

Index

- operator, 48
- & operator, 48
- * operator, 49
- ** operator, 49
- + operator, 48
- / operator, 49
- /= operator, 47
- < operator, 47
- <= operator, 47
- = operator, 47
- > operator, 47
- >= operator, 47

A

- ABS operator, 49
- absolute operator, 49
- access type, 31,41
- access type declaration, 41
- active, 162
- ACTIVE attribute, 161
- actuals, 99
- adding operator, 48
- addition operator, 48
- AFTER clause, 14, 15,'56,70,80
- aggregate, 40
- aggregate target, 164
- alias, 151,187
- alias declaration, 152
- ALL keyword, 116,144,157
- allocator, 41
- analyzer, 9,23
- AND operator, 47
- architecture body, 8, 11, 12,15,52,79,97,98,118,209,211
- architecture name, 52,142,159
- array aggregate, 40,41
- array type, 37
- array type declaration, 37
- assertion statement, 65,94,147,175
- association list, 99
- attribute, 156
- attribute declaration, 156
- attribute name, 157
- attribute specification, 157

B

- BASE attribute, 163
- base type, 31,163
- based literal, 35
- behavior, 11
- BEHAVIOR attribute, 159
- behavioral style, 16,50, 78, 188
- binding indication, 115,119
- bit string literal, 39
- BIT type, 10, 33,217
- BIT_VECTOR type, 11,39,218
- block configuration, 118,121,122,149,167
- block header, 91
- block label, 91,159
- block name, 119
- block statement, 78,90,104,118,154,165,189
- boolean equation, 185
- BOOLEAN type, 30, 33, 217
- BUFFER mode, 51, 101, 103
- BUS signal, 153,155

C

- CASE statement, 60, 199, 205
- character literal, 33
- CHARACTER type, 33,217
- choices, 61,89
- comment, 27
- component, 7,96,97

- component configuration, 119
- component declaration, 12,97,109,210
- component instantiation statement, 12,13, 96,99, 109, 210
- component label, 12,97,99
- component name, 98,99,115
- composite type, 30,37
- concatenation operator, 48,187
- concurrent assertion statement, 94
- concurrent procedure call, 128,129,147
- concurrent signal assignment statement, 14,56,78,80,166, 174,176,177,185,188
- concurrent statement, 13,14,16,52,53,90,94,97,148
- conditional signal assignment statement, 88,175
- configuration, 20,98,111,112
- configuration declaration, 8,19,118,149,167,213
- configuration name, 118
- configuration specification, 112,119,120,122,213
- constant, 30
- CONSTANT class, 27
- constant declaration, 28
- constant object, 27
- constrained array type, 38
- context clause, 142,214

D

- data object, 27
- dataflow, 11
- dataflow style, 14,78,188
- deallocate, 42
- decoder, 187,193
- deferred constant, 22,28
- deferred constant declaration, 137
- delay, 14,191
- DELAYED attribute, 162,175
- delta delay, 15,56,82
- design file, 140
- design library, 9, 23, 99,139, 140,214
- design unit, 7,99,118
- device, 5
- disconnect time, 154, 155, 198
- disconnection specification, 155
- disconnection statement, 155
- discrete type, 32,61
- division operator, 49
- driver, 70,84, 91, 106, 154

E

- elaboration, 20, 25,34,55, 108, 117, 148,191
- entity, xiii,5,6,7,96
- entity declaration, 8, 10,50, 98, 108,139,146,183,208,211
- entity name, 51,142
- entity statement, 51,146
- enumeration literal, 32
- enumeration type, 32
- enumeration type declaration, 32
- equality operator, 48
- event, 14,56, 67, 79, 91, 162,191
- EVENT attribute, 67,161
- event queue, 83
- EXIT statement, 64
- explicit signal, 162
- exponentiation operator, 49

F

- fall time, 191
- file, 44,178
- file declaration, 45
- file type, 31,44
- file type declaration, 44
- flip-flop, 194
- floating point literal, 35
- floating point type, 34
- floating point type declaration, 34

- for-generation scheme, 148
- formal parameter, 125,127
- function, 124,126
- function attribute, 158
- function body, 126
- function call, 127
- function call notation, 134
- function declaration, 130,137
- function name, 126

G

- generate identifier, 148
- generate label, 148
- generate statement, 118,148,177,190
- generic map, 166
- generics, 51,107,192
- globally static expression, 34, 148,150
- guard expression, 91,153
- GUARD signal, 91
- guarded assignment, 91, 153, 194,197
- GUARDED keyword, 91
- guarded signal, 153

H

- HIGH attribute, 37,159,161
- host environment, 9, 23,44, 139, 175

I

- identifier, 27,215
- IF statement, 59,189
- if-generation scheme, 148,150
- implicit signal, 162
- IN mode, 10,51,101
- incomplete type, 43
- incomplete type declaration, 43
- index constraint, 38
- inequality operator, 48
- inertial delay, 68, 73, 191
- initialization, 18,25, 55, 58
- INOUT mode, 51,101
- integer literal, 34
- INTEGER type, 30,34,218
- integer type, 34
- integer type declaration, 34
- intermediate representation, 23
- iteration scheme, 62

K

- keyword, 27,215

L

- LAST_ACTIVE attribute, 162
- LAST.EVENT attribute, 162
- LAST_VALUE attribute, 162
- latch, 195
- LEFT attribute, 29,159,161
- LEFTOF attribute, 160
- LENGTH attribute, 159
- LIBRARY clause, 20,21,98, 137,142,143
- library name, 143
- literal overloading, 33
- locally static expression, 34,108
- locals, 99
- logical operator, 47
- loop identifier, 62
- loop label, 62,64
- LOOP statement, 62
- LOW attribute, 159,161

M

- memory, 196
- miscellaneous operator, 49
- MOD operator, 49
- mode, 10,51

multiplexer, 193
multiplication operator, 49
multiplying operator, 49

N

named association, 40,41, 43, 100, 114, 117,127,129
NAND operator, 47
NATURAL subtype, 37,218
netlist, 96,189
NEW operator, 42
NEXT statement, 64
NOR operator, 47
NOT operator, 47,49
NOW function, 67, 162, 218
NULL statement, 62
numeric type, 32

O

object declaration, 27,28
OPEN keyword, 99,119,196
operator, 47
operator notation, 134
operator overloading, 133
OR operator, 47
OTHERS clause, 61
OTHERS keyword, 116
OUT mode, 10,51,101
overloading, 33, 124, 131, 133

P

package, 136
package body, 8, 22,28, 130, 136,138
package declaration, 8, 21,28, 98, 130,136
package name, 137,142
parameter list, 127
passive statement, 147
physical literal, 36
physical type, 36
physical type declaration, 36
port, 10,51,79,98,107,183
port map, 166
POS attribute, 160
position number, 32,34,36, 159,160
positional association, 12, 13,40,41,99,117,127,129
POSITIVE subtype, 37,218
PRED attribute, 160
predefined attribute, 158
primary unit, 79,140
procedure, 124,127
procedure body, 127
procedure call, 128
procedure declaration, 130,137
process label, 53
process statement, 16, 50, 53,80,81, 88, 90, 92, 125, 128, 129, 174, 176, 193,199,205,206

Q

qualified expression, 152
QUIET attribute, 162

R

RANGE attribute, 87,164
range attribute, 158
range constraint, 32
REAL type, 36,218
record aggregate, 41
record type, 37,40
record type declaration, 40
register, 195
REGISTER signal, 153,155,194,198
relational operator, 47
REM operator, 49
reserved word, xiii,27,215

resolution function, 85,93, 105, 153
resolved signal, 86,153
RETURN statement, 126
return statement, 126
REVERSE_RANGE attribute, 164
RIGHT attribute, 159,161
RIGHTOF attribute, 160
rise time, 191

S

scalar type, 30,31
secondary unit, 79,141
select expression, 89
selected name, 22,41,144
selected signal assignment statement, 89
sensitivity list, 16, 54,57,58,79, 88,90,130,208
sequential assertion statement, 94
sequential procedure call statement, 128
sequential signal assignment statement, 17,80
sequential statement, 16,53, 126
severity level, 66,175
SEVERITY_LEVEL type, 33,66,217
shift operation, 187
signal, 17, 18, 30, 55, 97, 184, 194, 199
signal assignment statement, 14, 17,55,68,78,80,91, 194, 197
signal attribute, 158
SIGNAL class, 28
signal declaration, 13, 15, 29,86,153
signal object, 28
simulation, 25
simulator, 9,66,83
slice, 38,101,186,187
STABLE attribute, 94,162
stack, 190
STANDARD package, 24,30,36,139,145,215,217
STD library, 24, 139, 145
string literal, 39
STRING type, 39,218
structural style, 12, 96, 188
structure, 11
STRUCTURE attribute, 160
subprogram, 124
subprogram body, 125
subprogram call, 125
subprogram declaration, 130
subprogram name, 125
subprogram overloading, 131
subprogram specification, 125, 126, 127,130
subprogram statements, 126
subtraction operator, 48
subtype, 31,86,110
subtype declaration, 31,152
SUCC attribute, 160

T

target signal, 14,68,88,89
test bench, 173
TEXT type, 47
TEXTIO package, 24,47,139,215,218
TIME type, 36,218
transaction, 70,85
TRANSACTION attribute, 162
transport delay, 69,71
type, 30
type attribute, 158
typecasting, 153
type checking, 152
type conversion, 152,153
type declaration, 30

U

unconstrained array declaration, 38

unconstrained array type, II, 38
USE clause, 21, 98, 137, 142,143
user-defined attribute, 156

V

VAL attribute, 160
value attribute, 158
variable, 17,30,54
variable assignment statement, 54
VARIABLE class, 28
variable declaration, 17,28
variable object, 28
VHDL system, 9,23

W

WAIT statement, 17,57,130,176
waveform element, 70,88,89,92
waveform expression, 70,88,89
wire, 13,184
WORK library, 24,139
working library, 23,24, 139

X

XOR operator, 47