

1. Study Sections 3.3, 3.4, 3.6
2. Do Exercises 3.7, 3.12, 3.14, 3.16, 3.18, 3.19, 3.21

Type your solutions in a text editor and save it in a PDF file named `a02written.pdf`. Note the lowercase `a`. 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.

Hand in the file electronically per the instructions for your course.

3. Do Problem 3.57.

Although the problem says to write your program in C, write it in Java with IntelliJ by completing the code in `Prob0357Main.java`, which has the user interface already in place. Convert the eight characters in `line` to eight integers in the `binNum` array. Verify that each bit entered by the user is 0 or 1 and output an error message if it is not. If the user enters

```
11111100
```

the output to the console should be

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

Here is a [link](#) to Oracle's Java documentation for the `String` class. It lists the methods you can use for the `line` variable. See the `charAt()` method for extracting an individual character from `line`.

Here is a [link](#) to documentation for the `PrintStream` class. You must use the formatting capabilities of the `System.out.printf()` method of this class even though it may not seem necessary. The `printf()` method will be necessary in later projects so you should start using it now. Also, you will be learning how `printf()` works in C because the `printf()` in Java has identical behavior.

RESTRICTION: Do not use the Java function `parseInt()` because it does automatically what your program is supposed to do.

Name your Java package `prob0357`. Note the lowercase `p`. The first line of your source file must be `package prob0357;`. Name your IntelliJ project `Prob0357` and the class that has the main program as `Prob0357Main`. Note the uppercase `P`.

For your convenience, here is a IntelliJ project set up according to the above specifications.

<https://www.cslab.pepperdine.edu/warford/cosc330/Prob0357.zip>

See this [link](#) for instructions on how to set up Java and complete the assignment.

Hand in the `Prob0357.jar` file electronically per the instructions for your course.