

Exercises

Section 2.1

1. Create and run Kernighan and Ritchie's famous "hello, world" program:

```
#include <stdio.h>

int main(void)
{
    printf("hello, world\n");
}
```

Do you get a warning message from the compiler? If so, what's needed to make it go away?

Section 2.2

2. Consider the following program:

```
#include <stdio.h>

int main(void)
{
    printf("Parkinson's Law:\nWork expands so as to ");
    printf("fill the time\n");
    printf("available for its completion.\n");
    return 0;
}
```

- (a) Identify the directives and statements in this program.
- (b) What output does the program produce?

Section 2.4

3. Condense the `dweight.c` program by (1) replacing the assignments to `height`, `length`, and `width` with initializers and (2) removing the `weight` variable, instead calculating $(\text{volume} + 165) / 166$ within the last `printf`.
4. Write a program that declares several `int` and `float` variables—without initializing them—and then prints their values. Is there any pattern to the values? (Usually there isn't.)

Section 2.7

5. Which of the following are not legal C identifiers?
 - (a) `100_bottles`
 - (b) `_100_bottles`
 - (c) `one__hundred__bottles`
 - (d) `bottles_by_the_hundred_`
6. Why is it not a good idea for an identifier to contain more than one adjacent underscore (as in `current__balance`, for example)?
7. Which of the following are keywords in C?
 - (a) `for`
 - (b) `If`
 - (c) `main`
 - (d) `printf`
 - (e) `while`