

# Languages-beta: OC-L-11-Module-Implementations \*

The PPlanCompS Project

OC-L-11-Module-Implementations.cbs | PLAIN | PRETTY

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*Language* "OCaml Light"

## 11 Module implementations

*Syntax*  $UI : \text{unit-implementation} ::= (\text{semicolon-pair}^* \text{module-items semicolon-pair}^*)?$

$MIS : \text{module-items} ::=$   
    definition  
    | expr  
    | module-items semicolon-pair\* module-item

$MI : \text{module-item} ::=$   
    definition  
    | semicolon-pair expr

$D : \text{definition} ::=$   
    let-definition  
    | type-definition  
    | exception-definition

*Lexis*  $SCP : \text{semicolon-pair} ::= ';;'$

*Semantics*  $\text{interpret}[\![ UI : \text{unit-implementation} ]\!] : \Rightarrow \text{environments}$

*Rule*  $\text{interpret}[\![ ]\!] = \text{map}(\ )$

*Rule*  $\text{interpret}[\![ SCP_1^* MIS SCP_2^* ]\!] =$   
    handle-thrown(  
        scope(  
            ocaml-light-core-library,  
            accumulate(define-or-evaluate-items[\![ MIS ]\])),  
        sequential(  
            print("Uncaught exception: ", ocaml-light-to-string given, "\n"),  
            map(\ ))

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\*Suggestions for improvement: [plancomps@gmail.com](mailto:plancomps@gmail.com).  
Reports of issues: <https://github.com/plancomps/CBS-beta/issues>.

*Semantics* `define-or-evaluate-items` [ `_` : `module-items` ] :  $(\Rightarrow \text{envs})^+$

*Rule* `define-or-evaluate-items` [ `LD` ] =  
`ocaml-light-define-and-display` `define-values` [ `LD` ]

*Rule* `define-or-evaluate-items` [ `TDS` ] = `define-types` [ `TDS` ]

*Rule* `define-or-evaluate-items` [ `ED` ] = `define-exception` [ `ED` ]

*Rule* `define-or-evaluate-items` [ `E` ] =  
`ocaml-light-evaluate-and-display` `evaluate` [ `E` ]

*Rule* `define-or-evaluate-items` [ `MIS SCP* D` ] =  
(`define-or-evaluate-items` [ `MIS` ], `define-or-evaluate-items` [ `D` ])

*Rule* `define-or-evaluate-items` [ `MIS SCP* SCP E` ] =  
(`define-or-evaluate-items` [ `MIS` ], `define-or-evaluate-items` [ `E` ])