

0.1 EBNF Grammatik für DMF

$\langle \text{source_file} \rangle$	$::= \langle \text{dmf_declaration} \rangle \langle \text{new_line} \rangle \langle \text{model_declaration} \rangle \langle \text{new_line} \rangle$ $[\langle \text{import_block} \rangle] \langle \text{model_content} \rangle$
$\langle \text{dmf_declaration} \rangle$	$::= \text{'dmf'} \langle \text{version_number} \rangle$
$\langle \text{model_declaration} \rangle$	$::= \text{'model'} \langle \text{string_value} \rangle \text{'version'} \langle \text{version_number} \rangle$
$\langle \text{import_block} \rangle$	$::= \langle \text{import_statement} \rangle^+$
$\langle \text{import_statement} \rangle$	$::= \text{'import'} \langle \text{package_string} \rangle \text{'from'} \langle \text{string_value} \rangle \langle \text{new_line} \rangle$
$\langle \text{model_content} \rangle$	$::= \langle \text{package_content} \rangle^+$
$\langle \text{package_content} \rangle$	$::= [\langle \text{comment_block} \rangle] [\text{'expand'}] \langle \text{package_block} \rangle [\langle \text{override_block} \rangle]$ $ [\langle \text{comment_block} \rangle] [\text{'expand'}] \langle \text{struct_block} \rangle [\langle \text{override_block} \rangle]$ $ [\langle \text{comment_block} \rangle] [\text{'expand'}] \langle \text{enum_block} \rangle [\langle \text{override_block} \rangle]$ $ [\langle \text{comment_block} \rangle] [\text{'expand'}] \langle \text{entity_block} \rangle [\langle \text{override_block} \rangle]$ $ [\langle \text{comment_block} \rangle] [\text{'expand'}] \langle \text{interface_block} \rangle [\langle \text{override_block} \rangle]$
$\langle \text{comment_block} \rangle$	$::= \langle \text{comment} \rangle^+$
$\langle \text{comment} \rangle$	$::= \text{R'//.*\n'}$
$\langle \text{override_block} \rangle$	$::= \text{'override'} \text{'{' } (\langle \text{java_override} \rangle \langle \text{typescript_override} \rangle)^* \text{'}'}$
$\langle \text{java_override} \rangle$	$::= \text{'java'} \text{'{' } (\langle \text{java_annotation} \rangle \langle \text{java_extends} \rangle \langle \text{java_implements} \rangle$ $ \langle \text{java_class} \rangle \langle \text{java_name} \rangle \langle \text{java_type} \rangle \langle \text{java_doc} \rangle)^* \text{'}'}$
$\langle \text{java_annotation} \rangle$	$::= \text{'annotations'} \langle \text{stringValue} \rangle$
$\langle \text{java_doc} \rangle$	$::= \text{'javaDoc'} \langle \text{stringValue} \rangle$
$\langle \text{java_extends} \rangle$	$::= \text{'extends'} \langle \text{stringValue} \rangle$
$\langle \text{java_implements} \rangle$	$::= \text{'implements'} \langle \text{stringValue} \rangle$
$\langle \text{java_class} \rangle$	$::= \text{'class'} \langle \text{stringValue} \rangle$

$\langle \text{java_name} \rangle$::= 'name' $\langle \text{stringValue} \rangle$
$\langle \text{java_type} \rangle$::= 'type' $\langle \text{stringValue} \rangle$
$\langle \text{package_block} \rangle$::= 'package' '{' $\langle \text{package_content} \rangle^*$ '}'
$\langle \text{struct_block} \rangle$::= 'struct' $\langle \text{identifier} \rangle$ [$\langle \text{extends_block} \rangle$] [$\langle \text{implements_block} \rangle$] '{' $\langle \text{struct_content} \rangle^*$ '}'
$\langle \text{extends_block} \rangle$::= 'extends' $\langle \text{reftype} \rangle$
$\langle \text{implements_block} \rangle$::= 'implements' $\langle \text{reftype} \rangle$ (',' $\langle \text{reftype} \rangle$)+
$\langle \text{struct_content} \rangle$::= [$\langle \text{comment_block} \rangle$] $\langle \text{arg_block} \rangle$ [$\langle \text{override_block} \rangle$] [$\langle \text{comment_block} \rangle$] $\langle \text{ref_block} \rangle$ [$\langle \text{override_block} \rangle$] [$\langle \text{comment_block} \rangle$] $\langle \text{multi_block} \rangle$ [$\langle \text{override_block} \rangle$] [$\langle \text{comment_block} \rangle$] $\langle \text{func_block} \rangle$ [$\langle \text{override_block} \rangle$]
$\langle \text{arg_block} \rangle$::= 'arg' $\langle \text{primitive_type} \rangle$ $\langle \text{identifier} \rangle$ ';' ;
$\langle \text{ref_block} \rangle$::= 'ref' $\langle \text{reftype} \rangle$ $\langle \text{identifier} \rangle$ ';' ;
$\langle \text{multi_block} \rangle$::= 'ref' $\langle \text{multi_name} \rangle$ '<' $\langle \text{primitive_type} \rangle$ [',' $\langle \text{primitive_type} \rangle$] >' $\langle \text{identifier} \rangle$ ';' ; 'ref' $\langle \text{multi_name} \rangle$ '<' $\langle \text{reftype} \rangle$ [',' $\langle \text{primitive_type} \rangle$] '>' $\langle \text{identifier} \rangle$ ';' ; 'ref' $\langle \text{multi_name} \rangle$ '<' $\langle \text{primitive_type} \rangle$ [',' $\langle \text{reftype} \rangle$] '>' $\langle \text{identifier} \rangle$ ';' ; 'ref' $\langle \text{multi_name} \rangle$ '<' $\langle \text{reftype} \rangle$ [',' $\langle \text{reftype} \rangle$] '>' $\langle \text{identifier} \rangle$ ';' ;
$\langle \text{func_block} \rangle$::= 'func' $\langle \text{reftype} \rangle$ $\langle \text{identifier} \rangle$ '(' [$\langle \text{param_definition} \rangle$ (',' $\langle \text{param_definition} \rangle$)*] ')' ';' ; 'func' $\langle \text{primitive_type} \rangle$ $\langle \text{identifier} \rangle$ '(' [$\langle \text{param_definition} \rangle$ (',' $\langle \text{param_definition} \rangle$)*] ')' ';' ; 'func' 'void' $\langle \text{identifier} \rangle$ '(' [$\langle \text{param_definition} \rangle$ (',' $\langle \text{param_definition} \rangle$)*] ')' ';' ;
$\langle \text{param_definition} \rangle$::= $\langle \text{reftype} \rangle$ $\langle \text{identifier} \rangle$ $\langle \text{primitive_type} \rangle$ $\langle \text{identifier} \rangle$

$\langle \text{enum_block} \rangle$	$::= \text{'enum' } \langle \text{identifier} \rangle \text{'\{' } \langle \text{enum_content} \rangle^* \text{'\}'}$
$\langle \text{enum_content} \rangle$	$::= [\langle \text{comment_block} \rangle] \langle \text{arg_block} \rangle [\langle \text{override_block} \rangle]$ $\quad \quad [\langle \text{comment_block} \rangle] \langle \text{enum_constant} \rangle [\langle \text{override_block} \rangle]$
$\langle \text{enum_constant} \rangle$	$::= \langle \text{identifier} \rangle \text{'(' } \langle \text{enum_index} \rangle \text{' ' } \langle \text{primitive_value} \rangle \text{')' ';'}$
$\langle \text{enum_index} \rangle$	$::= \text{'_'} \langle \text{integerValue} \rangle$
$\langle \text{entity_block} \rangle$	$::= \text{'entity' } \langle \text{identifier} \rangle [\langle \text{extends_block} \rangle] [\langle \text{implements_block} \rangle] \text{'\{'}$ $\quad \langle \text{struct_content} \rangle^* \langle \text{identifier_statement} \rangle \text{'\}'}$
$\langle \text{identifier_statement} \rangle$	$::= \text{'identifier' '(' } \langle \text{identifier} \rangle \text{' (' } \langle \text{identifier} \rangle \text{')' }^* \text{')' ';'}$
$\langle \text{interface_block} \rangle$	$::= \text{'interface' } \langle \text{identifier} \rangle [\langle \text{implements_block} \rangle] \text{'\{' } \langle \text{interface_content} \rangle^*$ $\quad \text{'\}'}$
$\langle \text{interface_content} \rangle$	$::= [\langle \text{comment_block} \rangle] \langle \text{func_block} \rangle [\langle \text{override_block} \rangle]$

0.2 Beispiel

$\langle \text{statement} \rangle$	$::= \langle \text{ident} \rangle \text{'=' } \langle \text{expr} \rangle$ $\quad \quad \text{'for' } \langle \text{ident} \rangle \text{'=' } \langle \text{expr} \rangle \text{'to' } \langle \text{expr} \rangle \text{'do' } \langle \text{statement} \rangle$ $\quad \quad \text{'{' } \langle \text{stat-list} \rangle \text{'\}'}$ $\quad \quad \langle \text{empty} \rangle$
$\langle \text{stat-list} \rangle$	$::= \langle \text{statement} \rangle \text{';' } \langle \text{stat-list} \rangle \langle \text{statement} \rangle$