Write a Java program that determines the product of a range of positive integer values. Your program will read two values representing the lower bound and upper bound of the range, compute the product of integers in the range, and print the result. For example, if the lower bound is 3 and the upper bound is 5, your program will output the product 60 (which is 3*4*5). If the lower and upper bounds are equal, the product will just be the lower bound. If the lower bound is greater than the upper bound the product will be 1. Because the product might be large, you should store it in a variable of type “long.” The following restrictions/assumptions apply to this problem:

- The name of the class you will define is `RangeProduct`.
- Use the messages “Enter lower bound” and “Enter upper bound” to read the upper and lower bounds, respectively.
- Use the message “Range product is ” followed by the computed product to display the result.
- Input and output operations must be completed using methods associated with JOptionPane.
- You do not need to provide comments, but you must use meaningful variable names and good indentation.
- You must write any necessary import statements.
- Write the program on the next page.
WRITE YOUR PROGRAM ON THIS PAGE.