ||
   ||
   ||
```



Please make sure you follow these rules in your implementation:

1. Your program should have at least two static methods in addition to your main method. Try to write your program as modular as possible (without overusing methods).
2. You are not allowed to generate the entire picture or any single line using printing statements such as System.out.print or System.out.println. For example, you cannot have a statement that says:
3. `System.out.println("\******/");`

   You need to generate it using for loops.
4. Assume that the **strawPos** will not be greater than **glassSize***2. (In other words, strawPos <= glassSize*2) Also, **strawPos** and **glassSize** will be strictly greater than zero.
5. You are not allowed to use statements that we haven't learned in class as of 23/10/18 (such as while loops, arrays, and so on).
6. Try to minimize the number of for loops you use.
7. We have given you a part of the code for the main method in **arguments.java** file. This code runs your program with arguments given to glassSize and strawPos respectively. Copy this code to your own .java file. To test and run your program with arguments, click **Run -> Run Configurations -> Arguments -> Program Arguments**. Enter two integers here, and then click run at the bottom of the window. These two integers represent glassSize and strawPos respectively.



Submission: You will submit a project report and your code over Moodle.
Project report should consist of five sections. These are:

1. Problem Description: In this section, you should describe the problem in your words.
2. Problem Solution: In this section, you should specify the concepts (methods, for loop, etc.) that you use in your program. Explain each one (i.e. why you need it, what you accomplish by using it, so on.). Report how many for loops you use.
3. Implementation: This section will include your whole code with comments. You need to pay attention to indentation in order to improve readability.
    - Do not forget to explain each variable that you use (i.e. int count=0; // count is the number of items).
    - Before each method, specify what the method does (i.e. /* This method . */)
4. Output of the program: A screen-shot of your program output should be put in this section. Two example runs are enough.
5. Conclusion: You should evaluate your work here. State whether you have solved the problem correctly. If not, state what is missing, what could have been improved, and so on.

Your .java file should be named with your initials and your student number together (e.g., OS2013800027). If you have Turkish characters as your initials, please change them to non-Turkish. (Example: ÖS2013800027 should be OS2013800027) You will submit these over Moodle as a single zip file where the file name is your student number. Your zip file should consist of your .java file and your report in .doc or .pdf format. **Do not use any Turkish characters in your code, class/variable names, or .java file names.**

Partial Submission: If you cannot generate the picture above, you should still submit your code as well as your report. Try to generate most of the picture. In your report, explain which parts you can generate and which parts you cannot.

Late Submission: Any submission after the deadline is considered late and will not be accepted.

More example runs:

glassSize = 4, strawPos = 2:

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 o
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  \****/
   \**/
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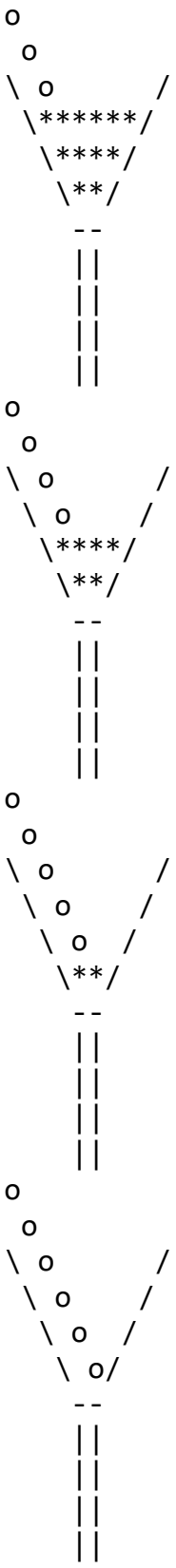
     ||
     ||
```



glassSize = 4, strawPos = 4:

```
o
 o
  o
   o
\*******/
 \******/
  \****/
   \**/
    --
    ||
    ||
    ||
    ||
o
 o
  o
   o
\   o    /
 \******/
  \****/
   \**/
    --
    ||
    ||
    ||
    ||
o
 o
  o
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\   o    /
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  \****/
   \**/
    --
    ||
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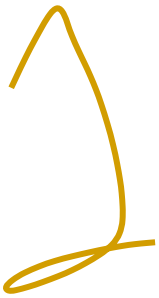
    ||
```



```
o
 o
  o
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\   o    /
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    ||
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    ||
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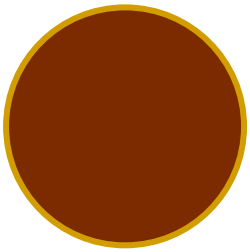
```



glassSize = 4, strawPos = 6:

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     o
      o
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    ||
    ||
o
 o
  o
   o
    o
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      o
\      o  /
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   \**/
    --
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```

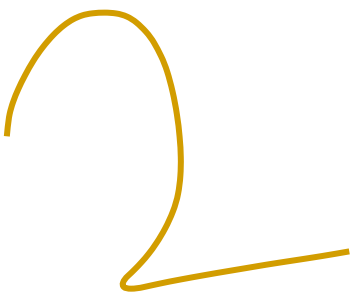

```
o
 o
  o
   o
    o
     o
      o
\      o   /
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  \****/
   \**/
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    ||
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```

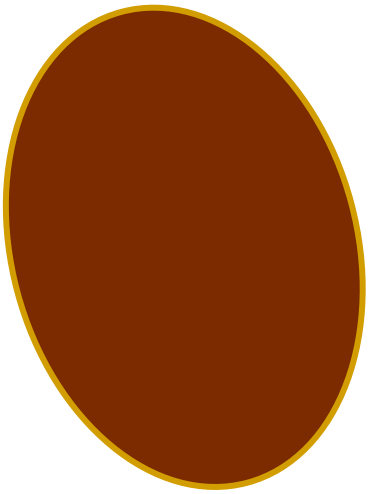

glassSize = 7, strawPos = 2:

```
o
 o
\**************/
 \************/
  \**********/
   \********/
    \******/
     \****/
      \**/
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       ||
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o
 o
\ o            /
 \************/
  \**********/
   \********/
    \******/
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```

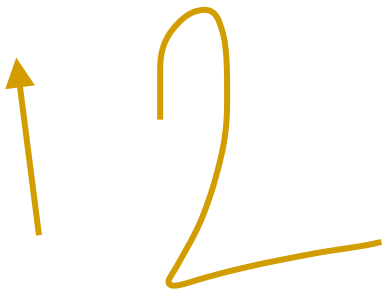

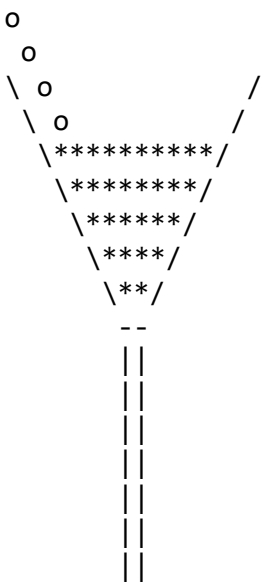

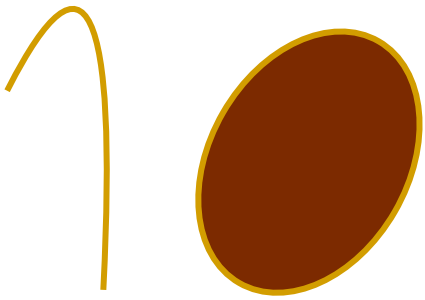

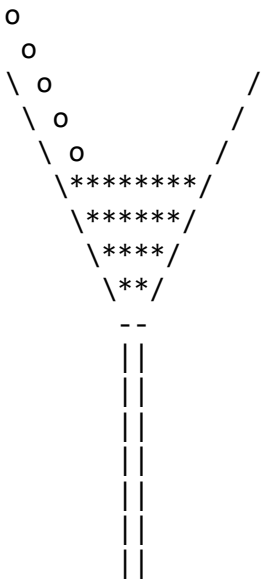

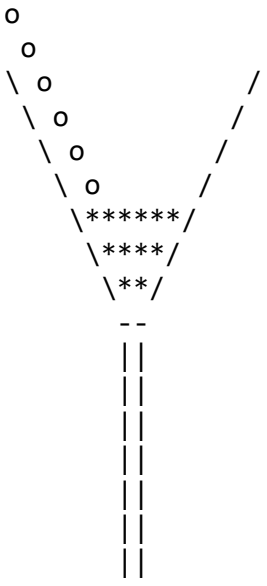

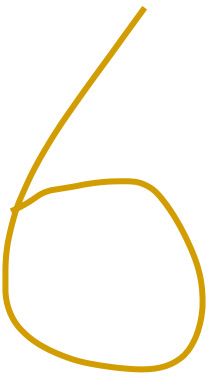

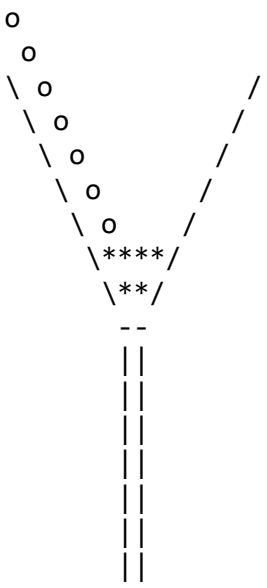

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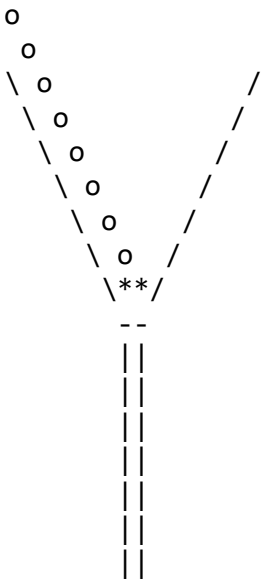

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