

# Conditional Processing - IF Statement

With the IF statement, you define a logical condition, and the execution of the statement attached to the IF statement then depends on that condition.

This chapter covers the following topics:

- Structure of IF Statement
- Nested IF Statements

## Structure of IF Statement

The IF statement contains three components:

IF	In the IF clause, you specify the logical condition which is to be met.
THEN	In the THEN clause you specify the statement(s) to be executed if this condition is met.
ELSE	In the (optional) ELSE clause, you can specify the statement(s) to be executed if this condition is <i>not</i> met.

So, an IF statement takes the following general form:

```
IF condition
  THEN execute statement(s)
  ELSE execute other statement(s)
END-IF
```

### Note:

If you wish a certain processing to be performed only if the IF condition is *not* met, you can specify the clause THEN IGNORE. The IGNORE statement causes the IF condition to be ignored if it is met.

### Example 1:

```
** Example 'IFX01': IF
*****
DEFINE DATA LOCAL
1 MYVIEW VIEW OF EMPLOYEES
  2 NAME
  2 BIRTH
  2 CITY
  2 SALARY (1:1)
END-DEFINE
*
LIMIT 7
READ MYVIEW BY CITY STARTING FROM 'C'
  IF SALARY (1) LT 40000 THEN
    WRITE NOTITLE '*****' NAME 30X 'SALARY LT 40000'
  ELSE
    DISPLAY NAME BIRTH (EM=YYYY-MM-DD) SALARY (1)
  END-IF
END-READ
END
```

The IF statement block in the above program causes the following conditional processing to be performed:

- IF the salary is less than 40000, THEN the WRITE statement is to be executed;
- otherwise (ELSE), that is, if the salary is 40000 or more, the DISPLAY statement is to be executed.

Output of Program IFX01:

NAME	DATE OF BIRTH	ANNUAL SALARY	
-----	-----	-----	
***** KEEN			SALARY LT 40000
***** FORRESTER			SALARY LT 40000
***** JONES			SALARY LT 40000
***** MELKANOFF			SALARY LT 40000
DAVENPORT	1948-12-25	42000	
GEORGES	1949-10-26	182800	
***** FULLERTON			SALARY LT 40000

## Example 2:

```
** Example 'IFX03': IF
*****
DEFINE DATA LOCAL
1 EMPLOY-VIEW VIEW OF EMPLOYEES
  2 NAME
  2 CITY
  2 BONUS (1,1)
  2 SALARY (1)
*
1 #INCOME (N9)
1 #TEXT (A26)
END-DEFINE
*
WRITE TITLE '-- DISTRIBUTION OF CATALOGS I AND II --' /
*
READ (3) EMPLOY-VIEW BY CITY = 'SAN FRANCISCO'
  COMPUTE #INCOME = BONUS(1,1) + SALARY(1)
  /*
  IF #INCOME > 40000
    MOVE 'CATALOGS I AND II' TO #TEXT
  ELSE
    MOVE 'CATALOG I'          TO #TEXT
  END-IF
  /*
  DISPLAY NAME 5X 'SALARY' SALARY(1) / BONUS(1,1)
  WRITE T*SALARY '-'(10) /
    16X 'INCOME:' T*SALARY #INCOME 3X #TEXT /
    16X '='(19)
  SKIP 1
END-READ
END
```

Output of Program IFX03:

```

-- DISTRIBUTION OF CATALOGS I AND II --
NAME                SALARY
                   BONUS
-----
COLVILLE JR        56000
                   0
                   -----
                   INCOME: 56000  CATALOGS I AND II
                   =====

RICHMOND            9150
                   0
                   -----
                   INCOME: 9150  CATALOG I
                   =====

MONKTON             13500
                   600
                   -----
                   INCOME: 14100  CATALOG I
                   =====

```

## Nested IF Statements

It is possible to use various nested IF statements; for example, you can make the execution of a THEN clause dependent on another IF statement which you specify in the THEN clause.

### Example:

```

** Example 'IFX02': IF (two IF statements nested)
*****
DEFINE DATA LOCAL
1 MYVIEW VIEW OF EMPLOYEES
  2 NAME
  2 CITY
  2 SALARY (1:1)
  2 BIRTH
  2 PERSONNEL-ID
1 MYVIEW2 VIEW OF VEHICLES
  2 PERSONNEL-ID
  2 MAKE
*
1 #BIRTH (D)
END-DEFINE
*
MOVE EDITED '19450101' TO #BIRTH (EM=YYYYMMDD)
*
LIMIT 20
FND1. FIND MYVIEW WITH CITY = 'BOSTON'
      SORTED BY NAME
  IF SALARY (1) LESS THAN 20000
    WRITE NOTITLE '*****' NAME 30X 'SALARY LT 20000'
  ELSE
    IF BIRTH GT #BIRTH
      FIND MYVIEW2 WITH PERSONNEL-ID = PERSONNEL-ID (FND1.)
        DISPLAY (IS=ON) NAME BIRTH (EM=YYYY-MM-DD)
          SALARY (1) MAKE (AL=8 IS=OFF)
    END-FIND
  END-IF

```

```

END-IF
SKIP 1
END-FIND
END
    
```

Output of Program IFX02:

NAME	DATE OF BIRTH	ANNUAL SALARY	MAKE
***** COHEN			SALARY LT 20000
CREMER	1972-12-14	20000	FORD
***** FLEMING			SALARY LT 20000
PERREAULT	1950-05-12	30500	CHRYSLER
***** SHAW			SALARY LT 20000
STANWOOD	1946-09-08	31000	CHRYSLER FORD