

## **ANEXOS**

## ANEXO A.

### ESHEMA XSD PARA LOS ARCHIVOS .CODML

```

<?xml version="1.0" encoding="utf-8"?>
<xs:schema attributeFormDefault="unqualified" elementFormDefault="qualified"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="REVENG">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="DEFINITIONS">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="INSIDE">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element maxOccurs="unbounded" name="DECLARATION" type="DECLARATION">
                    </xs:element>
                  </xs:sequence>
                </xs:complexType>
              <xs:attribute name="value" type="xs:string" use="required" />
            </xs:element>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element name="USAGE">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="INSIDE" type="INSIDE">
            </xs:element>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element name="FLOW">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="INSIDE">
              <xs:complexType>
                <xs:sequence>
                  <xs:element maxOccurs="unbounded" name="INSIDE">
                    <xs:complexType>
                      <xs:sequence>
                        <xs:element maxOccurs="unbounded" name="PROCEDURE">
                          <xs:complexType mixed="true">
                            <xs:sequence minOccurs="0">
                              <xs:choice maxOccurs="unbounded">
                                <xs:element maxOccurs="unbounded" name="IF" type="IF">
                                </xs:element>
                                <xs:element name="FOR" type="FOR">
                                </xs:element>
                                <xs:element name="EXIT" type="EXIT">
                                </xs:element>
                                <xs:element name="CASE" type="CASE">
                                </xs:element>
                                <xs:element name="WHILE" type="WHILE">
                                </xs:element>
                                <xs:element name="DO" type="DO">
                                </xs:element>
                              </xs:choice>
                            </xs:sequence>
                          </xs:complexType>
                        </xs:element>
                      </xs:sequence>
                    </xs:complexType>
                  </xs:element>
                </xs:sequence>
              </xs:complexType>
            </xs:element>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

```

        use="required" />
        use="required" />
        use="required" />
        use="required" />
        <xs:attribute name="iniLine" type="xs:unsignedInt"
        <xs:attribute name="iniChar" type="xs:unsignedInt"
        <xs:attribute name="endLine" type="xs:unsignedInt"
        <xs:attribute name="endChar" type="xs:unsignedInt"
        <xs:attribute name="file" type="xs:string" use="required" />
        <xs:attribute name="name" type="xs:string" use="required" />
    </xs:complexType>
</xs:element>
</xs:sequence>
<xs:attribute name="value" type="xs:string" use="required" />
</xs:complexType>
</xs:element>
</xs:sequence>
<xs:attribute name="value" type="xs:string" use="required" />
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="RULES">
    <xs:complexType>
        <xs:sequence>
            <xs:element maxOccurs="unbounded" name="Rule">
                <xs:complexType>
                    <xs:attribute name="type" type="xs:string" use="required" />
                    <xs:attribute name="code" type="xs:string" use="required" />
                    <xs:attribute name="description" type="xs:string" use="required" />
                    <xs:attribute name="iniLine" type="xs:unsignedInt" use="required" />
                    <xs:attribute name="endLine" type="xs:unsignedInt" use="required" />
                    <xs:attribute name="file" type="xs:string" use="required" />
                </xs:complexType>
            </xs:element>
        </xs:sequence>
    </xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
<xs:complexType name="DECLARATION" mixed="true">
    <xs:sequence minOccurs="0">
        <xs:element maxOccurs="unbounded" name="DECLARATION" type="DECLARATION">
            </xs:element>
        </xs:sequence>
        <xs:attribute name="type" type="xs:string" use="required" />
        <xs:attribute name="line" type="xs:unsignedInt" use="required" />
        <xs:attribute name="char" type="xs:unsignedInt" use="required" />
        <xs:attribute name="file" type="xs:string" use="required" />
        <xs:attribute name="value" type="xs:string" use="required" />
        <xs:attribute name="scope" type="xs:string" use="required" />
        <xs:attribute name="scopeType" type="xs:string" use="required" />
        <xs:attribute name="AccessType" type="xs:string" use="required" />
        <xs:attribute name="Friend" type="xs:boolean" use="required" />
        <xs:attribute name="Static" type="xs:boolean" use="required" />
        <xs:attribute name="DataType" type="xs:string" use="required" />
        <xs:attribute name="Ref" type="xs:boolean" use="required" />
    </xs:complexType>
<xs:complexType name="INSIDE" mixed="true">
    <xs:sequence minOccurs="0">
        <xs:choice maxOccurs="unbounded">
            <xs:element maxOccurs="unbounded" name="IDENTIFIER">
                <xs:complexType>
                    <xs:attribute name="line" type="xs:unsignedInt" use="required" />
                    <xs:attribute name="char" type="xs:unsignedInt" use="required" />
                    <xs:attribute name="file" type="xs:string" use="required" />
                </xs:complexType>
            </xs:element>
        </xs:choice>
    </xs:sequence>
</xs:complexType>

```

```

        <xs:attribute name="value" type="xs:string" use="required" />
    </xs:complexType>
</xs:element>
<xs:element name="ASSIGN">
    <xs:complexType>
        <xs:attribute name="line" type="xs:unsignedInt" use="required" />
        <xs:attribute name="char" type="xs:unsignedInt" use="required" />
        <xs:attribute name="file" type="xs:string" use="required" />
        <xs:attribute name="value" type="xs:string" use="required" />
    </xs:complexType>
</xs:element>
<xs:element name="INSTANTIATE">
    <xs:complexType>
        <xs:attribute name="line" type="xs:unsignedInt" use="required" />
        <xs:attribute name="char" type="xs:unsignedInt" use="required" />
        <xs:attribute name="file" type="xs:string" use="required" />
        <xs:attribute name="value" type="xs:string" use="required" />
    </xs:complexType>
</xs:element>
<xs:element name="INSIDE" type="INSIDE" />
</xs:choice>
</xs:sequence>
<xs:attribute name="value" type="xs:string" use="required" />
</xs:complexType>
<xs:complexType name="CONDITION">
    <xs:simpleContent>
        <xs:extension base="xs:string">
            <xs:attribute name="iniLine" type="xs:unsignedInt" use="required" />
            <xs:attribute name="iniChar" type="xs:unsignedInt" use="required" />
            <xs:attribute name="endLine" type="xs:unsignedInt" use="required" />
            <xs:attribute name="endChar" type="xs:unsignedInt" use="required" />
            <xs:attribute name="file" type="xs:string" use="required" />
        </xs:extension>
    </xs:simpleContent>
</xs:complexType>
<xs:complexType name="CODEBLOCK" mixed="true">
    <xs:sequence minOccurs="0">
        <xs:choice>
            <xs:element name="CASE" type="CASE" />
            <xs:element name="DO" type="DO" />
            <xs:element name="EXIT" type="EXIT" />
            <xs:element name="FOR" type="FOR" />
            <xs:element name="IF" type="IF" />
            <xs:element name="WHILE" type="WHILE" />
        </xs:choice>
    </xs:sequence>
    <xs:attribute name="iniLine" type="xs:unsignedInt" use="required" />
    <xs:attribute name="iniChar" type="xs:unsignedInt" use="required" />
    <xs:attribute name="endLine" type="xs:unsignedInt" use="required" />
    <xs:attribute name="endChar" type="xs:unsignedInt" use="required" />
    <xs:attribute name="file" type="xs:string" use="required" />
</xs:complexType>
<xs:complexType name="IF">
    <xs:sequence>
        <xs:element name="CONDITION" type="CONDITION">
            </xs:element>
        <xs:element maxOccurs="unbounded" name="CODEBLOCK" type="CODEBLOCK">
            </xs:element>
        </xs:sequence>
        <xs:attribute name="iniLine" type="xs:unsignedInt" use="required" />
        <xs:attribute name="iniChar" type="xs:unsignedInt" use="required" />
        <xs:attribute name="endLine" type="xs:unsignedInt" use="required" />
        <xs:attribute name="endChar" type="xs:unsignedInt" use="required" />
        <xs:attribute name="file" type="xs:string" use="required" />
    </xs:complexType>
<xs:complexType name="FOR">
    <xs:sequence>
        <xs:element name="CONDITION" type="CONDITION">

```

```

    </xs:element>
    <xs:element name="CODEBLOCK" type="CODEBLOCK">
    </xs:element>
</xs:sequence>
<xs:attribute name="iniLine" type="xs:unsignedInt" use="required" />
<xs:attribute name="iniChar" type="xs:unsignedInt" use="required" />
<xs:attribute name="endLine" type="xs:unsignedInt" use="required" />
<xs:attribute name="endChar" type="xs:unsignedInt" use="required" />
<xs:attribute name="file" type="xs:string" use="required" />
</xs:complexType>
<xs:complexType name="EXIT">
  <xs:sequence />
  <xs:attribute name="iniLine" type="xs:unsignedInt" use="required" />
  <xs:attribute name="iniChar" type="xs:unsignedInt" use="required" />
  <xs:attribute name="endLine" type="xs:unsignedInt" use="required" />
  <xs:attribute name="endChar" type="xs:unsignedInt" use="required" />
  <xs:attribute name="file" type="xs:string" use="required" />
  <xs:attribute name="block" type="xs:string" use="required" />
</xs:complexType>
<xs:complexType name="CASE">
  <xs:sequence>
    <xs:element name="CONDITION" type="CONDITION">
    </xs:element>
    <xs:element maxOccurs="unbounded" name="CODEBLOCK" type="CODEBLOCK">
    </xs:element>
  </xs:sequence>
  <xs:attribute name="iniLine" type="xs:unsignedInt" use="required" />
  <xs:attribute name="iniChar" type="xs:unsignedInt" use="required" />
  <xs:attribute name="endLine" type="xs:unsignedInt" use="required" />
  <xs:attribute name="endChar" type="xs:unsignedInt" use="required" />
  <xs:attribute name="file" type="xs:string" use="required" />
</xs:complexType>
<xs:complexType name="WHILE">
  <xs:sequence>
    <xs:element name="CONDITION" type="CONDITION">
    </xs:element>
    <xs:element name="CODEBLOCK" type="CODEBLOCK">
    </xs:element>
  </xs:sequence>
  <xs:attribute name="iniLine" type="xs:unsignedInt" use="required" />
  <xs:attribute name="iniChar" type="xs:unsignedInt" use="required" />
  <xs:attribute name="endLine" type="xs:unsignedInt" use="required" />
  <xs:attribute name="endChar" type="xs:unsignedInt" use="required" />
  <xs:attribute name="file" type="xs:string" use="required" />
</xs:complexType>
<xs:complexType name="DO">
  <xs:sequence>
    <xs:element name="CONDITION" type="CONDITION">
    </xs:element>
    <xs:element name="CODEBLOCK" type="CODEBLOCK">
    </xs:element>
  </xs:sequence>
  <xs:attribute name="iniLine" type="xs:unsignedInt" use="required" />
  <xs:attribute name="iniChar" type="xs:unsignedInt" use="required" />
  <xs:attribute name="endLine" type="xs:unsignedInt" use="required" />
  <xs:attribute name="endChar" type="xs:unsignedInt" use="required" />
  <xs:attribute name="file" type="xs:string" use="required" />
</xs:complexType>
</xs:schema>

```

## ANEXO B.

### ESHEMA XSD PARA EL ARCHIVO PROJECT.DESC

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema attributeFormDefault="unqualified" elementFormDefault="qualified"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="REVENG_DESC">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="ENTITIES">
          <xs:complexType>
            <xs:sequence>
              <xs:element maxOccurs="unbounded" name="ENTITY">
                <xs:complexType>
                  <xs:sequence minOccurs="0">
                    <xs:element maxOccurs="unbounded" name="RESOURCE" type="RESOURCE"/>
                  </xs:sequence>
                  <xs:attribute name="comment" type="xs:string" use="optional" />
                  <xs:attribute name="value" type="xs:string" use="required" />
                </xs:complexType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="RULES">
          <xs:complexType>
            <xs:sequence>
              <xs:element maxOccurs="unbounded" name="RULE">
                <xs:complexType mixed="true">
                  <xs:sequence minOccurs="0">
                    <xs:element maxOccurs="unbounded" name="RESOURCE" type="RESOURCE"/>
                  </xs:sequence>
                  <xs:attribute name="code" type="xs:string" use="required" />
                  <xs:attribute name="type" type="xs:string" use="required" />
                </xs:complexType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:complexType name="RESOURCE">
    <xs:attribute name="uri" type="xs:string" use="required" />
  </xs:complexType>
</xs:schema>
```