1. Complete this on your own, then review the videos and code in the class website: work on some simple recursive problems.

- Write a method that accepts a String as an argument. The method should use recursion to display each individual character in the String.
- Modify that method so it displays the String backwards.
- Write an iterative version of the factorial method from Chapter 16.
- Write a method named maxElement, which returns the largest value in an array that is passed as an argument. The method should use recursion to find the largest element. Demonstrate the method in a program.

2. Write the following recursive function yourself. There is a Video Note for this problem. Try to solve it yourself first.

Write a method that uses recursion to raise a number to a power. The method should accept two arguments: the number to be raised and the exponent. Assume that the exponent is a nonnegative integer. Demonstrate the method in a program.

3. On your own, write the Palindrome Detector from Chapter 16, Programming Challenge 5.

A palindrome is any word, phrase, or sentence that reads the same forward and backward. Here are some well-known palindromes:

Able was I, ere I saw Elba
A man, a plan, a canal, Panama
Desserts, I stressed
Kayak

Write a Boolean method that uses recursion to determine whether a String argument is a palindrome. The method should return true if the argument reads the same forward and backward. Demonstrate the method in a program.

(Do not include punctuation or capitalization in the strings you're testing and do not worry about it in your palindrome detector. For example, you would use, "able was I ere I saw elba" and not the exact text shown above.)