Enter color code (0-6): 3
Her nails were green.
Enter color code (0-6): 5
Her eyes were violet.
Enter color code (0-6): 2
Her shoes were yellow.
Enter color code (0-6): 8
Bye

**switch and if else**

Both the switch statement and the if else statement let a program select from a list of alternatives. The if else is the more versatile of the two. For example, it can handle ranges, as in the following:

```java
if (age > 17 && age < 35)
    index = 0;
else if (age >= 35 && age < 50)
    index = 1;
else if (age >= 50 && age < 65)
    index = 2;
else
    index = 3;
```

The switch, however, isn't designed to handle ranges. Each switch case label must be a single value. Also, that value must be an integer (which includes char), so a switch won't handle floating-point tests. And the case label value must be a constant. If your alternatives involve ranges or floating-point tests or comparing two variables, use if else.

If, however, all the alternatives can be identified with integer constants, you can use a switch or an if else statement. Because that's precisely the situation that the switch statement is designed to process, the switch statement usually is the more efficient choice in terms of code size and execution speed, unless there are only a couple of alternatives from which to choose.

**Tip**