First Computer Assignment

Write a program that reads a logical expression in p and q and prints the truth table of the expression. You should be able to input expressions such as "p & q " (meaning p and q); "p | q" (meaning p or q); and "p -> q" (meaning p implies q). In addition, you should be able to input the negation of p or q, such as "!q -> !p" (meaning (not q) implies (not p)). How many inequivalent truth tables can you generate from these expressions?

Some programming hints:

1. The truth table should contain columns for p, q, !p, and !q (and then additional columns for whatever logical sentence you are trying to compute).

2. Call your class Truthtable.

3. There should be at least one space between operands (such as p or !q) and operators (such as & or ->). The only exception is the ! sign should be adjacent to its operand.

This project should be emailed to me no later than Wednesday October 3 at 5 PM. Include in your email an answer to the question about the number of inequivalent truth tables together with a list of logical statements that generate those tables.