

# Arrays, Loops, and Conditionals

DHS CS Officers

## Problem Set 1

### 1 Instructions for submission

- Email your solution to `dullescomputerscience@gmail.com`
- Provide your name, the question(s) you solved, and attach the solution in Java to the email
- You will receive points for (at most) three of the questions you submit, for 0.5 points each; however, feel free to do as many as you'd like!

### 2 Problems

1. Given an  $N \times N$  matrix, find out the maximum number of rows that have the same product.
2. Convert a given int in base 10, convert it to base 4.
3. Given the date in MM/DD/YYYY format, print out the date in MLA format. (For example, 10/02/2021 should be converted to 2 October 2021.)
4. Given the word form of two digits and an operation, print out the word form of the result. (For example, the input `nine seven multiply` yields `sixty-three`.)
5. Find all prime numbers under 100.