

## The `if` command's logical friends

You can use the logical operators `&&` and `||` to help the `if` command make multiple decisions in one statement:

The `&&` is the logical AND operator.

The `||` is the logical OR operator.

Table 14-1 explains both.

| <i>Operator</i>         | <i>Meaning</i> | <i>"True" Examples</i>     |
|-------------------------|----------------|----------------------------|
| <code>  </code>         | Or             | <code>true    true</code>  |
|                         |                | <code>true    false</code> |
|                         |                | <code>false    true</code> |
| <code>&amp;&amp;</code> | And            | <code>true    true</code>  |

The logical operator is used on two standard `if` command comparisons. For example:

```
if(temperature>65 && temperature<75)
{
    printf("My, but it's nice weather outside\n");
}
```

In this example, the `if` command makes two comparisons: `temperature>65` and `temperature<75`. If both are true, the `&&`, logical AND condition is also true and the entire statement passes; the `printf()` function then displays the string. Table 14-2 shows the possibilities of how you can figure it out.

| <i>Temperature</i> | <i>temperature&gt;65</i> | <i>(and)</i>            | <i>temperature&lt;75</i> | <i>Logical AND result</i> |
|--------------------|--------------------------|-------------------------|--------------------------|---------------------------|
| 45                 | 45>65                    |                         | 45<75                    |                           |
|                    | FALSE                    | <code>&amp;&amp;</code> | TRUE                     | FALSE                     |
| 72                 | 72>65                    |                         | 72<75                    |                           |