Module 3 Prompt Questions

1. In the real world, the way to check palindromes can be recursive. Compared to an iterative process, it can be divided to a smaller subproblem that examines substring obtained by the first and last letter is a palindrome or not.

2. Another scenario would be painting a russian doll, which is keep opening it until the smallest doll that doesn't contain any smaller doll, and start to paint it, close the second smallest doll and paint. This is different from an iterative process that has to reach the base case (the smallest doll) first, and operate actual painting.

3. I think ultimately any simple iteration that can be converted to a recursive operation. Such as counting numbers that can be splitted to smaller tasks that count smaller numbers.

   E.g void countNum(int n){ // count n, n-1, … 1
   ```
   If (n == 0)  return;
      Else:
         System.out.println(n);
         countNum(n-1);
   ```

4. I think making sure about the base case scenario, and how to induce a problem to a smaller problem would be necessary to manage the recursive process. Also while traversing the recursion, keeping track of every status (values of variables) at each case would make it easier to organize my thoughts.