**Assignment 1006**

Believe it or not, JavaScript is considered to be pretty “high-level,” meaning that it’s already closer to the way humans express instructions and information than how computers really do it. This assignment hopes to get you into this “really” part.

**Not for Submission**

**By September 29**

1. Read Sections 1.1 to 1.4 in the Brookshear book for details on this week’s topic. If you are so moved, read all of Chapter 1.
2. Read Arthur Conan Doyle’s “The Adventure of the Dancing Men.” The entire story is available online, with illustrations, at this site:


   You can also find the story in print in a variety of Sherlock Holmes collections.
3. Be ready with a scheme for representing the following types of information solely in terms of bits (i.e., 0s and 1s):
   a. Boolean values (i.e., true and false)
   b. Integers \( \geq 0 \)
   c. Strings (e.g., “Hello world,” “5 computers,” “The score is 19.5.”)

**By October 1**

4. Refine your information conversion schemes based on what you saw during Tuesday’s class.

**For Submission**

Submit the following on hardcopy by the beginning of class on October 6.

**Exercises**

1. Write up your proposed schemes for representing the information listed on the left (Booleans, integers \( \geq 0 \), and strings). The schemes should specify how to convert this information to 0s and 1s and vice versa.
2. Do textbook exercises 5, 7, 9, 11, and 24, found on pages 73–75 of the Brookshear book.

**Reflection**

Answer the following reflection questions:

1. Why is it necessary to come up with schemes for converting information to 0s and 1s?
2. How would your conversion schemes have to change if we wanted to convert the values to \( \chi \)'s and \( \gamma \)'s instead of 0s and 1s?
3. Is there any information that you think cannot be converted into a sequence of 0s and 1s? Explain why you think so.
4. If Sherlock Holmes were to read the “Voices in Computing” article from a few weeks ago, what voices do you think would resonate with him the most? What voices would resonate with Dr. Watson the most?