

1. Study Chapter 3, Section 3.1, 3.2.
2. Do Exercises 3.23, 3.26, 3.28, 3.33, 3.35, 3.37.

For 3.23: Don't forget to convert the shifted values back to decimal.

NOTE: There is a slight difference between the fifth edition, and the sixth edition. In the fifth edition, ASR does not affect the V bit. In the sixth edition, the V bit for ASR is affected, and it is always 0. For the ASR operation, assume that the V bit is always affected and is always 0.

Type your solutions in a text editor or word processor app and save it in a `.pdf` file. You cannot simply change the extension of your file name from `.docx`, or `.rtf`, or `.txt` to `.pdf`. You must *export* your document as a `.pdf` file.

Submit your `.pdf` file as an attachment in Canvas under Assignment 5a.

3. Do Problem 3.57.

Here is the code for the input.

```
printf("Enter an eight-bit binary number with a space between bits: ");
for (int j = 0; j < 8; j++) {
    scanf("%d", &binNum[j]);
}
```

If the user enters

```
1 1 1 1 1 1 0 0
```

the output to the console should be

```
11111101
11111110
11111111
00000000
00000001
00000010
00000011
00000100
00000101
00000110
```

Your program must simulate the addition of 1 with the carry bit to obtain the next number. Do not use any math operations other than `+`, `/`, or `%`. Do not use any math functions, including those that convert decimal to binary or binary to decimal.

Make a copy of your original source file, and name the duplicate `xxmain.c` where `xx` is your assigned two-digit number. For example, if your two-digit number is 99 you would rename it `99main.c`. Hand in this duplicated and renamed file as an attachment in Canvas under Assignment 5b.