Chapter 28. PROCEDURE DIVISION statements

Statements, sentences, and paragraphs in the PROCEDURE DIVISION are executed sequentially except when a procedure branching statement such as EXIT, GO TO, PERFORM, GOBACK, or STOP is used.

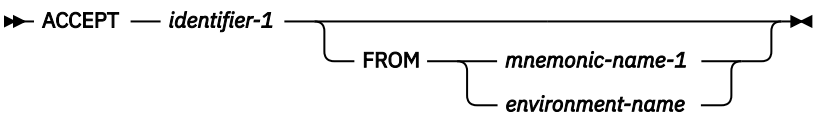
ACCEPT statement

The ACCEPT statement transfers data or system date-related information into the data area referenced by the specified identifier. There is no editing or error checking of the incoming data.

Data transfer

Format 1 transfers data from an input source into the data item referenced by *identifier-1* (the receiving area). When the FROM phrase is omitted, the system input device is assumed.

Format 1: data transfer



Format 1 is useful for exceptional situations in a program when operator intervention (to supply a given message, code, or exception indicator) is required. The operator must of course be supplied with the appropriate messages with which to reply.

identifier-1
The receiving area. Can be:

- An alphanumeric group item
- A national group item
- An elementary data item of usage DISPLAY, DISPLAY-1, or NATIONAL

A national group item is processed as an elementary data item of category national.

identifier-1 must not be a dynamic-length group item or a dynamic-length elementary item.

mnemonic-name-1
Specifies the input device. *mnemonic-name-1* must be associated in the SPECIAL-NAMES paragraph with an environment-name. See “SPECIAL-NAMES paragraph” on page 124.

- System input device

  The length of a data transfer is the same as the length of the record on the input device, with a maximum of 32,760 bytes.

  The system input device is read until the receiving area is filled or EOF is encountered. If the length of the receiving area is not an even multiple of the system input device record length, the final record will be truncated as required. If EOF is encountered after data has been moved and before the receiving area has been filled, the receiving area is padded with spaces of the appropriate representation for the receiving area. If EOF is encountered before any data has been moved to the

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receiving area, padding will not take place and the contents of the receiving area are unchanged. Each input record is concatenated with the previous input record.

If the input record is of a fixed-length format, the entire input record is used. No editing is performed to remove trailing or leading blanks.

If the input record is of the variable-length format, the actual record length is used to determine the amount of data received. With variable-format records, the Record Definition Word (RDW) is removed from the beginning of the input record. Only the actual input data is transferred to *identifier-1*.

If the data item referenced by *identifier-1* is of usage national, data is transferred without conversion and without checking for validity. The input data is assumed to be in UTF-16 format.

- Console

  1. A system-generated message code is automatically displayed, followed by the literal AWAITING REPLY.

     The maximum length of an input message is 114 characters.
  2. Execution is suspended.
  3. After the message code (the same code as in item 1) is entered from the console and recognized by the system, ACCEPT statement execution is resumed. The message is moved to the receiving area and left-justified regardless of its PICTURE clause.

     If *identifier-1* references a data item of usage NATIONAL, the message is converted from the native code page representation to national character representation. The native code page is the one that was specified by the CODEPAGE compiler option when the source code was compiled.

     The ACCEPT statement is terminated if any of the following conditions occurs:

     - No data is received from the console; for example, if the operator hits the Enter key. The target data item does not receive a new value and retains the value it had prior to the ACCEPT.
     - The receiving data item is filled with data.
     - Fewer than 114 characters of data are entered.

     If 114 bytes of data are entered and the receiving area is still not filled with data, more requests for data are issued to the console.

     If more than 114 characters of data are entered, only the first 114 characters will be recognized by the system.

     If the receiving area is longer than the incoming message, the rightmost characters are padded with spaces of the appropriate representation for the receiving area.

     If the incoming message is longer than the receiving area, the character positions beyond the length of the receiving area are truncated.

  For information about obtaining ACCEPT input from a z/OS UNIX file or stdin, see *Assigning input from a screen or file (ACCEPT)* in the *Enterprise COBOL Programming Guide*.

environment-name
Identifies the source of input data. An environment-name from the names given in Table 5 on page 126 can be specified.

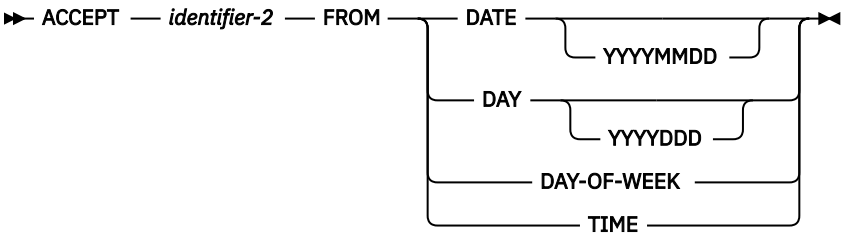
If the device is the same as that used for READ statements for a LINE SEQUENTIAL file, results are unpredictable.

System date-related information transfer

System information contained in the specified conceptual data items DATE, DATE YYYYMMDD, DAY, DAY YYYYDDD, DAY-OF-WEEK, or TIME, can be transferred into the data item referenced by *identifier-2*. The transfer must follow the rules for the MOVE statement without the CORRESPONDING phrase.

For more information, see "MOVE statement" on page 400.

Format 2: system information transfer



identifier-2

The receiving area. Can be:

- An alphanumeric group item
- A national group item
- An elementary data item of one of the following categories:
  - alphanumeric
  - alphanumeric-edited
  - numeric-edited (with usage DISPLAY or NATIONAL)
  - national
  - national-edited
  - numeric
  - internal floating-point
  - external floating-point (with usage DISPLAY or NATIONAL)

A national group item is processed as an elementary data item of category national.

identifier-2 cannot be a dynamic-length group item, but can be a dynamic-length elementary item.

Format 2 accesses the current date in two formats: the day of the week or the time of day as carried by the system (which can be useful in identifying when a particular run of an object program was executed). You can also use format 2 to supply the date in headings and footings.

The current date and time can also be accessed with the intrinsic function CURRENT-DATE, which also supports four-digit year values and provides additional information (see Chapter 43, "CURRENT-DATE," on page 541).

DATE, DATE YYYYMMDD, DAY, DAY YYYYDDD, DAY-OF-WEEK, and TIME

The conceptual data items DATE, DATE YYYYMMDD, DAY, DAY YYYYDDD, DAY-OF-WEEK, and TIME implicitly have USAGE DISPLAY. Because these are conceptual data items, they cannot be described in the COBOL program.

The content of the conceptual data items is moved to the receiving area using the rules of the MOVE statement. If the receiving area is of usage NATIONAL, the data is converted to national character representation.

DATE

Has the implicit PICTURE 9(6).

The sequence of data elements (from left to right) is:

```
Two digits for the year
Two digits for the month
Two digits for the day
```

Thus 27 April 2003 is expressed as 030427.

DATE YYYYMMDD
Has the implicit PICTURE 9(8).

The sequence of data elements (from left to right) is:

```
Four digits for the year
Two digits for the month
Two digits for the day
```

Thus 27 April 2003 is expressed as 20030427.

DAY
Has the implicit PICTURE 9(5).

The sequence of data elements (from left to right) is:

```
Two digits for the year
Three digits for the day
```

Thus 27 April 2003 is expressed as 03117.

DAY YYYYDDD
Has the implicit PICTURE 9(7).

The sequence of data elements (from left to right) is:

```
Four digits for the year
Three digits for the day
```

Thus 27 April 2003 is expressed as 2003117.

DAY-OF-WEEK
Has the implicit PICTURE 9(1).

The single data element represents the day of the week according to the following values:

```
1 represents Monday           5 represents Friday
2 represents Tuesday          6 represents Saturday
3 represents Wednesday        7 represents Sunday
4 represents Thursday
```

Thus Wednesday is expressed as 3.

TIME
Has the implicit PICTURE 9(8).

The sequence of data elements (from left to right) is:

```
Two digits for hour of day
Two digits for minute of hour
Two digits for second of minute
Two digits for hundredths of second
```

Thus 2:41 PM is expressed as 14410000.

Example of the ACCEPT statement

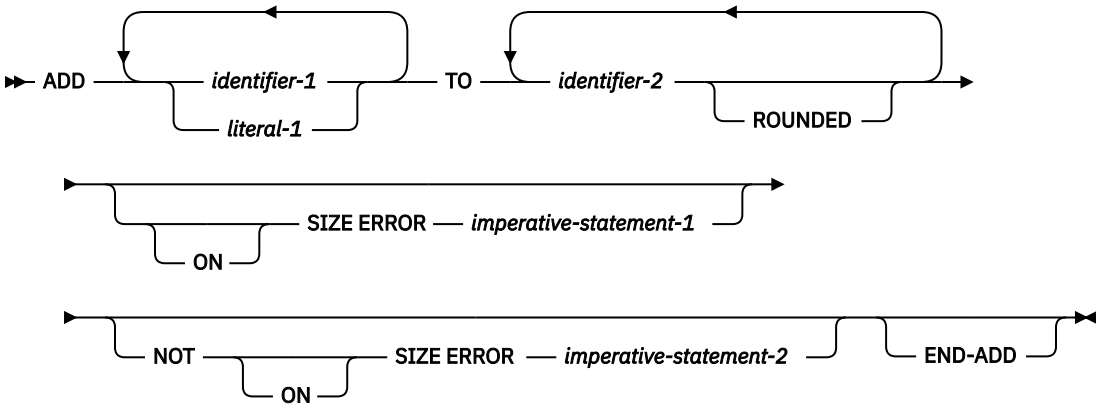
This topic lists an example for the ACCEPT statement.

```
//COBOL.SYSIN DD *
       IDENTIFICATION DIVISION.
        PROGRAM-ID. ACCPTST.
        ENVIRONMENT DIVISION.
        DATA DIVISION.
        WORKING-STORAGE SECTION.
        01 AGE                      PIC 9(3).
        01 GENDER                   PIC X(1).
        PROCEDURE DIVISION.
            ACCEPT AGE.
            ACCEPT GENDER.
            EVALUATE TRUE ALSO TRUE
               WHEN AGE > 60 ALSO GENDER = 'M'
                    DISPLAY 'THE MAN IS RETIRED   '
               WHEN AGE > 60 ALSO GENDER = 'F'
                    DISPLAY 'THE WOMAN IS RETIRED  '
               WHEN AGE <= 60 ALSO GENDER = 'M'
                    DISPLAY 'THE MAN IS NOT RETIRED   '
               WHEN AGE <= 60 ALSO GENDER = 'F'
                    DISPLAY 'THE WOMAN IS NOT RETIRED  '
               WHEN OTHER
                    DISPLAY 'INVALID INPUT      '
                    DISPLAY 'AGE =' AGE ' and GENDER =' GENDER
            END-EVALUATE.
            STOP RUN.
/*
//GO.SYSIN   DD *
 64
M
//*
```

ADD statement

The ADD statement sums two or more numeric operands and stores the result.

Format 1: ADD statement



All identifiers or literals that precede the keyword TO are added together, and this sum is added to and stored in *identifier-2*. This process is repeated for each successive occurrence of *identifier-2* in the left-to-right order in which *identifier-2* is specified.