**Exercise 5.1**

1. List the three repetition statements that are provided in C.
   1. while
   2. for
   3. do-while
2. List the four elements that must be present to create repeating sections of code.
   1. The repetition statement.
   2. A condition that must be evaluated.
   3. A statement that initially sets the condition being tested.
   4. A statement within the repeating section of code that alters the condition so that it eventually becomes false.
3. A. What is an entrance-controlled loop?
   1. An entrance-controlled loop, also known as a pretest loop, is a loop in which the condition being tested is evaluated at the beginning of the repeating section of code (at the beginning of the loop).
      1. Which of C’s repetition statements produce entrance-controlled loops
4. while, for
5. A. What is an exit-controlled loop?
   1. An exit-controlled loop, also known as a posttest loop, is a loop in which the condition being tested is evaluated at the end of the repeating section of code (at the end of the loop).
      1. Which of C’s repetition statements produce exit-controlled loops
6. do-while
7. What is the difference between a pretest and a posttest loop?
   1. A pretest loop is a loop in which the condition being tested is evaluated at the beginning of the repeating section of code, while a posttest loop is one in which the condition is evaluated at the end of the repeating section of code.
8. If the condition being tested in a pretest loop is false to begin with, how many times will statements internal to the loop be executed?
   1. If the condition is initially false, then the statements in a pretest loop will never be executed.
9. If the condition being tested in a posttest loop is false to begin with, how many times will statements internal to the loop be executed?
   1. If the condition is initially false, then the statements in a posttest loop will execute only once.
10. What is the difference between a counter-controlled loop and a condition-controlled loop?
    1. In a counter-controlled loop, the number of repetitions is known before the loop executes, whereas in a condition-controlled loop the number or repetitions is not known and instead terminates according to some set condition.