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1: #####
2: # $Id: ogr.py 11670 2007-06-19 15:44:59Z warmerdam $
3: #
4: # Project: OpenGIS Simple Features Reference Implementation
5: # Purpose: OGR Python Shadow Class Implementations
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7: #
8: #####
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28: #####
29:
30:
31: # OGRwkbGeometryType
32:
33: wkb25Bit = -2147483648 # 0x80000000
34: wkbUnknown = 0
35: wkbPoint = 1
36: wkbLineString = 2
37: wkbPolygon = 3
38: wkbMultiPoint = 4
39: wkbMultiLineString = 5
40: wkbMultiPolygon = 6
41: wkbGeometryCollection = 7
42: wkbNone = 100
43: wkbLinearRing = 101
44: wkbPoint25D = wkbPoint + wkb25Bit
45: wkbLineString25D = wkbLineString + wkb25Bit
46: wkbPolygon25D = wkbPolygon + wkb25Bit
47: wkbMultiPoint25D = wkbMultiPoint + wkb25Bit
48: wkbMultiLineString25D = wkbMultiLineString + wkb25Bit
49: wkbMultiPolygon25D = wkbMultiPolygon + wkb25Bit
50: wkbGeometryCollection25D = wkbGeometryCollection + wkb25Bit
51:
52:
53: # OGRFieldType
54:
55: OFTInteger = 0
56: OFTIntegerList = 1
57: OFTReal = 2
58: OFTRealList = 3
59: OFTString = 4
60: OFTStringList = 5
61: OFTWideString = 6
62: OFTWideStringList = 7
63: OFTBinary = 8
64: OFTDate = 9
65: OFTTime = 10
66: OFTDateTime = 11
67:
68:
69: # OGRJustification
70:
71: OJUndefined = 0
72: OJLeft = 1
73: OJRight = 2
74:
75: wkbXDR = 0
76: wkbNDR = 1
77:
78:
79: #####
80: # Various free standing functions.
81:
82: def Open( filename, update = 0 ):
83: def OpenShared( filename, update = 0 ):
84: def GetDriverCount():
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85: def GetDriver( driver_index ):
86: def GetDriverByName( name ):
87: def GetOpenDSCount():
88: def GetOpenDS( i ):
89: def SetGenerate_DB2_V72_BYTE_ORDER( flag ):
90: def BuildPolygonFromEdges( edges, bBestEffort=0, bAutoClose=0, Tolerance=0 ):
91:
92:
93: #####
94: # OGRSFDriver
95:
96: class Driver:
97:     def __init__(self,obj=None):
98:     def GetName( self ):
99:     def TestCapability( self, cap ):
100:     def Open( self, filename, update = 0 ):
101:     def CreateDataSource( self, filename, options = [] ):
102:     def CopyDataSource( self, src_ds, filename, options = [] ):
103:     def DeleteDataSource( self, filename ):
104:
105:
106: #####
107: # OGRDataSource
108:
109: class DataSource:
110:     def __init__(self,obj=None):
111:     def __len__(self):
112:     def __getitem__(self, value):
113:     def Destroy(self):
114:     def Release(self):
115:     def Reference(self):
116:     def Dereference(self):
117:     def GetRefCount( self ):
118:     def GetSummaryRefCount( self ):
119:     def GetName( self ):
120:     def GetLayerCount( self ):
121:     def GetLayer( self, iLayer=0 ):
122:     def GetLayerByName( self, name ):
123:     def DeleteLayer( self, iLayer ):
124:     def CreateLayer( self, name, srs = None, geom_type = wkbUnknown, options = [] ):
125:     def CopyLayer( self, src_layer, new_name, options = [] ):
126:     def TestCapability( self, cap ):
127:     def ExecuteSQL( self, statement, region = 'NULL', dialect = "" ):
128:     def ReleaseResultSet( self, layer ):
129:     def GetDriver( self ):
130:
131:
132: #####
133: # OGRLayer
134:
135: class Layer:
136:     def __init__(self,obj=None):
137:     def __len__(self):
138:     def Reference(self):
139:     def Dereference(self):
140:     def GetRefCount( self ):
141:     def SetSpatialFilter( self, geom ):
142:     def SetSpatialFilterRect( self, minx, miny, maxx, maxy ):
143:     def GetSpatialFilter( self ):
144:     def SetAttributeFilter( self, where_clause = None ):
145:     def ResetReading( self ):
146:     def GetName( self ):
147:     def GetFeature( self, fid ):
148:     def GetNextFeature( self ):
149:     def SetNextByIndex( self, new_index ):
150:     def SetFeature( self, feat ):
151:     def CreateFeature( self, feat ):
152:     def DeleteFeature( self, fid ):
153:     def SyncToDisk( self ):
154:     def GetLayerDefn( self ):
155:     def GetFeatureCount( self, force = 1 ):
156:     def GetExtent( self, force = 1 ):
157:     def TestCapability( self, cap ):
158:     def CreateField( self, field_def, approx_ok = 1 ):
159:     def CreateFeature( self, feature ):
160:     def StartTransaction( self ):
161:     def CommitTransaction( self ):
162:     def RollbackTransaction( self ):
163:     def GetSpatialRef( self ):
164:     def GetFeaturesRead( self ):
165:
166:
167: #####
168: # OGRFeature
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169:
170: class Feature:
171:     def __init__(self, feature_def=None, obj=None):
172:     def __del__(self):
173:     def __cmp__(self, other):
174:     def __copy__(self):
175:     def __getattr__(self, name):
176:     def __setattr__(self, name, value):
177:     def Destroy( self ):
178:     def GetDefnRef( self ):
179:     def SetGeometry( self, geom ):
180:     def SetGeometryDirectly( self, geom ):
181:     def GetGeometryRef( self ):
182:     def Clone( self ):
183:     def Equal( self, other_geom ):
184:     def GetFieldCount( self ):
185:     def GetFieldDefnRef( self, fld_index ):
186:     def GetFieldIndex( self, name ):
187:     def IsFieldSet( self, fld_index ):
188:     def UnsetField( self, fld_index ):
189:     def SetField( self, fld_index, value ):
190:     def GetFieldAsString( self, fld_index ):
191:     def GetFieldAsInteger( self, fld_index ):
192:     def GetFieldAsDouble( self, fld_index ):
193:     def GetField( self, fld_index ):
194:     def GetFID( self ):
195:     def SetFID( self, fid ):
196:     def DumpReadable(self):
197:     def SetFrom( self, other, be_forgiving = 1 ):
198:     def GetStyleString( self ):
199:     def SetStyleString( self, style ):
200:
201:
202: #####
203: # OGRFeatureDefn
204:
205: class FeatureDefn:
206:     def __init__(self, obj=None, name='unnamed'):
207:     def Destroy( self ):
208:     def GetName( self ):
209:     def GetFieldCount( self ):
210:     def GetFieldDefn( self, i ):
211:     def GetFieldIndex( self, name ):
212:     def AddFieldDefn( self, field_defn ):
213:     def GetGeomType( self ):
214:     def SetGeomType( self, geom_type ):
215:     def Reference( self ):
216:     def Dereference( self ):
217:     def GetReferenceCount( self ):
218:
219:
220: #####
221: # OGRFieldDefn
222:
223: class FieldDefn:
224:     def __init__(self, name='unnamed', field_type=OFTString, obj=None):
225:     def Destroy( self ):
226:     def GetName( self ):
227:     def GetNameRef( self ):
228:     def SetName( self, name ):
229:     def GetType( self ):
230:     def SetType( self, type ):
231:     def GetJustify( self ):
232:     def SetJustify( self, justification ):
233:     def GetWidth( self ):
234:     def SetWidth( self, width ):
235:     def GetPrecision( self ):
236:     def SetPrecision( self, precision ):
237:
238:
239: #####
240: # OGRGeometry
241:
242: def CreateGeometryFromWkb( bin_string, srs = None ):
243: def CreateGeometryFromWkt( string, srs = None ):
244: def CreateGeometryFromGML( string ):
245: class Geometry:
246:     def __init__(self, type=None, obj=None, wkt=None, thisown = None, wkb=None, gml=None, srs=None):
247:     def __del__(self):
248:     def __str__(self):
249:     def __copy__(self):
250:     def Destroy( self ):
251:     def ExportToWkb( self, byte_order = None ):
252:     def ExportToWkt( self):

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253:     def ExportToGML( self ):
254:     def GetDimension( self ):
255:     def GetCoordinateDimension( self ):
256:     def SetCoordinateDimension( self, new_dimension ):
257:     def WkbSize( self ):
258:     def Clone( self ):
259:     def GetGeometryType( self ):
260:     def GetGeometryName( self ):
261:     def GetEnvelope( self ):
262:     def FlattenTo2D( self ):
263:     def CloseRings( self ):
264:     def AssignSpatialReference( self, srs ):
265:     def GetSpatialReference( self ):
266:     def Transform( self, coord_tran ):
267:     def TransformTo( self, srs_out ):
268:     def Intersect( self, other_geom ):
269:     def Equal( self, other_geom ):
270:     def Disjoint( self, other_geom ):
271:     def Touches( self, other_geom ):
272:     def Crosses( self, other_geom ):
273:     def Within( self, other_geom ):
274:     def Contains( self, other_geom ):
275:     def Overlaps( self, other_geom ):
276:     def Empty( self ):
277:     def GetArea( self ):
278:     def Centroid( self, pnt_geom = None ):
279:     def GetPointCount( self ):
280:     def GetX( self, i = 0 ):
281:     def GetY( self, i = 0 ):
282:     def GetZ( self, i = 0 ):
283:     def SetPoint( self, i, x, y, z = 0 ):
284:     def SetPoint_2D( self, i, x, y ):
285:     def AddPoint( self, x, y, z=0 ):
286:     def AddPoint_2D( self, x, y ):
287:     def GetGeometryCount( self ):
288:     def GetGeometryRef( self, i ):
289:     def AddGeometry( self, subgeom ):
290:     def AddGeometryDirectly( self, subgeom ):
291:     def GetBoundary( self ):
292:     def ConvexHull( self ):
293:     def Buffer( self, distance, quadsects = 30 ):
294:     def Intersection( self, other ):
295:     def Union( self, other ):
296:     def Difference( self, other ):
297:     def SymmetricDifference( self, other ):
298:     def Distance( self, other ):
299:
```