Section 13: Strings

Exercise Solutions:

1) What do the following lines of code print to the console? **3 blind mice**

```
String word = "ice";
println( word.length() + " bl" + word.charAt(0) + "nd m" + word );
```

2) Fill in the blanks in the Processing code for the function `frequency()`, which returns the number of times that a particular `char` c appears in a `String` s. For example, `frequency("missus",'s')` returns 3.

```
int frequency(String s, char c) {
    int count = 0;
    int i = 0;
    while (i < s.length()) {
        if ( s.charAt(i) == c ) {
            count = count + 1;
        }
        i = i + 1;
    }
    return count;
}
```

3) Write Processing code below to create the string `"1, 2, 3, 4, 5, 6, 7, 8, 9"` using a for-loop and store it in the variable `result`. Pay special attention to the spaces and commas!

```
String result = "";
int i = 1;
while( i < 9 ) {
    result = result + i + ", ";
    i = i + 1;
}
result = result + "9";
```

4) After the following code is executed, what string is stored in `msg`? **"happy"**

```
char[] alphabet = {'a','b','c',…,'x','y','z'};   // assume all 26 written out
int[] nums = {7,0,15,15,24};
String msg = "";
int i = 0;
while ( i < nums.length ) {
    msg = msg + alphabet[ nums[i] ];
    i = i + 1;
}
```

Notice that we first access `nums[i]`, which gives us an integer. We then use that integer as the index with which we access the `alphabet[]` array. Concatenating these characters to our string `msg` one-by-one in the for-loop, we end up with `"happy"`.