Programming in Java - Assignment 2

Let's write a shape generator program called Shape Factory. Firstly, the program needs to ask the user if he/she would like to print a reversed pyramid pattern or a number pattern. If the first option has been selected, the program should ask the user for the second time if he/she would like a reversed pyramid of stars (*****) or at signs (**@**) and then print the shape (see the screenshots below).

If the user would like to see a number pattern, the other shape should be printed (see the screenshots below).

Rules:

1) The user input for the first conditional statement should be validated, meaning the user cannot enter a character different than R or #. Otherwise, the program should ask again after printing an appropriate message.
2) If the user wants to exit the program in the first conditional statement, he/she could do so by entering X as input and the program should end after printing an appropriate message.

Good luck!

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*** Welcome to Shape Factory! ***
Do you want to print a reversed pyramid or a number pattern? ("R", "#" or "x" for exit)
R
A reversed pyramid of stars or at signs? ("*" or "@")
*
* * * * *
 * * * *
  * * *
   * *
    *

Do you want to print a reversed pyramid or a number pattern? ("R", "#" or "x" for exit)
r
A reversed pyramid of stars or at signs? ("*" or "@")
@
@ @ @ @ @
 @ @ @ @
  @ @ @
   @ @
    @

Do you want to print a reversed pyramid or a number pattern? ("R", "#" or "x" for exit)
#
1
2 3
4 5 6
7 8 9 10
11 12 13 14 15

Do you want to print a reversed pyramid or a number pattern? ("R", "#" or "x" for exit)
q
Wrong input! Please try again.

Do you want to print a reversed pyramid or a number pattern? ("R", "#" or "x" for exit)
x
Bye !!
```