**TEST statement**

TEST transfers control to a function based on the status of the tested field, record, map, or special function word with the EZE prefix.

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**TEST**

ÊÊ TEST

|  |  |
| --- | --- |
| map item | BLANK |
|  | BLANKS |
|  | CURSOR |
|  | DATA |
|  | MODIFIED |
|  | NULL |
|  | NULLS |
|  | NUMERIC |
|  | nnn |
|  | +nnn |
|  | ônnn |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| SQL row record item |  |  | BLANK | | |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  | BLANKS | | |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  | NULL |  | | |  |  |
|  |  |  |  |  | | |  |  |
|  |  |  |  | NUMERIC | | | |  |  |
|  |  |  |  |  |  |
|  |  |  |  | TRUNC | |  | | |  |
|  |  |  |  |  | | |  |

record I/O error value UI record MODIFIED map MODIFIED EZEAID AID value

data item BLANK

BLANKS

NUMERIC

EZESYS SYS value

true

,false

true,false

; ÊÍ

|  |  |
| --- | --- |
| **Attribute** | **Description** |
|  |  |
| map item | Name of a variable field on a map or a map item parameter for a |
|  | function. A map item can be subscripted, qualified, or both. This |
|  | comparison is only valid for terminal maps. |
|  |  |
| BLANK, | When used with map items, tests true if either of the following cases |
| BLANKS | are true: |
|  | v The data received from the display for the specified data item |
|  | contained all blanks or nulls or both. |
|  | v The map containing the item has not been conversed since the |
|  | program started, or since the last SET map CLEAR. |
|  | When use with non-map items with data type CHA, MIX, or DBCS, |
|  | tests true if the data item contains all blanks. |
|  |  |
| CURSOR | Tests that the user left the cursor in the specified data item. |
|  |  |
| DATA | Tests that there is data other than blanks or nulls within the map item |
|  | specified. Either the user entered the data or the data was moved to |
|  | the field before writing to the screen. |
|  |  |

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| --- | --- |
|  | **TEST** |
|  |  |
| **Attribute** | **Description** |
|  |  |
| MODIFIED | Tests true if data in the variable field has changed. Data is considered |
|  | changed if any of the following conditions are true: |
|  | v When specified for a map variable field, data was entered by the |
|  | program user the last time the map was displayed. |
|  | v A SET MODIFIED was done prior to the CONVERSE of the map. |
|  | v The field on the map was defined with a modified data tag (MDT) |
|  | at map definition time, and this is the first display of the map in the |
|  | program or the first display of the map after a SET CLEAR. |
|  | v When specified for a map, tests true if any variable field on the map |
|  | was changed. |
|  | **Note:** This saves you from having to test each map field separately. |
|  |  |
| NULL, | When specified for map variable field, tests true if either of the |
| NULLS | following cases are true: |
|  | v The data entered into the panel for the specified data item contained |
|  | all nulls or blanks. Nulls are received when the program user |
|  | presses the Erase EOF key. Note that a true TEST for NULLS does |
|  | not mean that the field contains nulls internally (it contains blanks). |
|  | v The map containing the item has not been conversed since the |
|  | program started, or since the last SET map CLEAR. |
|  | When use with non-map items with data type CHA, MIX, DBCS, or |
|  | UNICODE, tests true if the data item contains all blanks. |
|  |  |
| NULL (SQL | Tests true if the SQL row record item has had no value assigned to the |
| row record | item. |
| item) |  |
|  |  |
| NUMERIC | If the map item or data item type is character or mixed, tests true if |
|  | the field contains the characters 0 through 9. NUMERIC cannot be |
|  | used with EZE words. |
|  |  |
| nnn, +nnn, | Compares the length of the data returned against the value nnn, which |
| −nnn | is a numeric literal. If no sign precedes the number, the test is for an IS |
|  | EQUAL TO condition. If a + sign precedes the number, the condition |
|  | tested is IS GREATER THAN. For a minus (−) sign preceding a |
|  | number, the test is IS LESS THAN. |
|  | v In calculating the length, leading blanks, trailing blanks, and nulls |
|  | are not counted. |
|  | v If the field is at its originally defined state, the length is 0. For |
|  | example, if the map item contains default text (inserted during |
|  | definition) and it has not been modified during execution in any |
|  | way, then the length is calculated as 0. SET map CLEAR resets a |
|  | field to its originally defined state. |
|  | v If the field is not at its originally defined state, then the length is |
|  | calculated based on what was displayed or entered on the last |
|  | converse. |
|  |  |

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**TEST**

|  |  |
| --- | --- |
| **Attribute** | **Description** |
|  |  |
| true | Name of a main function or EZECLOS if specified within a program |
|  | flow. The name of a function, EZEFLO, EZERTN, or EZECLOS if |
|  | specified within a function. |
|  |  |
| false | Name of a main function or EZECLOS if specified within a program |
|  | flow. The name of a function, EZEFLO, EZERTN, or EZECLOS if |
|  | specified within a function. |
|  |  |
| SQL row | Name of a data item in an SQL row record or an SQL item parameter |
| record item | for a function. The name can include a qualifier. |
|  |  |
| TRUNC | Tests whether a character or a DBCS item in an SQL row record was |
|  | truncated (nonblank characters deleted on the right) the last time the |
|  | item value was read from the relational database. Truncation can only |
|  | occur when the column in the database is longer than the data item. |
|  | The TRUNC indicator is reset whenever a value is moved to the item, |
|  | or when the item is set to NULL. |
|  |  |
| record | Name of a record. |
|  |  |
| I/O error | Tests true if the I/O error value specified was returned from the |
| value | system on the last I/O option that accessed the record. See [ªI/O error](#page396) |
|  | [valueº on page 368](#page396) for more information. |
|  |  |
| map | Name of a map. |
|  |  |
| EZEAID | The special function used to test the key that caused the input |
|  | interrupt from the display. |
|  |  |
| AID value | Used in testing the state of the EZEAID special function word. See |
|  | [ªAID valueº on page 364](#page392) for more information. |
|  |  |
| data item | A data item syntactical element. See [ªData itemº on page 366](#page394) for more |
|  | information. |
|  |  |
| EZESYS | A special function word used to test the system on which a program is |
|  | running. |
|  | The EZESYS test is a runtime test. Generation for a target system will |
|  | fail if the program includes functions not supported on that system, |
|  | even if the function is within an IF EZESYS clause that would prevent |
|  | that function from executing on the target system. To allow generation |
|  | for the target system to proceed, replace the offending function with a |
|  | call to a program that performs the function. |
|  |  |
| SYS value | Used to test the state of the EZESYS special function word. See [ªSYS](#page405) |
|  | [valueº on page 377](#page405) for more information. |
|  |  |

**Definition considerations for TEST**

If you specify both a true and a false name on a TEST statement, you can separate the names with a comma. If you specify only the false part of the

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statement, you must precede it with a comma. Commas are automatically inserted for you when you use the TEST statement template.

If the state being tested is true, the name specified as the true attribute is executed as an unconditional statement. If the true attribute is not specified, execution continues with the statement following the TEST statement.

If the state being tested is false, the name specified as the false attribute is executed as an unconditional statement. If the false attribute is not specified, execution continues with the statement following the TEST statement.

Testing a map item is valid from the time the map is conversed until the next map appears or is conversed. If the modified data tag is on, the value of the item as it appears on the display is tested. Test statement results are consistent across environments for map items with fill characters null or blank, or with the modified data tag on.

When using the TEST statement within a function, you may test the map attributes of a parameter item as long as the parameter item has been defined as a map item parameter or the SQL attributes as long as the parameter item has been defined as an SQL item parameter. This capability allows reusable routines to be written to handle the map and SQL item processing.

**Target environments for TEST**

|  |  |
| --- | --- |
| **Environment** | **Compatibility considerations** |
|  |  |
| VM CMS | None. |
|  |  |
| VM batch | None. |
|  |  |
| CICS for | None. |
| MVS/ESA |  |
|  |  |
| MVS/TSO | None. |
|  |  |
| MVS batch | None. |
|  |  |
| IMS/VS | For a map field to test true when the data entered for a data item |
|  | contained all blanks, nulls, or a combination of both, the program |
|  | user must enter at least one blank in the field before pressing the |
|  | Erase EOF key. If the program user presses Erase EOF without |
|  | entering one blank in the field, IMS message format services leave |
|  | the field set to its original contents. |
|  |  |
| IMS BMP | None. |
|  |  |
| CICS for | None. |
| VSE/ESA |  |
|  |  |
| VSE batch | None. |
|  |  |
| CICS for OS/2 | None. |
|  |  |

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|  |  |
| --- | --- |
| **Environment** | **Compatibility considerations** |
|  |  |
| OS/400 | None. |
|  |  |
| OS/2 (GUI) | The following are not supported: |
|  | v TEST record IS I/O error value |
|  | v TEST record NOT I/O error value |
| Windows (GUI) | Same as OS/2 (GUI). |
|  |  |
| OS/2 (C++) | None. |
|  |  |
| AIX | None. |
|  |  |
| HP-UX | None. |
|  |  |
| CICS for AIX | None. |
|  |  |
| Windows NT | None. |
| (C++) |  |
|  |  |
| Windows NT | None. |
| (Java) |  |
|  |  |
| CICS for | None. |
| Windows NT |  |
|  |  |
| Solaris | None. |
|  |  |
| CICS for Solaris | None. |
|  |  |
| Test Facility | No distinction is made between testing for BLANKS and NULL. |
|  |  |

**Examples for TEST**

The following examples show how you can use the TEST statement.

**TEST statement using NULL**

In the following example, control transfers to AOK if the STA column in the SQLR record is null. Otherwise, control transfers to TRYGEN.

TEST SQLR.STA NULLS AOK,TRYGEN;

**TEST statement using NUMERIC**

To test using NUMERIC, type:

TEST TEMPNUM NUMERIC IS-NUM,NOT-NUM; /\* Call appropriate routine.

**TEST statement using MODIFIED**

To pass control to MOD if an item is modified, and pass control to NOMOD if it is not, type:

TEST ITEM MODIFIED MOD,NOMOD;

To pass control to MOD only if an item is modified, type:

TEST ITEM MODIFIED MOD;

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If the item is not modified, the statement immediately following the TEST statement is executed.

To pass control to NOMOD if an item is not modified, type:

TEST ITEM MODIFIED ,NOMOD;

If the item is modified, the statement immediately following the TEST statement is executed.

**Testing for a function key**

To test if PF1 was pressed by the program user, type:

TEST EZEAID PF1 TRUEGP,FALSEGP;

A variation that is a test for a true condition only is:

TEST EZEAID PF1 TRUEGP;

The TRUEGP set of statements is executed only if (in this example) PF1 is pressed.

Use of test for false testing is as follows:

TEST EZEAID PF1 ,FALSEGP;

**Testing for bypass edit PF keys or a PA key**

To test for bypass edit PF keys or a PA key code the following:

TEST EZEAID BYPASS EZEFLO,EZERTN;

**Testing the results of the last I/O for a record**

You can use a TEST statement to test the results of the last I/O operation for a record.

The following statement runs ERR1 if REC1 has an end of file condition:

TEST REC1 EOF ERR1;

**Testing for the length of data**

If a field on map (MAP1.FLD1) is defined as length 10 and XYZ is entered, the length of the data entered is 3:

|  |  |  |  |
| --- | --- | --- | --- |
| TEST MAP1.FLD1 +2 | | TRUEGP,FALSEGP; | /\* true |
| TEST MAP1.FLD1 3 TRUEGP,FALSEGP; | | | /\* true |
| TEST MAP1.FLD1 | -3 | TRUEGP,FALSEGP; | /\* false |
| TEST MAP1.FLD1 | +3 | TRUEGP,FALSEGP; | /\* false |