

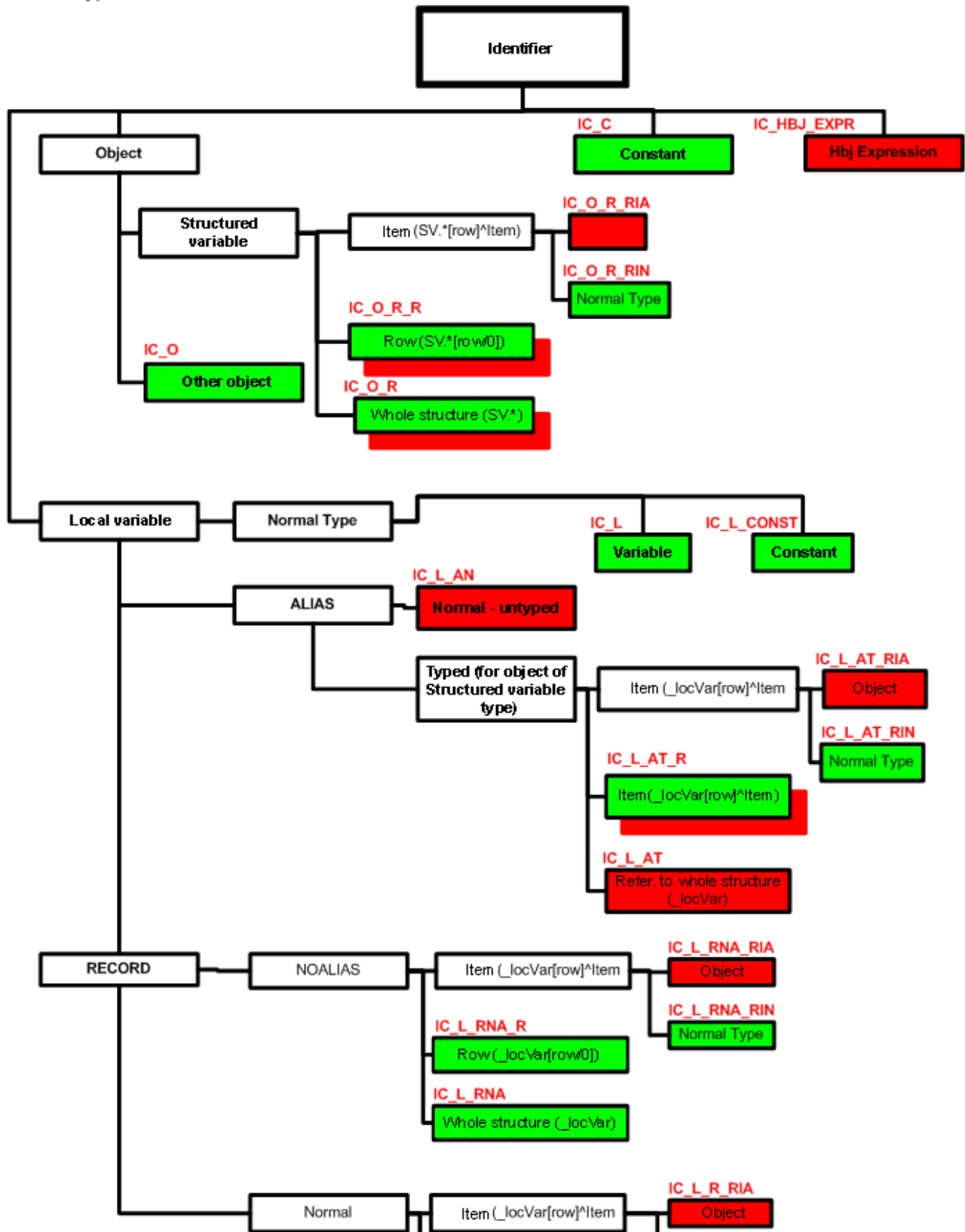
# Identifiers in ESL

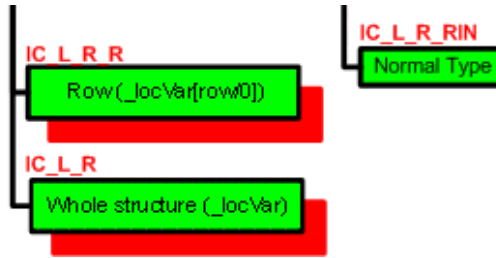
## Identifiers

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

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

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





#### Notes:

- Only coloured boxes shows a value.
- A green-coloured box represents a value (group of values in case of a structure), with no references to other objects (ALIAS or column of *Object* type).
- A red-coloured box represents a value (group of values in case of a structure), with references to other objects (ALIAS or column of *Object* type).
- A combination of red and green colours 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 - expression of HOBJ type</li> <li>2. row number - expression of INT type</li> <li>3. column number - expression of 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> a <a href="#">SETDT_LINEOBJ</a> actions. | (H.Struct\HBJ, 2, 3)                                              |
| IC_O                  | Object of a type other than <a href="#">Structured variable</a> .                                                                                                                                                                                                                                                                                                                                                                                     | Sec, SysTime, I/O tag, ...                                        |
| IC_O_R                | Object of <a href="#">Structured variable</a> type.                                                                                                                                                                                                                                                                                                                                                                                                   | <a href="#">SV.Structure</a>                                      |
| IC_O_R_R              | Row of object <a href="#">Structured variable</a> type. If the index is 0, it means whole value analogous to IC_O_R.                                                                                                                                                                                                                                                                                                                                  | <a href="#">SV.Structure[2]</a> , <a href="#">SV.Structure[0]</a> |
| IC_O_R_RIA            | Row item of object of <a href="#">Structured variable</a> type. The item is <i>Object</i> type (reference to object).                                                                                                                                                                                                                                                                                                                                 | <a href="#">SV.Structure[2]^Object</a>                            |
| IC_O_R_RIN            | Row item of object of <a href="#">Structured variable</a> type. The item is not <i>Object</i> type (reference to object).                                                                                                                                                                                                                                                                                                                             | <a href="#">SV.Structure[2]^Text</a>                              |
| IC_L                  | <a href="#">Local variable</a> of <b>BOOL</b> , <b>INT</b> , <b>TEXT</b> , <b>TIME</b> or <b>REAL</b> types.                                                                                                                                                                                                                                                                                                                                          |                                                                   |
| IC_L_CONST            | Constant (initialized) <a href="#">local variable</a> of <b>BOOL</b> , <b>INT</b> , <b>TEXT</b> , <b>TIME</b> or <b>REAL</b> type.                                                                                                                                                                                                                                                                                                                    |                                                                   |
| IC_L_AN               | <a href="#">Local variable</a> of ALIAS type (untyped).                                                                                                                                                                                                                                                                                                                                                                                               | ALIAS _a                                                          |
| IC_L_AT               | <a href="#">Local variable</a> of typed ALIAS type (without index or access to item).                                                                                                                                                                                                                                                                                                                                                                 | ALIAS ( <a href="#">SD.RecordDef</a> ) _recA                      |
| IC_L_AT_R             | Row of object of <a href="#">Structured variable</a> type, to which the typed ALIAS currently refers. If the index is 0, it means whole value.                                                                                                                                                                                                                                                                                                        | _recA[1] or the whole value _recA[0]                              |
| IC_L_AT_RIA           | 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 (reference to object).                                                                                                                                                                                                                                                                                   | _recA[1]^Object                                                   |
| IC_L_AT_RIN           | Row item of an object of <a href="#">Structured variable</a> type, to which the typed ALIAS currently refers. The item is not <i>Object</i> type (reference to object).                                                                                                                                                                                                                                                                               | _recA[1]^Text                                                     |
| IC_L_RNA              | <a href="#">Local variable</a> of <i>Record</i> type. Reference to the whole value.                                                                                                                                                                                                                                                                                                                                                                   | RECORD NOALIAS ( <a href="#">SD.RecordDef</a> ) _recNA            |
| IC_L_RNA_R            | <a href="#">Local variable</a> row of <i>Record</i> type. If the index is 0, it means whole value similarly to IC_L_RNA.                                                                                                                                                                                                                                                                                                                              | _recNA[1] or the whole value _recNA[0]                            |
| IC_L_RNA_RIA          | Row item of a <a href="#">local variable</a> of <i>Record</i> type. The item is <i>Object</i> type (reference to object). Considering forbidden references to objects, this item represents an simple value (without predefined value type).                                                                                                                                                                                                          | _recNA[1]^Object                                                  |
| IC_L_RNA_RIN          | Row item of a <a href="#">local variable</a> of <i>Record</i> type. The item is <i>Object</i> type (reference to 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.RecordDef</a> ) _rec                      |

|                   |                                                                                                                                                              |                                              |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| IC_L_R_R          | Row of <a href="#">local variable</a> of <i>Record</i> type. If the index is 0, it means whole value analogous to IC_L_R.                                    | _rec[1] or the whole value<br>_rec[0]        |
| IC_L_R_RIA        | Row item of a <a href="#">local variable</a> of <i>Record</i> type. The item is <i>Object</i> type (reference to object).                                    | _rec[1]^Object                               |
| IC_L_R_RIN        | Row item of a <a href="#">local variable</a> of <i>Record</i> type. The item is not <i>Object</i> type (reference to object).                                | _rec[1]^Text                                 |
| IC_L_NR           | <a href="#">Local variable</a> of <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 variable</a> of <i>Record</i> type (the structure type is not define). If the index is 0, it is the whole value like IC_L_NR.   | _rec[1] or the whole value<br>_rec[0]        |
| IC_L_NR_RII       | The row item of <a href="#">local variable</a> of <i>Record</i> type (the structure type is not define). The column is defined by the number.                | _rec[1]^_iCol                                |
| IC_L_NRNA         | <a href="#">Local variable</a> of <i>Record</i> type (the structure type is not define). The reference to the whole value.                                   | RECORD NOALIAS ()<br>_recNA                  |
| IC_L_NRNA_R       | The row of <a href="#">local variable</a> of <i>Record</i> type (the structure type is not define). If the index is 0, it is the whole value like IC_L_NRNA. | _recNA[1] or the whole<br>value<br>_recNA[0] |
| IC_L_NRNA_R<br>II | The row item of <a href="#">local variable</a> of <i>Record</i> type (the structure type is not define). The column is defined by the number.                | _recNA[1]^_iCol                              |



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