INDEX

A

abbreviations table 4, 66–67
ABI 10, 60
accelerated access 49
access declarations 41
accessibility 18, 41, 74
activations 5, 59
address space
  contiguous 23, 26
  flat 19
  multiple 13
  segmented 5, 19, 26, 33, 50, 66
addresses
  class 19, 26, 38, 75
  offset portion 19, 50, 66, 77
  size of 50, 66, 77
anonymous types 30
anonymous unions 33, 41
arrays 5, 39
  dimensions 39
  ordering 39, 77
  stride 39
artificial entries 19
attributes 3, 7, 67
  addresses 8, 67
  blocks 8, 67
  constants 8, 68
  flags 8, 69
  forms 4, 7, 67
  names 4, 7, 67
  ordering 9, 27
  references 8, 69
  strings 9, 70
  values 4, 7, 66

B

base types 18, 24, 37, 65, 74
bit fields 42

C

C 3, 26, 33, 39–40, 45, 47, 57
C++ 3, 5, 18–19, 21, 28, 32–33, 40–41, 43, 47, 49, 57
call frame information 5, 59, 65, 78
  Common Information Entry 61
  Frame Description Entry 62
  instructions 62, 78
  register rules 61
  structure 60
  usage 64
calling conventions 26, 65, 76
catch blocks 32
classes 33, 40
  derived 40
  friends 41
  incomplete 40
  virtual base 41
common blocks 27, 35
compatibility 3, 65
compilation units 23, 28, 44, 66
  header 66
constants 33–34

D

`.debug` 4
`.debug_abbrev` 66–67, 79
`.debug_aranges` 49, 77, 79
`.debug_frame` 61, 79
`.debug_info` 3–4, 7, 49–50, 66, 79
`.debug_line` 4, 50, 79
`.debug_loc` 17, 79
`.debug_macinfo` 57, 79
`.debug_pubnames` 49, 77, 79
`.debug_str` 70, 79
debugging information entries 3, 7, 9, 66
  child entries 4, 9, 67
  null entries 9, 66–67
  siblings 4, 9, 67
declarations
  accessibility 18, 74
  coordinates 20, 28, 30, 44
  defining 20, 33, 40, 43
  external 25, 33
  imported 35
  non-defining 4, 20, 26, 33, 38, 40
  scope 34, 37
  types of 4, 18
  visibility 18, 75
discriminants 44, 77
discriminated unions 40, 44, 77

E

entry points 25
  declarations owned by 27

  locations 26
  return types 26
enumerations 5, 39, 45
error values 65
exceptions 5, 28, 32

F

file types 48
flat address space 19
Fortran 3, 27, 35, 46–47
FORTRAN77 3
Fortran90 3, 34–35
friends 41

I

identifiers
  case 24, 76
  names 21, 49
imports 35
inheritance 40

L

labels 31
languages 3, 23, 75
LEB128 8, 51, 68, 70
lexical blocks 31
line number information 4, 20, 23, 50, 77
  definitions 51, 77
  extended opcodes 52, 56, 78
  general rules 59
  prologue 52
  special opcodes 52, 54
  standard opcodes 52, 55, 78
  state machine registers 51
locations
  arithmetic operations 13
  control flow operations 14
  descriptions 4, 10, 19, 41, 72
  examples 15–16
  expressions 10, 41, 65, 72
  lists 4, 10, 17, 74
  literal encodings 11
  logical operations 13
  register based addressing 12
  register name operators 10
  special operations 15
  stack 11–12, 15
lookup
  by address 49, 77
  by name 49, 77

M

macro information 4, 24, 57, 78
  base source entries 58
  command line options 58
  define and undefine entries 57
  end file entries 58
  start file entries 58
  vendor extensions 58
main programs 26
members 30
  bit fields 42
  data 40–41
  functions 25, 40, 43
  locations 11, 43
  pointers to 47
  static data 33, 40, 49
Modula2 3, 18, 25, 32
modules 25
  definition 25
  priority 25

N

namelists 35

O

optimized code 10, 18, 33

P

parameters
  default value 34
  formal 27, 32–33, 45
  optional 34
  unspecified 27, 32, 46
  variable 34
Pascal 3, 32, 40, 46, 48
pointers to members 47
pre-processor 4, 57

R

records 40

S

scope 34, 37
segmented address space 5, 19, 26, 33, 50, 66
set types 46
source
  columns 20, 51
  files 20, 23, 51, 53, 56, 58, 78
  lines 20, 51, 57
string table 70
string types 46
structures 33, 40
  derived 40
  incomplete 40
subranges 39, 46
subroutines 19, 25
  declarations owned by 27
  frame base 12, 27
  inline 28, 76
  inlined 29
  locations 26
  members 25, 43
  nested 27
  out-of-line 30
  prototypes 26, 45
  return addresses 27
  return types 26, 45
  types 19, 45

T

tags 4, 7, 65, 67
templates 5, 28, 43
try blocks 32
type modifiers 18, 38
typedefs 38
types
  base 18, 24, 37, 65, 74
  constant 18, 38
  modifiers 18, 38
  packed 18, 38
  pointer 18–19, 38
  reference 18–19, 38
  user-defined 18
  volatile 18, 38

U

unions 33, 40, 42
  anonymous 33, 41
  incomplete 40
user-defined types 18

V

variable length data 4, 8, 68, 70
variables 33
variants 40, 44, 77
vendor extensions 4, 58, 60, 65
Version 1 3–4, 10, 66
Version 2 3, 10, 66, 78
virtual functions 3, 19, 43
virtuality 19, 41, 43, 75
visibility 18, 75

W

with statements 32