

9-08-08-CS8421

Computer Number Systems Part 2

CS8421

Computing Systems

Dr. Ken Hoganson

Class

Will

Start

Momentarily...

Outline:

1. Decimal System (Powers-of-the-Base)
2. Binary System
3. Converting from Binary to Decimal
4. Converting from Decimal to Binary
5. Representing Negative Numbers
6. Sign-Magnitude and Problems
7. Two's Complement
8. Hexadecimal
9. Converting between Binary and Hexadecimal
10. Memory Addressing

**Coverage of this material is also in Appendix B of my
Concepts in Computing**

Convert from binary to decimal:

1. 1001
2. 0011
3. 10011000
4. 01001101

Convert from decimal to binary:

1. 7
2. 15
3. 113
4. 238

Convert from binary to hexadecimal:

- 1001
- 0011
- 10011000
- 01001101

Convert the following from hexadecimal to binary:

- 57
- AA
- 9CE1
- 8FBA

Determine the two's complement binary values (in 8 bits) for the following

- -7
- -15
- -113
- 28

Find the equivalent decimal values for the following two's complement numbers:

- 10011001
- 11100011
- 10000011
- 00000011

**End
Of
Today's
Lecture.**

