

### 30. Using IF .. ELSE

Sometimes you might wish to program the computer to take one course of action in a certain case - and a different course of action in another case. To do this the IF .. ELSE statement is used.

For example you may wish the computer to display 'PASS' if a student gets 50 or more in an exam, and 'FAIL' if the mark is less than 50 - this could be written in COBOL as follows:

```
IF STUDENT-MARK IS NOT LESS THAN 50
  DISPLAY 'PASS'
ELSE
  DISPLAY 'FAIL'.
```

*Note* - there should be a full-stop at the end of the complete IF .. ELSE sentence - and not before.

Sometimes the ELSE is not required:

e.g. IF SALARY > 2000 PERFORM DEDUCT-TAX. (i.e. anyone paid 2000 or less will not pay tax - so no action is needed)

The following *Relational Operators* may be used with the IF .. ELSE statement:- (the English version or the appropriate sign can be used)

IS GREATER THAN	>	IS NOT GREATER THAN	NOT >
IS LESS THAN	<	IS NOT LESS THAN	NOT <
IS EQUAL TO	=	IS NOT EQUAL TO	NOT =

*Note* In COBOL the sign for >= (greater than or equal to) does not exist; it must be expressed using IS NOT LESS THAN (or NOT <)

#### *Exercises*

1. Write a program which will ask an employee for his/her length of service (in years); if the length of service is more than 5 years, the computer should display the words 'bonus payable £100' - otherwise the words 'bonus payable £20' should appear.
2. Write a program which will ask a student for his/her marks in an exam. If the mark is less than 10, the message 'You must resit the exam' should appear, otherwise the computer should congratulate the student on his/her mark.