

# Lab 2: Common Operations on Binary Values

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Due Friday, July 17 at 11:59 AM

## Goals for This Lab

By the time you have completed this work, you should be able to:

- Perform common operations on binary values, including:
  - AND, OR, XOR, NOT
  - Shift left
  - Arithmetic and logical shift right
  - Addition
  - Subtraction
- Use the aforementioned operations for bit masking
- Manipulate values in twos complement

**Provided files:**

- [lab2problems.txt](#)
  - [collaborators.txt](#)
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## Step-by-Step Instructions

### Step 1: Edit the [lab2problems.txt](#) File

Using a text editor of your choice, open the [lab2problems.txt](#) file. The file contains a series of questions for you to answer. The answers should be placed directly in the file itself. All questions must be answered correctly for full credit. Make sure you save your answers before you exit.

**If you are working with others, record their names in [collaborators.txt](#).** Each collaborator should be listed one per line. If you did not collaborate with anyone, you do not need to edit `collaborators.txt`.

### Step 2: Turn in Your Answers Using [Canvas](#)

Log into [Canvas](#), and go to the COMP 122L class. Click “Assignments” on the left pane, then click “Lab 2”. From here, you can upload your answers in your local copy of `lab2problems.txt` by clicking the “Submit Assignment” button. **Be sure that the file you upload is named `lab2problems.txt`, and that it is actually a plain text file.** If you collaborated with anyone else,

be sure to also upload your local copy of `collaborators.txt`. You can turn in the assignment multiple times, but only the last version you submitted will be graded.

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Based on material originally prepared for UCSB CS64 by Prof. Diana Franklin.