Name: _____

Exploring the Java API

Go to http://download.oracle.com/javase/8/docs/api/

1. Use the API for the String class (java.lang.String) to answer the following questions. Assume that **string1** and **string2** are variables declared as type **String**. Also assume that **num** is an **int** variable. Write a complete Java statement as an answer for each question:

   a. How would you find the first position in a string?
   "string".substring(0, 1)

   b. How would you find the last position in a string?
   string.length() - 1;

   c. How would you remove leading and trailing spaces from a string?
   string.trim()

   d. How do you get the number of characters in a string?

   e. How can you tell if two strings have the same characters?
   compareTo(String anotherstring), or indexOf(String str, ?

   f. How can you create a new string from the 1st character to the 9th character of a string?
   string.substring(0, 8)

   g. How can you create a new string from the 3rd character to the 7th character of a string?
   string.substring(2, 6)

   h. How can you create a new string from the 5th character to the end of a string?
   string.substring(4)

   i. How can you join two strings together into a new string?
   new string = string1 + string2

2. Use the API for the Scanner class (java.util.Scanner) to answer the following:

   a. What two lines of code would you write to read a number from keyboard input using a **Scanner** object with the identifier **keyIn** and store in the **int** variable **num**?
   Scanner keyIn = new Scanner(System.in);
   int num = keyIn.nextInt();

   b. What **Scanner** method would you use to get a **String** value from the input source and store it into a **String** variable called **string1**?
   keyIn.next();

c. What is the difference between the **Scanner** methods **next**() and **nextLine**()?

next() gets the next string

nextLine() gets the entire line as a string

d. How can you determine if there another token to be read? In other words, which Scanner method would you call to get a true/false response to tell you if there was any more input?

keyln.next();

3. Use the API for the Math class (java.lang.Math) to answer the following:

a. How can you use the Math class to calculate 2 to the 10^{th} power?

math.pow(2, 10)

b. How can you use the Math class to find the square root of 100?

math.sqrt(100)

c. How can you use the Math class to round a decimal number, 3.14150?

math.round(3.14150)

d. How can you use the Math class to generate a random number between 1 and 10, inclusive?

math.random(

4. Use the API for the Integer class (java.lang.Integer) to answer the following:

a. What method can you use to convert string to a primitive type int value?

parseInt(string)

5. Use the API for the Double class (java.lang.Double) to answer the following:

a. What method can you use to convert a string to a primitive type double value?

parseDouble(string)