# CS111 Spring 2018: Assignment 1

# The Binary System and Boolean Expressions

Worth 10 points (1.43% of course grade)

Posted Fri, Jan 26

Due Fri, Feb 2, 5:00PM (Grace period ends 11:00PM)

## 1. Patterns

a. How many different patterns can be represented using 5 bits?
b. What is the largest decimal number that can be stored in 8 bits?

## 2. Binary Conversion

Convert the following binary numbers to their decimal values (show your work):

a. 00011
b. 11011
c. 111011000
d. 1111

## 3. Boolean Expressions

Create a truth table to determine the outcome of the following Boolean expressions:

a. (A && B) || C
b. (!A && B)
c. (A && B) || (B && C)
d. !(A || B) && (A || C)

## Submitting

Submit your answers in a PDF file called **assign1.pdf** in Sakai under Written Assignments. Use your preferred text editor to type your answers, and then save the file in PDF format.

You must upload your file, and then click the Submit button. If you don't click the Submit button we don't have your assignment.