

CMPSCI 182 – Project 3  
Recursion as a Problem-Solving Technique  
30 points total  
Due 10/23/17

1. (20 points) Complete the program that solves the Eight Queens problem (pages 318 through 320). The program's output should look similar to:

```
|1|0|0|0|0|0|0|0|
|0|0|0|0|0|0|0|1|
|0|0|0|0|0|1|0|0|
|0|0|0|0|0|0|0|0|
|0|1|0|0|0|0|0|0|
|0|0|0|1|0|0|0|0|
|0|0|0|0|0|1|0|0|
|0|0|1|0|0|0|0|0|
```

2. (10 points) Design and implement a class called PostfixCalculator. Use the algorithm given on page 374 to evaluate postfix expressions, as entered into the calculator. Use only the operators +, -, \*, %, and /. Assume that the postfix expressions have *single digit numbers* in the expression and are syntactically correct. This means that the expressions will have already been converted into correct postfix form. The PostfixCalculator should *not* convert from infix to postfix form. In order to test the PostfixCalculator, it will be necessary to *manually* convert your test expressions into postfix form before entering them into the PostfixCalculator.

When you have completed both programs, ZIP the entire Project 3 folder into a single ZIP file and submit this ZIP file via Canvas.