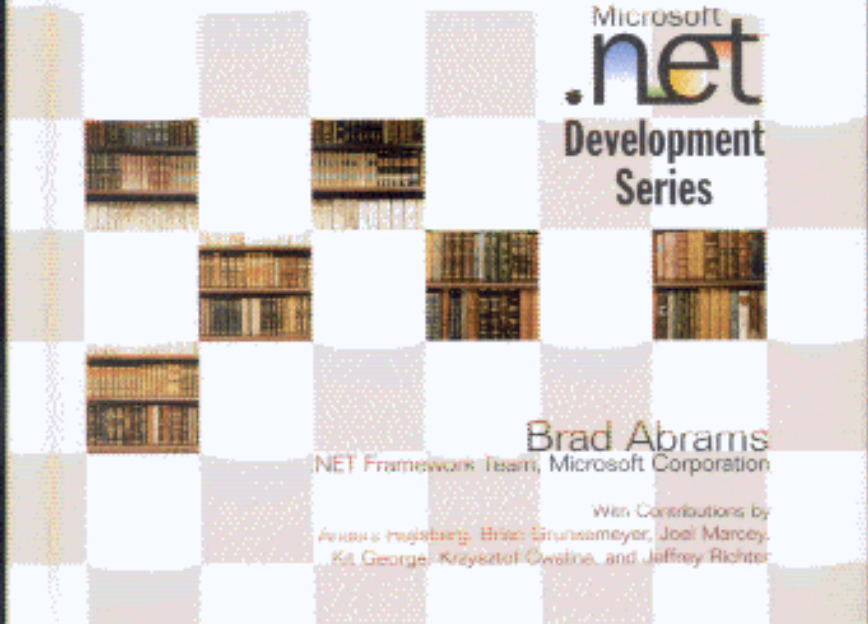


Foreword by Joel Marcey, Chair, CLI Technical Group, ECMA International



.NET Framework Standard Library Annotated Reference

Volume 1: Base Class Library and
Extended Numerics Library



Microsoft
.net
Development
Series

Brad Abrams
NET Framework Team, Microsoft Corporation

With Contributions by
Anders Iwajski, Brian Grunsmeyer, Joel Marcey,
Kit George, Krzysztof Owsiniak, and Jeffrey Richter



Contents

Foreword xiii

Preface xvii

Part I Namespace Overviews 1

System	3
System.Collections	11
System.Diagnostics	14
System.Globalization	15
System.IO	17
System.Security	21
System.Text	25
System.Threading	27

Part II Class Libraries 31

System.ApplicationException	33
System.ArgumentException	35
System.ArgumentNullException	37
System.ArgumentOutOfRangeException	40
System.ArithmeticException	42
System.Array	44
System.Collections.ArrayList	52
System.ArrayTypeMismatchException	57
System.Text.ASCIIEncoding	59
System.AsyncCallback Delegate	61
System.Attribute	63

System.AttributeTargets Enum 68
System.AttributeUsageAttribute 71

System.Boolean Structure 75
System.Byte Structure 77

System.Char Structure 81
System.CharEnumerator 85
System.CLSCompliantAttribute 88
System.Security.CodeAccessPermission 90
System.Security.Permissions.CodeAccessSecurityAttribute 94
System.Collections.Comparer 96
System.Diagnostics.ConditionalAttribute 97
System.Console 100
System.Convert 104

System.DateTime Structure 115
System.Globalization.DateTimeFormatInfo 121
System.Globalization.DateTimeStyles Enum 131
System.Decimal Structure 133
System.Text.Decoder 140
System.Delegate 142
System.Collections.DictionaryEntry Structure 146
System.IO.Directory 148
System.IO.DirectoryNotFoundException 151
System.DivideByZeroException 153
System.Double Structure 155
System.DuplicateWaitObjectException 160

System.Text.Encoder 163
System.Text.Encoding 164
System.IO.EndOfStreamException 170
System.Enum 172
System.Environment 177
System.Security.Permissions.EnvironmentPermission 180
System.Security.Permissions.EnvironmentPermissionAccess Enum 183
System.Security.Permissions.EnvironmentPermissionAttribute 185

System.EventArgs 187
System.EventHandler Delegate 190
System.Exception 192
System.ExecutionEngineException 198

System.IO.File 201
System.IO.FileAccess Enum 204
System.Security.Permissions.FileIOPermission 206
System.Security.Permissions.FileIOPermissionAccess Enum 211
System.Security.Permissions.FileIOPermissionAttribute 213
System.IO.FileLoadException 215
System.IO.FileMode Enum 218
System.IO.FileNotFoundException 220
System.IO.FileShare Enum 223
System.IO.FileStream 225
System.FlagsAttribute 231
System.FormatException 233

System.GC 235

System.Collections.Hashtable 239

System.IAsyncResult Interface 245
System.ICloneable Interface 248
System.Collections.ICollection Interface 251
System.IComparable Interface 254
System.Collections.IComparer Interface 258
System.Collections.IDictionary Interface 260
System.Collections.IDictionaryEnumerator Interface 262
System.IDisposable Interface 264
System.Collections.IEnumerable Interface 267
System.Collections.IEnumerator Interface 269
System.IFormatProvider Interface 271
System.IFormattable Interface 273
System.Collections.IHashCodeProvider Interface 283
System.Collections.IList Interface 286
System.IndexOutOfRangeException 292

System.Int16 Structure 294
System.Int32 Structure 297
System.Int64 Structure 301
System.Threading.Interlocked 304
System.InvalidCastException 307
System.InvalidOperationException 309
System.InvalidProgramException 311
System.IO.IOException 312
System.Security.IPermission Interface 314

System.MarshalByRefObject 317
System.Math 319
System.IO.MemoryStream 321
System.Threading.Monitor 325

System.NotFiniteNumberException 331
System.NotImplementedException 333
System.NotSupportedException 335
System.NullReferenceException 337
System.Globalization.NumberFormatInfo 339
System.Globalization.NumberStyles Enum 343

System.Object 347
System.ObjectDisposedException 350
System.ObsoleteAttribute 352
System.OutOfMemoryException 354
System.OverflowException 356

System.IO.Path 359
System.IO.PathTooLongException 365
System.Security.PermissionSet 367
System.Security.Permissions.PermissionState Enum 373

System.Random 375
System.RankException 378

System.SByte Structure 381
System.Security.Permissions.SecurityAction Enum 384

System.Security.Permissions.SecurityAttribute 386
System.Security.SecurityElement 388
System.Security.SecurityException 390
System.Security.Permissions.SecurityPermission 392
System.Security.Permissions.SecurityPermissionAttribute 395
System.Security.Permissions.SecurityPermissionFlag Enum 398
System.IO.SeekOrigin Enum 400
System.Single Structure 402
System.StackOverflowException 406
System.IO.Stream 408
System.IO.StreamReader 414
System.IO.StreamWriter 417
System.String 420
System.Text.StringBuilder 429
System.IO.StringReader 434
System.IO.StringWriter 436
System.Threading.SynchronizationLockException 438
System.SystemException 440

System.IO.TextReader 443
System.IO.TextWriter 445
System.Threading.Thread 448
System.Threading.ThreadAbortException 452
System.Threading.ThreadPriority Enum 454
System.Threading.ThreadStart Delegate 456
System.Threading.ThreadState Enum 458
System.Threading.ThreadStateException 461
System.Threading.Timeout 463
System.Threading.Timer 465
System.Threading.TimerCallback Delegate 468
System.TimeSpan Structure 470
System.Type 474
System.TypeInitializationException 484

System.UInt16 Structure 487
System.UInt32 Structure 490

System.UInt64 Structure	493
System.UnauthorizedAccessException	496
System.Globalization.UnicodeCategory Enum	498
System.Text.UnicodeEncoding	500
System.Text.UTF8Encoding	503
System.ValueType	507
System.Security.VerificationException	510
System.Version	512
System.Threading.WaitHandle	515
<i>Annotations Index</i>	519
<i>Index</i>	521