Team Shampooing et Conditionneur (Cheryl Qian, Stefan Tan, Lynne Wang)
APCS2 pd1
HW02 -- Speaking In Pseudocode
2018-01-31

The Situation:
Consider an *n* x *n* 2D array of ints, wherein numbers increase across any row (L->R) and down any column...
e.g.,
| 1 3 5 |
| 3 7 8 |
| 5 12 15 |

Procedure

1) Start at the element at the bottom left and compare it to the number that is being searched for, x.
2) If x is greater than that element then compare it to the element to the right. If x is less than that element then compare it to the element one row above.
3) For every element you compare x - if x is greater than the element, compare x to the element on the right. If x is less than the element to the right, then compare x to the element right above.
4) Repeat step 4 until the element equals x.

Pseudocode:

```
Int num = number we are looking for
Int i = number of rows - 1
Int x = 0
While num not equals matrix[i][x]
        If num > matrix[i][x]
                x += 1
        Else if num < matrix[i][x]
                i -= 1
                x -= 1
        Else
                Row = i
                Column = x
SOP(Row, Column)
```

Considerations:
If number is not in matrix