

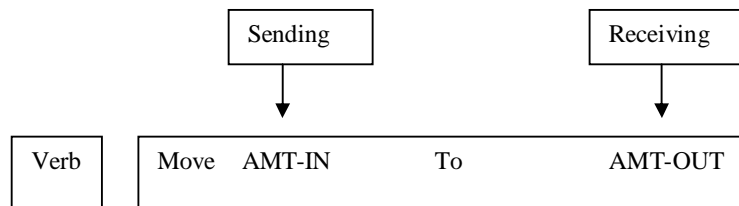
Moving Data and Printing Information

The Move Statement has The following Format:

Format 1 Move Identifier-1 To Identifier-2

Format2 Move Literal-1 To Identifier-2

The Move Statement has the following components



- 1) The move statement (Like any other Verb) appears in the Procedure Division.
- 2) Amt-In and Amt-Out are identifiers defined in the Data Division.
- 3) The Picture clause of both field must be identical..
- 4) The original contents of the receiving field will be replaced with the content of the sending field during the move operation.

Examples

```

Move Zeros To Total-Out.
Move Spaces To Heading-1.
Move 123 To Dept-Out.
Move Code-In To Code-Out.
    
```

a) Numeric Move

A numeric MOVE is one in which a numeric field or a literal is moved to a numeric receiving field.

When Sending and Receiving Fields Have the Same PIC Clauses.

The content of the Identifier-2 will be replaced with the contents of Identifier-1 and the sending field will be unchanged.

When Sending and Receiving Fields Have Different PIC Clauses.

The Move statement will not produce the same contents in the receiving field as in the sending field, since the size of the two fields differ.

Moving Integer Portion of Numeric Field.

Rule 1: MOVING INTEGER PORTION OF NUMERIC FIELDS

When moving an integer or integer portion of numeric sending field to a numeric receiving field, movement is from *right to left*. All nonfilled **higher-order** (Leftmost) integer positions of the receiving field are placed with zeros.

Example

Move Amt-In To Amt-Out.

	Picture	Content Before	Content After
Amt-In	999	123	123
Amt-Out	9999	4567	0123

Avoiding Truncation

In Numeric MOVE, be sure that the receiving field has at least as many whole number or integer positions as the sending field. If the receiving field has fewer integer positions than the sending field, you inadvertently **TRUNCATE** or cut off the most significant digits.

Example

Move Amt-In To Amt-Out.

	Picture	Content Before	Content After
Amt-In	9999	1000	1000
Amt-Out	999	345	000

Moving Decimal Portion of Numeric Field:

Rule 2: MOVING INTEGER PORTION OF NUMERIC FIELDS

When moving decimal portion of a numeric sending field to a decimal portion of numeric receiving field, movement is from **left to right**. All nonfilled **lower-order** (Rightmost) integer positions of the receiving field are placed with zeros.

Examples

- 1) Receiving Field Has More Decimal Positions Than The Sending Field

Move Cost-In To Cost-Out.

	Picture	Content Before	Content After
Cost-In	99v99	12^34	12^34
Cost-Out	99v999	56^789	12^340

- 2) Receiving Field Has Fewer Decimal Positions Than The Sending Field

Move Discount-In To Discount-Out.

	Picture	Content Before	Content After
Discount-In	V99	^12	^12
Discount-Out	V9	^3	^1

- 3) Sending Field Has More Integer and Decimal Positions Than The Receiving Field

Move QTY-In To QTY-Out.

	Picture	Content Before	Content After
QTY-In	999v9	123^4	123^4
QTY-Out	99	00	23

Moving Numeric Literals To Numeric Fields

The Rules are exactly the same as numeric fields.

Examples

- 1) The Sending Field Is a Numeric Literal with Integers Only.

```
Move 123 To LEVEL-NO-OUT.
```

05 LEEVEL-NO-OUT PIC 9(4).

	Content Before	Content After
LEVEL-NO-OUT	9999	0123

- 2) The Sending Field Is a Numeric Literal with a Decimal Component.

```
MOVE 12.34 TO PRICE-OUT
```

05 PRICE-OUT PIC 99v999.

	Content Before	Content After
PRICE-OUT	66666	12^340

b) NONNUMERIC OR ALPHANUMERIC MOVE

By a nonnumeric MOVE, we mean

<p>NONNUMERIC MOVE</p> <p>Moving an alphanumeric or alphabetic field, defined by PICTURE of X's or A's, to another alphanumeric or alphabetic field.</p> <p>Moving a nonnumeric literal to alphanumeric or alphabetic field.</p> <p>Move a numeric field or numeric literal to alphanumeric field</p>

When the receiving field has a PICTURE of X's or A's, or a group item, the move is treated as a nonnumeric move. There is only one rule for such moves:

<p>Rule for NONNUMERIC MOVE</p> <p>In a nonnumeric move, data is transmitted from the sending field to the receiving field from LEFT to Right. Low-order or right-order positions of the receiving field that are not replaced with sending field characters are filled with spaces.</p>

Examples:

- 1) The Receiving Field Is Larger Than The Sending Field.

<p>Move Name-In To Name-Out</p>

	Name-In	Name-OUT
Picture	XXX	XXXXX
Content Before	ABC	DEFGH
Content After	ABC	ABCbb

- 2) The Receiving Field Is Smaller Than the Sending Field.

Move Name-In To Name-Out

	Name-In	Name-OUT
Picture	XXXX	XXX
Content Before	NAME	
Content After	NAME	NAM

- 3) The Sending Filed Is Numeric Integer and The Receiving Field is Nonnumeric.

Move Unit-In To Unit-Out

	Unit-In	Unit-OUT
Picture	999	XXXX
Content Before	321	DCBA
Content After	321	321b

- 4) Sending Field Is a Nonnumeric Literal.

Move 'ABC' To Code-Out

	Code-Out
Picture	X(5)
Content Before	Aaaaa
Content After	ABCbb

5) Sending Field Is a Figurative Constant.

Move Spaces To Code-Out

	Code-Out
Picture	X(5)
Content Before	Aaaaa
Content After	

A Group Move Is Considered a Nonnumeric Move

All Group items, even those with numeric subfields, *are treated as alphanumeric fields.*

Example:

Suppose we want to represent January 1994 as 0194 in DATE-OUT, which has been defined as a group item:

```
05          Date-Out.
10 MONTH-OUT  PIC 99.
10 YEAR-OUT   PIC 99.
```

Because MONTH-OUT and YEAR-OUT are numeric fields,

```
MOVE 1 TO MONTH-OUT and
MOVE 94 TO YEAR-OUT
```

would result in 0194 in DATE-OUT field.

If, however, the programmer attempts to move data into DATE-OUT, DATE-OUT will be treated as alphanumeric field because it is a group item. The statement

```
MOVE ' 194' TO DATE-OUT
```

would result in 194b in DATE-OUT, **NOT** 0194 as it would if the month and year were moved separately.

Permissible MOVE Operations

Sending Field	Receiving Field			
	Numeric	Alphabetic	Alphanumeric	Group Item
Numeric	Yes	No	Yes*	Yes
Alphanumeric	No	Yes	Yes	Yes
Alphabetic	No	Yes	Yes	Yes
Zeros	Yes	No	Yes	Yes
Spaces	No	Yes	Yes	Yes
Group Item	No	Yes	Yes	Yes

* Numeric integer fields can be moved to alphanumeric fields but numeric fields with a V in the PIC clause cannot be moved to alphanumeric fields.

Qualification of Names

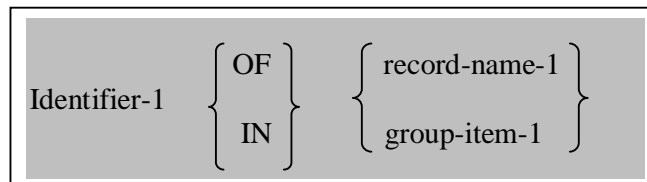
If the same name is used to define fields in different records or group items, indicate which record or group item is to be accessed by qualifying the identifier with the word OF or IN.

If AMT is both input and output field, we **can not** code
ADD AMT TO TOTAL.

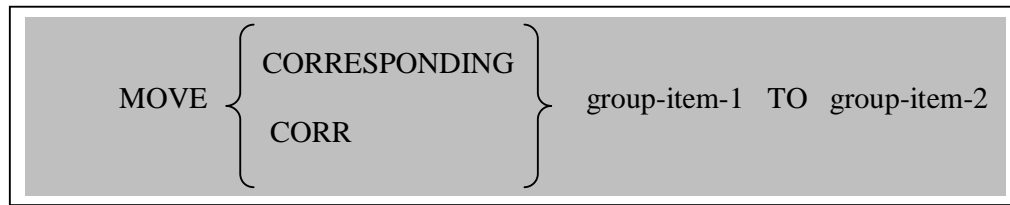
We could say instead

ADD AMT OF RECORD-IN TO TOTAL.

When more than one field in storage has the same name, we qualify the name in PROCEDURE DIVISION as follows



The MOVE CORRESPONDING Statement



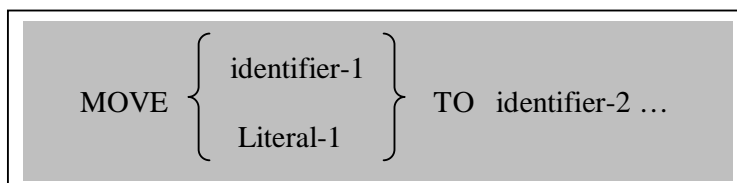
In the MOVE CORRESPONDING statement, all the elementary items within group-item-1 that have the *same names* as corresponding elementary items in group-item-2 will be moved.

Example:

```
Move Corresponding Record-In To Record-Out
```

With the move corresponding statement, all the fields in RECORD-IN that have the *same names* as fields in RECORD-OUT will be moved. The same-name fields in the RECORD-OUT need not be in a specific order. Any fields of the sending record (RECORD-IN) that are not matched by the same name fields in the receiving record (RECORD-OUT) are ignored.

Performing Multiple MOVE with a Single Statement.



Example:

```
MOVE 'ABC' TO CODE-1 CODE-2 CODE-3.
```

```
MOVE ZEROS TO WS-AMT1 WS-AMT2 WS-AMT3.
```

Reference Modification: Accessing segments of a Field

It is possible to reference a portion of an elementary field

- | |
|---------------------------------------------------------------------------------|
| a) Move 'Electroencephewgraph' To Name-In
b) Move Name-In (7,10) To Name-Out |
|---------------------------------------------------------------------------------|

After the field name Name-In, the First digit 7 in parentheses indicates the **Start** of the MOVE, and the Second digit 10 in parentheses indicates the **Length** of the MOVE.

	Name-In	Name-Out
Picture	X(21)	X(27)
Content After a)	'Electroencephewgraph'	XRDCBA
Content After b)	'Electroencephewgraph'	ENCENPHEWGRAPH

Note: b Denotes a Blank