

CS-341 Lecture 7

February 23, 2001

IEEE-754 Encoding

- Two formats, using 32 and 64 bits
 - Correspond to Java's float and double data types.
 - Sign of fraction: 1 bit
 - Signed exponent: 8 bits (biased-127) or 11 bits (biased-1023) for 32 and 64-bit formats.
 - Value of fraction: 23 or 52 bits for 32 and 64-bit formats.

Floating Point Resources

- Appendix B of the textbook.
- Floating-point calculators in the CS-341 web site:
 - <http://babbage.cs.qc.edu/courses/cs341/IEEE-754.html>
 - There are three calculators; links to the others are at the bottom of each page.
- Homework: Exercises 1, 2, 5 at the end of Appendix B. Use the calculators to check your work.