

Homework: Numbering Systems

Due: 1-week later

NB: Only hardcopies (with handwritten answers) will be accepted and graded. Any homework that is emailed will be unopened, deleted and unrecorded for credit.

1. Convert the following numbers to binary. Show calculations i.e. don't just use a calculator to write down the answer (10 points)

- A. 64
- B. 67 answer: 1000011
- C. 99
- D. 608
- E. 2000
- F. 1999
- G. 32694
- H. 213
- I. 10001
- J. 1101

2. Convert the following binary numbers to decimal. Show calculations i.e. don't just use a calculator to write down the answer (10 points)

- K. 10101010
- L. 1010101 answer: 85
- M. 1111111100000000
- N. 1100110011101001
- O. 0000000011111111
- P. 10001001001001
- Q. 0000000000000001
- R. 1000000000000000
- S. 1000000000000001
- T. 0101010101010101

3. Write a LabVIEW program that converts a decimal number (0 to 255) to its 8-bit binary representation. Use an input control for the user to input a decimal number. Use 8 virtual LEDs to display the binary representation. Include hardcopies of the Front Panel and Block Diagram. Include notes in your Block Diagram to comment on the code and how the program works (30 points)