9. Are the following if statements equivalent? If not, why not?

```
if (score >= 90)           if (score < 60)
    printf("A");               printf("F");
else if (score >= 80)      else if (score < 70)
    printf("B");               printf("D");
else if (score >= 70)      else if (score < 80)
    printf("C");               printf("C");
else if (score >= 60)      else if (score < 90)
    printf("D");               printf("B");
else                       else
    printf("F");               printf("A");
```

Section 5.3   Ⓦ*10.   What output does the following program fragment produce? (Assume that i is an integer variable.)

```
i = 1;
switch (i % 3) {
    case 0: printf("zero");
    case 1: printf("one");
    case 2: printf("two");
}
```

11. The following table shows telephone area codes in the state of Georgia along with the largest city in each area:

Area code	Major city
229	Albany
404	Atlanta
470	Atlanta
478	Macon
678	Atlanta
706	Columbus
762	Columbus
770	Atlanta
912	Savannah

Write a switch statement whose controlling expression is the variable area_code. If the value of area_code is in the table, the switch statement will print the corresponding city name. Otherwise, the switch statement will display the message "Area code not recognized". Use the techniques discussed in Section 5.3 to make the switch statement as simple as possible.

Programming Projects

1. Write a program that calculates how many digits a number contains:

```
Enter a number: 374
The number 374 has 3 digits
```

You may assume that the number has no more than four digits. *Hint:* Use if statements to test the number. For example, if the number is between 0 and 9, it has one digit. If the number is between 10 and 99, it has two digits.