

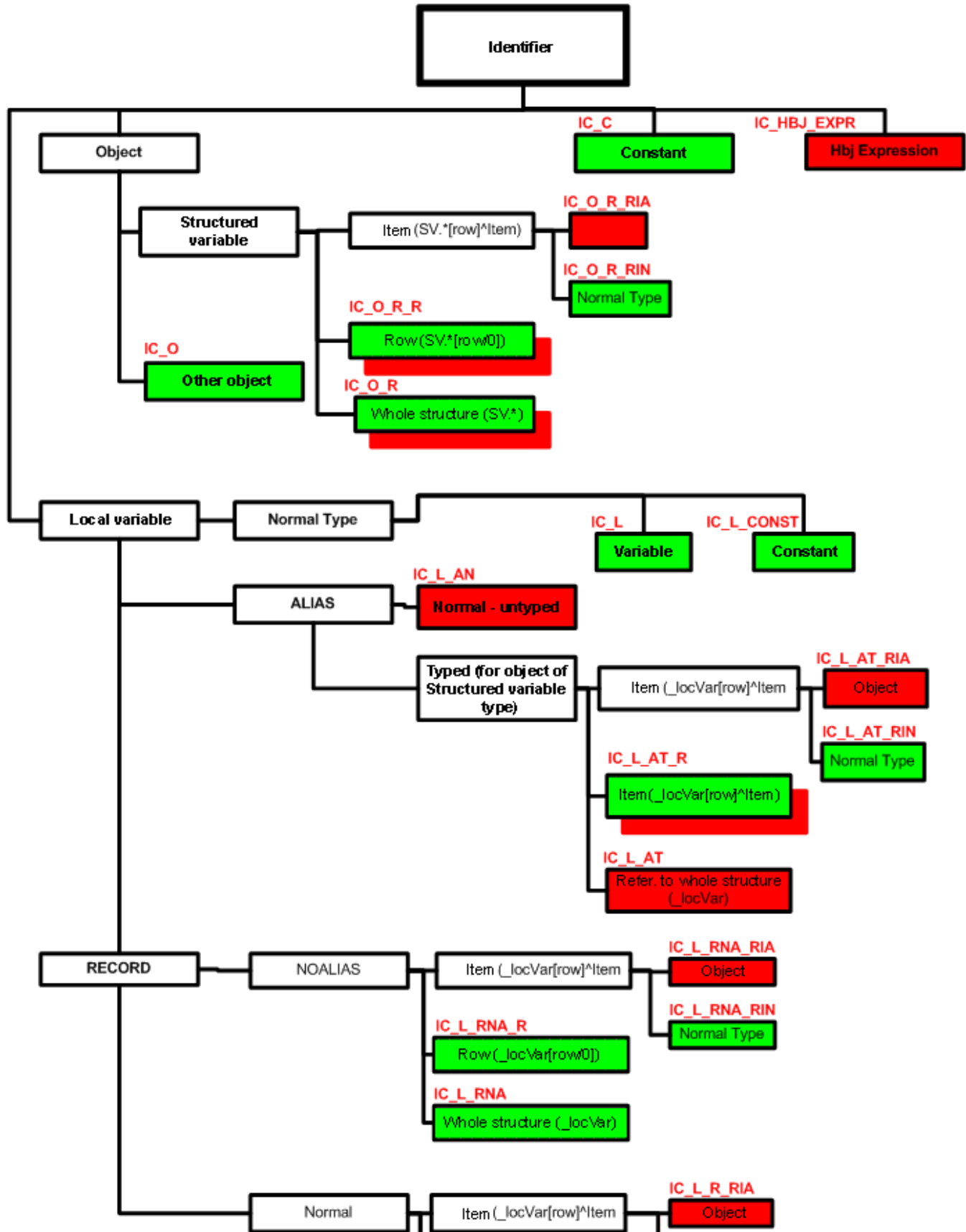
# Identifiers in ESL

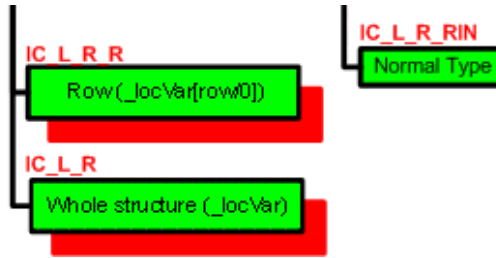
## Identifiers

Identifiers in the script provide the access to the value of an object or a local variable. In the case of a structured value, it is possible to access the whole value, the row of a structured variable, or its item through an identifier.

The following figure shows and names all possible methods of reference to a value, which are used in ESL:

Normal Type = INT, TEXT, BOOL, REAL, TIME, ...





#### Notes:

- Only colored boxes show a value.
- A green-colored box represents a value (group of values in case of a structure), with no references to other objects (ALIAS or column of the *Object* type).
- A red-colored box represents a value (group of values in case of a structure), with references to other objects (ALIAS or column of the *Object* type).
- A combination of red and green colors represents a value (group of values in case of a structure) where values and references may be combined.
- Each method of reference to value is named (red text above box).

#### Examples for individual types of references to value:

| Reference type (name) | Value description                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Example                                                           |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| IC_C                  | Constant.                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | "Text", 1, ...                                                    |
| IC_HOBJ_EXPR          | Expression of <b>INT</b> type that is interpreted as the reference to an object. The object is enclosed in brackets on the position where the identifier is expected.                                                                                                                                                                                                                                                                                                      | (20), (Sec\HBJ)                                                   |
| IC_VOBJ_EXPR          | Three comma-separated expressions enclosed in brackets: <ol style="list-style-type: none"> <li>1. unique identifier - an expression of HOBJ type</li> <li>2. row number - an expression of the INT type</li> <li>3. column number - an expression of the INT type</li> </ol> <b>Note:</b> The reference may only be used as a reference to a historical value for the <a href="#">GETARCHVAL</a> , <a href="#">GETARCHARR</a> , and <a href="#">SETDT_LINEOBJ</a> actions. | (H.Struct\HBJ, 2, 3)                                              |
| IC_O                  | An object of a type other than the <a href="#">Structured variable</a> .                                                                                                                                                                                                                                                                                                                                                                                                   | Sec, SysTime, I/O tag, ...                                        |
| IC_O_R                | An object of <a href="#">Structured variable</a> type.                                                                                                                                                                                                                                                                                                                                                                                                                     | <a href="#">SV.Structure</a>                                      |
| IC_O_R_R              | The row of object <a href="#">Structured variable</a> type. If the index is 0, it means the whole value, like IC_O_R.                                                                                                                                                                                                                                                                                                                                                      | <a href="#">SV.Structure[2]</a> , <a href="#">SV.Structure[0]</a> |
| IC_O_R_RIA            | The row item of objects of the <a href="#">Structured variable</a> type. The item is <i>Object</i> type (a reference to an object).                                                                                                                                                                                                                                                                                                                                        | <a href="#">SV.Structure[2]^Object</a>                            |
| IC_O_R_RIN            | The row item of objects of the <a href="#">Structured variable</a> type. The item is not an <i>Object</i> type (a reference to an object).                                                                                                                                                                                                                                                                                                                                 | <a href="#">SV.Structure[2]^Text</a>                              |
| IC_L                  | A local <a href="#">variable</a> of <i>BOOL</i> , <i>INT</i> , <i>TEXT</i> , <i>TIME</i> , or <i>REAL</i> types.                                                                                                                                                                                                                                                                                                                                                           |                                                                   |
| IC_L_CONST            | A constant (initialized) <a href="#">local variable</a> of <i>BOOL</i> , <i>INT</i> , <i>TEXT</i> , <i>TIME</i> , or <i>REAL</i> type.                                                                                                                                                                                                                                                                                                                                     |                                                                   |
| IC_L_AN               | A local <a href="#">variable</a> of ALIAS type (untyped).                                                                                                                                                                                                                                                                                                                                                                                                                  | ALIAS _a                                                          |
| IC_L_AT               | A local <a href="#">variable</a> of typed ALIAS type (without index or access to item).                                                                                                                                                                                                                                                                                                                                                                                    | ALIAS ( <a href="#">SD.RecordDef</a> ) _recA                      |
| IC_L_AT_R             | The row of objects of the <a href="#">Structured variable</a> type, to which the typed ALIAS currently refers. If the index is 0, it means the whole value.                                                                                                                                                                                                                                                                                                                | _recA[1] or the whole value<br>_recA[0]                           |
| IC_L_AT_RIA           | The row item of an object of <a href="#">Structured variable</a> type, to which the typed ALIAS currently refers. The item is <i>Object</i> type (a reference to an object).                                                                                                                                                                                                                                                                                               | _recA[1]^Object                                                   |
| IC_L_AT_RIN           | The row item of an object of <a href="#">Structured variable</a> type, to which the typed ALIAS currently refers. The item is not an <i>Object</i> type (a reference to an object).                                                                                                                                                                                                                                                                                        | _recA[1]^Text                                                     |
| IC_L_RNA              | A local <a href="#">variable</a> of the <i>Record</i> type. Reference to the whole value.                                                                                                                                                                                                                                                                                                                                                                                  | RECORD NOALIAS ( <a href="#">SD.RecordDef</a> )<br>_recNA         |

|               |                                                                                                                                                                                                                                                     |                                                                |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| IC_L_RNA_R    | A local <a href="#">variable</a> row of the <i>Record</i> type. If the index is 0, it means the whole value similar to IC_L_RNA.                                                                                                                    | _recNA[1] or the whole value _recNA[0]                         |
| IC_L_RNA_RIA  | The row item of a <a href="#">local variable</a> of <i>Record</i> type. The item is <i>Object</i> type (a reference to an object). Considering forbidden references to objects, the item represents a simple value (without predefined value type). | _recNA[1]^Object                                               |
| IC_L_RNA_RIN  | The row item of a <a href="#">local variable</a> of <i>Record</i> type. The item is <i>Object</i> type (a reference to an object). Unlike IC_L_RNA_RIA, the value type of the item is defined.                                                      | _recNA[1]^Text                                                 |
| IC_L_R        | A local structured variable. Reference to the whole value.                                                                                                                                                                                          | RECORD ( <a href="#">SD</a> . <a href="#">RecordDef</a> ) _rec |
| IC_L_R_R      | A row of <a href="#">local variables</a> of the <i>Record</i> type. If the index is 0, it means the whole value, like IC_L_R.                                                                                                                       | _rec[1] or the whole value _rec[0]                             |
| IC_L_R_RIA    | The row item of a <a href="#">local variable</a> of the <i>Record</i> type. The item is <i>Object</i> type (a reference to an object).                                                                                                              | _rec[1]^Object                                                 |
| IC_L_R_RIN    | The row item of a <a href="#">local variable</a> of the <i>Record</i> type. The item is not an <i>Object</i> type (a reference to an object).                                                                                                       | _rec[1]^Text                                                   |
| IC_L_NR       | A <a href="#">local variable</a> of the <i>Record</i> type (the structure type is not defined). The reference to the whole value.                                                                                                                   | RECORD () _rec                                                 |
| IC_L_NR_R     | The row of <a href="#">local variables</a> of the <i>Record</i> type (the structure type is not defined). If the index is 0, it is the whole value like IC_L_NR.                                                                                    | _rec[1] or the whole value _rec[0]                             |
| IC_L_NR_RII   | The row item of <a href="#">local variables</a> of the <i>Record</i> type (the structure type is not defined). The column is defined by the number.                                                                                                 | _rec[1]^_iCol                                                  |
| IC_L_NRNA     | A <a href="#">local variable</a> of the <i>Record</i> type (the structure type is not defined). The reference to the whole value.                                                                                                                   | RECORD NOALIAS () _recNA                                       |
| IC_L_NRNA_R   | The row of <a href="#">local variables</a> of the <i>Record</i> type (the structure type is not defined). If the index is 0, it is the whole value like IC_L_NRNA.                                                                                  | _recNA[1] or the whole value _recNA[0]                         |
| IC_L_NRNA_RII | The row item of <a href="#">local variables</a> of the <i>Record</i> type (the structure type is not defined). The column is defined by the number.                                                                                                 | _recNA[1]^_iCol                                                |



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