Using structures and arrays in CPDev

1. Structures should be first defined as new types. There is no support for anonymous structures.

Example:

```
TYPE MyFirstStruct : STRUCT
  Field1 : WORD := 8;
  Field2 : INT;
  Field3 : LWORD;
END_STRUCT;
END_TYPE
```

2. Definitions of new types have to be placed outside of program boundaries (i.e after `END_PROGRAM`). A POU with empty program can be created in the project to accommodate structure definitions. It may be left without any instructions, just for keeping the new types.

3. Structures can be used as inputs and outputs of function blocks.

Example:

```
FUNCTION_BLOCK STRUCT_BLOCK
VAR_INPUT
  INP_STRUCT1 : MYFIRSTSTRUCT;
  INP_STRUCT2 : MYSECONDSTRUCT; END_VAR
VAR_OUTPUT
  OUT_STRUCT1 : MYFIRSTSTRUCT;
  OUT_FIELD : INT;
END_VAR

  OUT_STRUCT1 := INP_STRUCT1;
  OUT_FIELD := INP_STRUCT2.Field2;

END_FUNCTION_BLOCK
```

4. Arrays of structures can be created also as global variables.

Example:

```
VAR_GLOBAL
  ARRAY_STRUCT : ARRAY [1..10] OF MYSECONDSTRUCT;
END_VAR
```

5. Direct access to fields of structures used as array elements is not possible. An extra variable is needed.

Example:

```
VAR E : MySecondStruct; END_VAR
(* Filling the array of structures with numbers 1..10 *)
```

```
FOR I:=1 TO 10 DO
  E := ARRAY_STRUCT[I];
  E.Field1:=I;  (* instead of ARRAY_STRUCT[I].Field1 := I *)
  ARRAY_STRUCT[I] := E;
END_FOR
```