

## 4. BRANCHING COMMANDS

### GOTO and GOSUB

Advan BASIC has the standard BASIC commands, GOTO and GOSUB. Also available are named subroutines with arguments. They can simplify the writing of programs and make them easier for someone else to understand. That "someone" could be you if you need to modify a program you wrote some time ago. Chapter 8 is devoted to functions and subroutines.

### IF THEN ELSE

The IF THEN ELSE command lets you take different actions depending upon whether or not a specified condition is true or false:

```
10 IF DATE$="1 JAN" THEN PRINT "1st" ELSE PRINT "Not 1st"
```

The IF command is always followed by a conditional expression, which may contain integers, real, or string expressions. Conditions can also be combined with the AND and OR commands:

```
10 IF DAY%=31% AND MONTH$="DEC" THEN PRINT "IT'S NEW YEAR'S EVE"
```

If you are using both AND's and OR's, the AND's will always be executed first unless you use parentheses. In the next example, the OR commands in parentheses are executed before the AND.

```
10 IF (T%<3% OR Y%<>2%) AND (Z%>5% OR J%<=1%) THEN 100
```

You can have a line number or one or more statements after THEN. ELSE is optional; if used, it can be followed by a line number or by one or more statements. IF THEN ELSE must fit on one BASIC line (no more than 3 screen lines).

### IF DO ELSE ENDIF

IF DO ELSE ENDIF is a multi-line version of IF THEN ELSE. Just as in IF THEN, a conditional expression must always follow IF. DO replaces THEN and tells the compiler that it's a multi-line IF. In IF THEN, the end of the BASIC line is also the end of the IF. In the DO form, the IF continues until the ENDIF command is reached. ELSE is optional:

```
10 IF MONTH$="JAN" AND DAY%=1% DO
20   YEAREXPENSES=0
30   YEARINCOME=0
40   YEARTAX=0
50 ENDIF
```

In the above example, if it's Jan 1st, lines 20, 30, and 40 are executed and the three variables zeroed. If it's not Jan 1st, the program will skip lines 20, 30, and 40. Here is another example: