# [MS-ACCDT]:

# Access Template File Format

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## Revision Summary

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| 11/6/2009 | 0.3 | Editorial | Revised and edited the technical content |
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| 2/15/2022 | 7.0 | None | No changes to the meaning, language, or formatting of the technical content. |


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# 1 Introduction

The Access Template File Format specifies the Access Template File Format (.accdt). This File Format is a collection of structures used to define a database application. These structures can include schemas for storing data, the data to be stored, layout descriptions for views of the data, actions controlling workflow, and metadata describing the database application as a whole.

Sections 1.7 and 2 of this specification are normative. All other sections and examples in this specification are informative.

## 1.1 Glossary

This document uses the following terms:

**Augmented Backus-Naur Form (ABNF)**: A modified version of Backus-Naur Form (BNF), commonly used by Internet specifications. ABNF notation balances compactness and simplicity with reasonable representational power. ABNF differs from standard BNF in its definitions and uses of naming rules, repetition, alternatives, order-independence, and value ranges. For more information, see [RFC5234].

**calculated field**: A user-defined field that can perform calculations by using the contents of other fields.

**database application**: A set of objects, including tables, queries, forms, reports, macros, and code modules, that are stored in a database structure.

**database object**: An object such as a table, query, form, report, macro, or module that can be referenced by name in a database, database application, or database project.

**database template**: A file that contains the data and component descriptions that are needed to create or instantiate a database application.

**field**: A discrete unit of a record that has a name, a data type, and a value.

**list**: A container within a SharePoint site that stores list items. A list has a customizable schema that is composed of one or more fields.

**list item**: An individual entry within a SharePoint list. Each list item has a schema that maps to fields in the list that contains the item, depending on the content type of the item.

**sort order**: A set of rules in a search query that defines the ordering of rows in the search result. Each rule consists of a managed property, such as modified date or size, and a direction for order, such as ascending or descending. Multiple rules are applied sequentially.

**MAY, SHOULD, MUST, SHOULD NOT, MUST NOT:** These terms (in all caps) are used as defined in [RFC2119]. All statements of optional behavior use either MAY, SHOULD, or SHOULD NOT.

## 1.2 References

Links to a document in the Microsoft Open Specifications library point to the correct section in the most recently published version of the referenced document. However, because individual documents in the library are not updated at the same time, the section numbers in the documents may not match. You can confirm the correct section numbering by checking the Errata.


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### 1.2.1 Normative References

We conduct frequent surveys of the normative references to assure their continued availability. If you have any issue with finding a normative reference, please contact dochelp@microsoft.com. We will assist you in finding the relevant information.

[ISO/IEC-29500-1] International Organization for Standardization, "Information technology -- Document description and processing languages -- Office Open XML File Formats -- Part 1: Fundamentals and Markup Language Reference", ISO/IEC 29500-1:2008, http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=51463

[ISO/IEC-29500-2] International Organization for Standardization, "Information technology -- Document description and processing languages -- Office Open XML File Formats -- Part 2: Open Packaging Conventions", ISO/IEC 29500-2:2008, http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=51459

[MS-ASWS] Microsoft Corporation, "Access Services Protocol".

[MS-AXL] Microsoft Corporation, "Access Application Transfer Protocol Structure".

[MS-LISTSWS] Microsoft Corporation, "Lists Web Service Protocol".

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997, http://www.rfc-editor.org/rfc/rfc2119.txt

[RFC4234] Crocker, D., Ed., and Overell, P., "Augmented BNF for Syntax Specifications: ABNF", RFC 4234, October 2005, http://www.rfc-editor.org/rfc/rfc4234.txt

[RFC5234] Crocker, D., Ed., and Overell, P., "Augmented BNF for Syntax Specifications: ABNF", STD 68, RFC 5234, January 2008, http://www.rfc-editor.org/rfc/rfc5234.txt

[XMLSCHEMA1] Thompson, H., Beech, D., Maloney, M., and Mendelsohn, N., Eds., "XML Schema Part 1: Structures", W3C Recommendation, May 2001, http://www.w3.org/TR/2001/REC-xmlschema-1-20010502/

[XMLSCHEMA2] Biron, P.V., Ed. and Malhotra, A., Ed., "XML Schema Part 2: Datatypes", W3C Recommendation, May 2001, http://www.w3.org/TR/2001/REC-xmlschema-2-20010502/

### 1.2.2 Informative References

[ISO/IEC-29500-3] International Organization for Standardization, "Information technology -- Document description and processing languages -- Office Open XML File Formats -- Part 3: Markup Compatibility and Extensibility", ISO/IEC 29500-3:2008, http://www.iso.org/iso/catalogue_detail?csnumber=51461

## 1.3 Structure Overview (Synopsis)

This document specifies the format of a **database template** used to create an instance of a **database application**. The database template data is contained in a ZIP **package** (section 2.1.1) conforming to Open Packaging Conventions as specified in [ISO/IEC-29500-2]. Individual files stored in the ZIP package (section 2.1.1) called **parts** (section 2.1.2) contain information about the structure and content of the resulting database application. The parts include definitions of the **database objects**, data to be populated, and properties of the resulting database application. Note that the contents of many of the parts (section 2.1.2) described in this document are the same as those used by the MSysASO **list** as described in [MS-ASWS] section 3.1.1.1.1.

The document is organized as follows:


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Section 2 of this documentation contains an overview of high-level concepts that are followed by more detailed concepts. Section 2.1 specifies higher-level concepts that are required to understand the remainder of the documentation, and should be read before reading the remainder of section 2.

Section 2.1 specifies the structure and concepts that are used to organize and structure the file itself. Subsection 2.1.4 further specifies the valid **parts** (section 2.1.2) allowed within this **package** (section 2.1.1).

Section 2.2 specifies the details of structures that contain metadata associated with the database template.

Section 2.3 specifies the details of structures that contain metadata associated with individual database objects.

Section 2.4 specifies the details of structures used for creating lists.

Section 2.5 specifies the details of structures that contain data to be populated in the resulting database application.

Section 3 provides specific examples intended to illustrate the concepts and elements of this file format.

Section 4 discusses security considerations relating to files of the type specified by the document.

Section 6 is a list of application-specific behavior. It is not intended to be read alone, but rather to be understood in the context of specifications in section 2. Specifications in section 2 provide links to the relevant items in section 6.

## 1.4 Relationship to Protocols and Other Structures

The Access Template File Format is a package containing a set of related parts as specified by [ISO/IEC-29500-2]. It is dependent on the structures defined in the following references:

- [MS-AXL] for the persistence format for database objects.
- [MS-LISTSWS] for the persistence format for **list** definitions. **[MS-LISTSWS]** describes a SOAP protocol; the Access Template File Format contains a set of persisted SOAP commands defined by this protocol that can be issued to create a list with a particular schema. Section 2.4 describes this relationship in detail.
- [XMLSCHEMA2] for the persistence format for list data.
- [MS-ASWS] for the persistence format of version-related values, as described in Section 2.2.3.1.

## 1.5 Applicability Statement

This document specifies a persistence format for **database applications**, which can include structures for storing data, the data to be stored, layout descriptions for views of the data, actions to control workflow, and metadata to describe the database application as a whole. This persistence format is applicable for persistence of applications based on storing data in tables, including views and logic to control workflow.

This persistence format is applicable for use as a stand-alone document.

This persistence format provides interoperability with applications that create or read documents conforming to this structure.


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## 1.6 Versioning and Localization

This document covers versioning issues in the following areas:

**Structure Versions:** There is only one version of the Access Template File Format (.accdt) Specification.

**Localization:** The structure of the Access Template File Format (.accdt) contains no locale-dependent information.

## 1.7 Vendor-Extensible Fields

This persistence format can be extended by storing information in parts not specified in section 2. Implementations are not required to preserve or remove additional parts when modifying an existing document. Implementations can extend the XML as specified by [ISO/IEC-29500-3].


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# 2 Structures

## 2.1 File Structure

This section specifies the overall structure of a file that conforms to this specification.

A file of the type specified by this document is a **package** (section 2.1.1) that contains a collection of related **parts** (section 2.1.2). **Parts** contain information about the contents of a **database application**, including database objects, associated metadata, and the structure of the **package**. **Parts** contain information stored using XML, text, and binary formats.

### 2.1.1 Package

A file of the type specified by this document is a package that is a ZIP archive that conforms to the Open Packaging Conventions as specified in [ISO/IEC-29500-2], the further packaging restrictions specified in [ISO/IEC-29500-1] section 9, and this specification.

A file of the type specified by this document MUST contain one **Template Metadata** (section 2.1.4.23) part, and that **part** (section 2.1.2) MUST be the target of a **relationship** (section 2.1.3) in the package relationship **part**. The **Template Metadata** part is the main or starting **part** in a file of the type specified by this document.

### 2.1.2 Part

A part is a stream of bytes as specified in [ISO/IEC-29500-2] section 9.1. Each part has an associated content type that specifies the nature and type of content stored in the part. Parts store information in binary, XML, and text formats. The valid parts, valid content types, and required **relationships** (section 2.1.3) between all parts in a **package** (section 2.1.1) are specified in **Part Enumeration** (section 2.1.4).

This document uses **Augmented Backus-Naur Form (ABNF)** as specified in [RFC5234] to specify the content of the **List Definition** (section 2.1.4.11) and **Table Data** (section 2.1.4.22) parts.

### 2.1.3 Relationship

A relationship specifies a connection between a source and a target resource as specified in [ISO/IEC-29500-2] section 9.3. Relationship identifiers are used in binary, XML, and text **part** (section 2.1.2) content to reference unique relationship elements in relationship **parts** that in turn target other resources. There are several different types of relationships:

- A package relationship is a relationship where the target is a **part** and the source is the **package** (section 2.1.1) as a whole.
- A part-to-part relationship is a relationship where the target is a **part** and the source is a **part** in the **package**.
- An explicit relationship is a relationship where a resource is referenced from the contents of a source **part** by referencing a relationship element by the value of its **ID** attribute, specified in [ISO/IEC-29500-2] section 9.3.2.
- An implicit relationship is a relationship that is not explicit.
- An internal relationship is a relationship where the target is a **part** in the **package**.
- An external relationship is a relationship where the target is an external resource not in the **package**.


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### 2.1.4 Part Enumeration

This section specifies the parts of the Access Template File Format (.accdt) package. Refer to the sections **Package** (section 2.1.1), **Part** (section 2.1.2), and **Relationship** (section 2.1.3) for information about **packages**, **parts**, and **relationships**, including the **package relationship part**.

**Parts** and their **relationships** are summarized in the following table.

| Part | Relationship Target of |
|---|---|
| **Application Properties** (section 2.1.4.1) | **Template Metadata** (section 2.1.4.23) |
| **Data Macro** (section 2.1.4.2) | **List Definition** (section 2.1.4.11), **Object** (section 2.1.4.14) |
| **File Properties, Core** (section 2.1.4.3) | **Package** (section 2.1.1) |
| **Form** (section 2.1.4.4) | **Template Metadata** (section 2.1.4.23) |
| **Icon** (section 2.1.4.5) | **Package** (section 2.1.1) |
| **Image** (section 2.1.4.6) | **Template Metadata** (section 2.1.4.23) |
| **Image Cluster** (section 2.1.4.7) | **Template Metadata** (section 2.1.4.23) |
| **Instantiation Form** (section 2.1.4.8) | **Package** (section 2.1.1) |
| **Legacy Application Properties** (section 2.1.4.9) | **Template Metadata** (section 2.1.4.23) |
| **Linked Table** (section 2.1.4.10) | **Template Metadata** (section 2.1.4.23) |
| **List Definition** (section 2.1.4.11) | **Template Metadata** (section 2.1.4.23) |
| **Macro** (section 2.1.4.12) | **Template Metadata** (section 2.1.4.23) |
| **Navigation Pane** (section 2.1.4.13) | **Template Metadata** (section 2.1.4.23) |
| **Object** (section 2.1.4.14) | **Template Metadata** (section 2.1.4.23) |
| **Object Metadata** (section 2.1.4.15) | **Form** (section 2.1.4.4), **Linked Table** (section 2.1.4.10), **List Definition** (section 2.1.4.11), **Macro** (section 2.1.4.12), **Object** (section 2.1.4.14), **Query** (section 2.1.4.18), **Report** (section 2.1.4.20) |
| **Object Properties** (section 2.1.4.16) | **Form** (section 2.1.4.4), **List Definition** (section 2.1.4.11), **Query** (section 2.1.4.18), **Report** (section 2.1.4.20) |
| **Preview Image** (section 2.1.4.17) | **Package** (section 2.1.1) |
| **Query** (section 2.1.4.18) | **Template Metadata** (section 2.1.4.23) |
| **Relationship** (section 2.1.4.19) | **Template Metadata** (section 2.1.4.23) |
| **Report** (section 2.1.4.20) | **Template Metadata** (section 2.1.4.23) |


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| Part | Relationship Target of |
|---|---|
| **Resource** (section 2.1.4.21) | **Image** (section 2.1.4.6), **Image Cluster** (section 2.1.4.7), **Theme** (section 2.1.4.24) |
| **Table Data** (section 2.1.4.22) | **List Definition** (section 2.1.4.11), **Object** (section 2.1.4.14) |
| **Template Metadata** (section 2.1.4.23) | **Package** (section 2.1.1) |
| **Theme** (section 2.1.4.24) | **Template Metadata** (section 2.1.4.23) |
| **Variation** (section 2.1.4.25) | **Form** (section 2.1.4.4), **Linked Table** (section 2.1.4.10), **List Definition** (section 2.1.4.11), **Macro** (section 2.1.4.12), **Object** (section 2.1.4.14), **Query** (section 2.1.4.18), **Report** (section 2.1.4.20) |
| **Visual Basic References** (section 2.1.4.26) | **Template Metadata** (section 2.1.4.23) |

In the following sections, Content type is as specified in [ISO/IEC-29500-2] section 9.1.2 and Relationship type is as specified in [ISO/IEC-29500-2] section 9.3.2

### 2.1.4.1 Application Properties

| Content type | Relationship type |
|---|---|
| Application/xml | `http://schemas.microsoft.com/office/2007/relationships/Properties` |

An instance of this part type specifies properties of the **database application**.

An **Application Properties** part MUST be the target of exactly one explicit relationship from the **Template Metadata** part (section 2.1.4.23).

The content associated with this part begins with the Application element as specified by [MS-AXL] section 2.2.1.1.

### 2.1.4.2 Data Macro

| Content type | Relationship type |
|---|---|
| Application/xml | `http://schemas.microsoft.com/office/2007/relationships/DataMacros` |

An instance of this part type contains definitions for the data macros, as specified by [MS-AXL] section 2.1.3.2, that are associated with a **list**.

A **Data Macro** part MUST be the target of an explicit relationship from a **List Definition** (section 2.1.4.11) or **Object** (section 2.1.4.14) part.

The content associated with this part begins with the **DataMacros** element as specified by [MS-AXL] section 2.2.1.5.

### 2.1.4.3 File Properties, Core

This part is specified in [ISO/IEC-29500-1] section 15.2.12.1. The content associated with this part is specified in [ISO/IEC-29500-2] section 11.


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### 2.1.4.4 Form

| Content type | Relationship type |
|---|---|
| Application/xml | http://schemas.microsoft.com/office/2007/relationships/Form |

An instance of this part type contains the definition for a single form as specified by [MS-AXL] section 2.1.2.

A **Form** part MUST be the target of an explicit relationship from the **Template Metadata** part (section 2.1.4.23).

A **Form** part MUST have an explicit relationship to exactly one **Object Metadata** part (section 2.1.4.15).

A **Form** part MUST have an explicit relationship to exactly one **Object Properties** part (section 2.1.4.16).

The content associated with this part begins with the **View** element as specified by [MS-AXL] section 2.2.1.7.

### 2.1.4.5 Icon

| Content type | Relationship type |
|---|---|
| Image/unknown<br>Image/bmp<br>Image/gif<br>Image/png<br>Image/tiff<br>Image/xbm<br>Image/x-icon<br>Image/x-pcx<br>Image/x-pcz<br>Image/x-emz<br>Image/x-wmz<br>Image/jpeg<br>Image/x-emf<br>Image/x-wmf | http://schemas.microsoft.com/office/2007/relationships/icon-image |

An instance of this part type can have any content such that the part remains valid for the given content type.

An **Icon** part MUST be the target of an explicit relationship from the **Package** part (section 2.1.1).

### 2.1.4.6 Image

| Content type | Relationship type |
|---|---|
| Image/unknown<br>Image/bmp<br>Image/gif<br>Image/png<br>Image/tiff | http://schemas.microsoft.com/office/2007/relationships/shared-image |


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| Content type | Relationship type |
|---|---|
| Image/xbm<br>Image/x-icon<br>Image/x-pcx<br>Image/x-pcz<br>Image/x-emz<br>Image/x-wmz<br>Image/jpeg<br>Image/x-emf<br>Image/x-wmf | |

An instance of this part type contains an image to be used as a Shared Image as specified by [MS-AXL] section 2.1.6.

An **Image** part MUST be the target of an explicit relationship from the **Template Metadata** part (section 2.1.4.23).

An **Image** part MUST have an explicit relationship to exactly one **Resource** part (section 2.1.4.21).

### 2.1.4.7 Image Cluster

| Content type | Relationship type |
|---|---|
| Image/unknown<br>Image/bmp<br>Image/gif<br>Image/png<br>Image/tiff<br>Image/xbm<br>Image/x-icon<br>Image/x-pcx<br>Image/x-pcz<br>Image/x-emz<br>Image/x-wmz<br>Image/jpeg<br>Image/x-emf<br>Image/x-wmf | `http://schemas.microsoft.com/office/2007/relationships/image-cluster` |

An instance of this part type contains an image cluster to be used as a Shared Image as specified by [MS-AXL] section 2.1.6. An **Image Cluster** part is a composite image where specific portions of the image are used by forms in the database application as specified by [MS-AXL] sections 2.3.4.77, 2.3.4.78 and 2.3.4.79.

An **Image Cluster** part MUST be the target of an explicit relationship from the **Template Metadata** part (section 2.1.4.23).

An **Image Cluster** part MUST have an explicit relationship to exactly one **Resource** part (section 2.1.4.21).


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### 2.1.4.8 Instantiation Form

| Content type | Relationship type |
|---|---|
| Application/xml | http://schemas.microsoft.com/office/2007/relationships/instantiation-form |

An instance of this part type can have any content such that the part remains valid for the given content type.

An **Instantiation Form** part MUST be the target of an explicit relationship from the **Package** part (section 2.1.1).

### 2.1.4.9 Legacy Application Properties

| Content type | Relationship type |
|---|---|
| Application/xml | http://schemas.microsoft.com/office/access/2005/04/template/properties |

An instance of this part type can have any content such that the part remains valid for the given content type.

A **Legacy Application Properties** part MUST be the target of an explicit relationship from the **Template Metadata** part (section 2.1.4.23).

### 2.1.4.10 Linked Table

| Content type | Relationship type |
|---|---|
| Application/xml | http://schemas.microsoft.com/office/2007/relationships/Link |

An instance of this part type can have any content such that the part remains valid for the given content type.

A **Linked Table** part MUST be the target of an explicit relationship from the **Template Metadata** part (section 2.1.4.23).

A **Linked Table** part MUST have an explicit relationship to exactly one **Object Metadata** part (section 2.1.4.15).

### 2.1.4.11 List Definition

| Content type | Relationship type |
|---|---|
| Application/xml | http://schemas.microsoft.com/office/2007/relationships/ListInstanceDefinition |

An instance of this part type contains the definition for a single **list**.

A **List Definition** part MUST be the target of an explicit relationship from the **Template Metadata** part (section 2.1.4.23).

A **List Definition** part MUST have an explicit relationship to exactly one **Object Metadata** part (section 2.1.4.15).

A **List Definition** part MUST have an explicit relationship to exactly one **Object Properties** part (section 2.1.4.16).


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The content associated with this part is specified by **List Schema** (section 2.4).

### 2.1.4.12 Macro

| Content type | Relationship type |
|---|---|
| Application/xml | `http://schemas.microsoft.com/office/2007/relationships/Macro` |

An instance of this part type contains the definition for a single standalone User Interface Macro as specified by [MS-AXL] section 2.1.3.1.

A **Macro** part MUST be the target of an explicit relationship from the **Template Metadata** part (section 2.1.4.23) part.

A **Macro** part MUST have an explicit relationship to exactly one **Object Metadata** part (section 2.1.4.15).

The content associated with this part begins with the **UserInterfaceMacro** element as specified by [MS-AXL] section 2.2.1.6

### 2.1.4.13 Navigation Pane

| Content type | Relationship type |
|---|---|
| Application/xml | `http://schemas.microsoft.com/office/access/2005/04/template/nav-pane` |

An instance of this part type can have any content such that the part remains valid for the given content type.

A **Navigation Pane** part MUST be the target of exactly one explicit relationship from the **Template Metadata** part (section 2.1.4.23).

### 2.1.4.14 Object

| Content type | Relationship type |
|---|---|
| Text/xml<br>Text/plain | `http://schemas.microsoft.com/office/access/2005/04/template/object` |

An instance of this part type can have any content such that the part remains valid for the given content type.

An **Object** part MUST be the target of an explicit relationship from the **Template Metadata** part (section 2.1.4.23).

An **Object** part MUST have an explicit relationship to exactly one **Object Metadata** part (section 2.1.4.15).

### 2.1.4.15 Object Metadata

| Content type | Relationship type |
|---|---|
| Application/xml | `http://schemas.microsoft.com/office/access/2005/04/template/object-metadata` |

An instance of this part type contains the definition of the metadata associated with a single object.


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An **Object Metadata** part MUST be the target of an explicit relationship from a **Form** (section 2.1.4.4), **Linked Table** (section 2.1.4.10), **List Definition** (section 2.1.4.11), **Macro** (section 2.1.4.12), **Object** (section 2.1.4.14), **Query** (section 2.1.4.18), or **Report** (section 2.1.4.20) part.

The content associated with this part is specified by section 2.3.

### 2.1.4.16 Object Properties

| Content type | Relationship type |
|---|---|
| application/vnd-ms-access.objectproperties+xml | `http://schemas.microsoft.com/office/2007/relationships/ObjectProperties` |

An instance of this part type can have any content such that the part remains valid for the given content type.

An **Object Properties** part MUST be the target of an explicit relationship from a **Form** (section 2.1.4.4), **List Definition** (section 2.1.4.11), **Query** (section 2.1.4.18), or **Report** (section 2.1.4.20) part.

### 2.1.4.17 Preview Image

| Content type | Relationship type |
|---|---|
| Image/unknown<br>Image/bmp<br>Image/gif<br>Image/png<br>Image/tiff<br>Image/xbm<br>Image/x-icon<br>Image/x-pcx<br>Image/x-pcz<br>Image/x-emz<br>Image/x-wmz<br>Image/jpeg<br>Image/x-emf<br>Image/x-wmf | `http://schemas.microsoft.com/office/access/2005/04/template/preview-image` |

An instance of this part type can have any content such that the part remains valid for the given content type.

A **Preview Image** part MUST be the target of an explicit relationship from the **Package** (section 2.1.1) part.

### 2.1.4.18 Query

| Content type | Relationship type |
|---|---|
| Application/xml | `http://schemas.microsoft.com/office/2007/relationships/Query` |

An instance of this part type contains the definition for a single query as specified by [MS-AXL] section 2.1.4.


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A **Query** part MUST be the target of an explicit relationship from the **Template Metadata** part (section 2.1.4.23).

A **Query** part MUST have an explicit relationship to exactly one **Object Metadata** part (section 2.1.4.15).

A **Query** part MUST have an explicit relationship to exactly one **Object Properties** part (section 2.1.4.16).

The content associated with this part begins with the **Query** element as specified by [MS-AXL] section 2.2.1.2.

### 2.1.4.19 Relationship

| Content type | Relationship type |
|---|---|
| Application/xml | `http://schemas.microsoft.com/office/access/2005/04/template/relationships` |

An instance of this part type can have any content such that the part remains valid for the given content type.

A **Relationship** part MUST be the target of exactly one explicit relationship from the **Template Metadata** part (section 2.1.4.23).

### 2.1.4.20 Report

| Content type | Relationship type |
|---|---|
| Application/xml | `http://schemas.microsoft.com/office/2007/relationships/Report` |

An instance of this part type contains the definition for a single report as specified by [MS-AXL] section 2.1.5.

A **Report** part MUST be the target of an explicit relationship from the **Template Metadata** part (section 2.1.4.23) part.

A **Report** part MUST have an explicit relationship to exactly one **Object Metadata** part (section 2.1.4.15).

A **Report** part MUST have an explicit relationship to exactly one **Object Properties** part (section 2.1.4.16).

The content associated with this part begins with the **Report** element as specified by [MS-AXL] section 2.4.1.1.

### 2.1.4.21 Resource

| Content type | Relationship type |
|---|---|
| Text/plain | `http://schemas.microsoft.com/office/2007/relationships/resource-name` |

An instance of this part type contains the name of a shared resource, which uniquely identifies the resource in the template. A **Resource** part MUST be the target of an explicit relationship from an **Image** (section 2.1.4.6), **Image Cluster** (section 2.1.4.7), or **Theme** (section 2.1.4.24) part. This file MUST contain a single line that is the name of the **shared resource** used by the **database application**. The combination of a shared resource's name and its parent part type (**Image**, **Image Cluster**, or **Theme**) MUST be unique within the database application.


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The resource name MUST NOT be longer than 64 characters and MUST NOT contain any of the following characters:

! ` [ ] ; . ~ # % & * { } \ : < > ? / |"

### 2.1.4.22 Table Data

| Content type | Relationship type |
|---|---|
| Application/xml | http://schemas.microsoft.com/office/access/2005/04/template/table-data |

An instance of this part defines the schema associated with the table and the data contained in the table.

A **Table Data** part MUST be the target of an explicit relationship from a **List Definition** (section 2.1.4.11) or **Object** (section 2.1.4.14) part.

The content associated with this part is specified by **List Data** (section 2.5).

### 2.1.4.23 Template Metadata

| Content type | Relationship type |
|---|---|
| Text/xml | http://schemas.microsoft.com/office/access/2005/04/template/start |

An instance of this part type contains the template-level metadata for the current file.

A **Template Metadata** part MUST be the target of exactly one explicit relationship from the **Package** part (section 2.1.1).

The content associated with this part is specified by **Template Metadata** (section 2.2).

### 2.1.4.24 Theme

| Content type | Relationship type |
|---|---|
| application/vnd.ms-officetheme | `http://schemas.microsoft.com/office/2007/relationships/shared-theme` |

An instance of this part type contains display details for a single display theme.

A **Theme** part MUST be the target of an explicit relationship from the **Template Metadata** part (section 2.1.4.23).

A **Theme** part MUST have an explicit relationship to exactly one **Resource** part (section 2.1.4.21).

The contents of this part MUST be a ZIP archive that conforms to the Open Packaging Conventions as specified in [ISO/IEC-29500-2], and the further packaging restrictions specified in [ISO/IEC-29500-1] section 9. This ZIP archive MUST contain at least one **Theme** part as specified by [ISO/IEC-29500-1] section 14.2.7.

### 2.1.4.25 Variation

| Content type | Relationship type |
|---|---|
| Text/xml<br>Text/plain | `http://schemas.microsoft.com/office/access/2005/04/template/variation` |


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An instance of this part type can have any content such that the part remains valid for the given content type.

A **Variation** part MUST be the target of an explicit relationship from a **Form** (section 2.1.4.4), **Linked Table** (section 2.1.4.10), **List Definition** (section 2.1.4.11), **Macro** (section 2.1.4.12), **Object** (section 2.1.4.14), **Query** (section 2.1.4.18), or **Report** (section 2.1.4.20) part.

#### 2.1.4.26 Visual Basic References

| Content type | Relationship type |
|---|---|
| Application/xml | `http://schemas.microsoft.com/office/access/2005/04/template/vba-references` |

An instance of this part type can have any content such that the part remains valid for the given content type.

A **Visual Basic References** part MUST be the target of exactly one explicit relationship from the **Template Metadata** part (section 2.1.4.23).

## 2.2 Template Metadata

### 2.2.1 Global Elements

#### 2.2.1.1 Template

*Target namespace:* http://schemas.microsoft.com/office/access/2005/04/template/start

A **CT_Template** element (section 2.2.3.1).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="Template" type="CT_Template"/>
```

### 2.2.2 Global Attributes

None.

### 2.2.3 Complex Types

#### 2.2.3.1 CT_Template

*Target namespace:* http://schemas.microsoft.com/office/access/2005/04/template/start

*Referenced by:* Template

Metadata for the template described by the current file.

*Child Elements:*


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**TemplateFormat:** MUST be ignored.

**FlipRightToLeft:** MUST be ignored.

**PerformLocalizationFixup:** MUST be ignored.

**CollatingOrder:** An unsignedInt [XMLSCHEMA2] element that specifies the locale to be used for the **sort order**.

**DataLocale:** An unsignedInt [XMLSCHEMA2] element that specifies the locale to be used for formatting data.

**UILocale:** An unsignedInt [XMLSCHEMA2] element that specifies the locale to be used for displaying the template in the user interface.

**RequiredAccessVersion:** A string [XMLSCHEMA2] element that specifies the version of the template. This element MUST be set to 12 or 14.

**AccessServicesVersion:** A string [XMLSCHEMA2] element that is used to determine the target namespace for Xml in parts of this template that are defined by schemas in [MS-AXL]. The format of this string MUST follow the ABNF [RFC4234] specified by [MS-ASWS] section 3.1.1.2. The target namespaces that are used based on its value MUST be those specified by [MS-ASWS] section 3.1.1.2.

**Type:** MUST be ignored.

**PerformFontFixup:** MUST be ignored.

**VariationIdentifier:** MUST be ignored.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_Template">
  <xsd:sequence>
    <xsd:element name="TemplateFormat" type="xsd:unsignedInt" minOccurs="0"/>
    <xsd:element name="FlipRightToLeft" type="xsd:unsignedInt"/>
    <xsd:element name="PerformLocalizationFixup" type="xsd:unsignedInt"/>
    <xsd:element name="CollatingOrder" type="xsd:unsignedInt" minOccurs="0"/>
    <xsd:element name="DataLocale" type="xsd:unsignedInt" minOccurs="0"/>
    <xsd:element name="UILocale" type="xsd:unsignedInt" minOccurs="0"/>
    <xsd:element name="RequiredAccessVersion" type="xsd:string"/>
    <xsd:element name="AccessServicesVersion" type="xsd:string"/>
    <xsd:element name="Type" type="xsd:string"/>
    <xsd:element name="PerformFontFixup" type="xsd:unsignedInt" minOccurs="0"/>
    <xsd:element name="VariationIdentifier" type="xsd:string" minOccurs="0"/>
  </xsd:sequence>
</xsd:complexType>
```

### 2.2.4 Simple Types

None.

## 2.3 Object Metadata

### 2.3.1 Global Elements

#### 2.3.1.1 AccessObject

*Target namespace:* http://schemas.microsoft.com/office/access/2005/04/template/object-metadata


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A **CT_AccessObject** element (section 2.3.3.2) that specifies a database object.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="AccessObject" type="CT_AccessObject"/>
```

### 2.3.2 Global Attributes

None.

### 2.3.3 Complex Types

#### 2.3.3.1 CT_NameMap

*Target namespace:* http://schemas.microsoft.com/office/access/2005/04/template/object-metadata

*Referenced by:* CT_AccessObject

MUST be ignored.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_NameMap">
  <xsd:sequence>
    <xsd:any maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
```

#### 2.3.3.2 CT_AccessObject

*Target namespace:* http://schemas.microsoft.com/office/access/2005/04/template/object-metadata

*Referenced by:* AccessObject

Specifies an object in a database application, such as a form or a report.

*Child Elements:*

**Type:** An **ST_Type** element (section 2.3.4.1) that specifies the type of the object.

**Name:** A string [XMLSCHEMA2] element that specifies the name of the object. This value MUST conform to the restrictions of a **ST_ObjectName** simple type as specified by [MS-AXL] section 2.2.4.1.

**NameMap:** MUST be ignored.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT AccessObject">
  <xsd:sequence>
    <xsd:element name="Type" type="ST_Type"/>
    <xsd:element name="Name" type="xsd:string"/>
    <xsd:element name="NameMap" type="CT NameMap" minOccurs="0"/>
  </xsd:sequence>
```


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```
</xsd:complexType>
```

### 2.3.4 Simple Types

#### 2.3.4.1 ST_Type

*Target namespace:* http://schemas.microsoft.com/office/access/2005/04/template/object-metadata

*Referenced by:* CT_AccessObject

Specifies the type of object contained within the related part.

| Value | Meaning |
|---|---|
| Table | The part associated with the current **Object Metadata** part (section 2.1.4.15) describes a tabular data. |
| Link | The part associated with the current **Object Metadata** part describes a connection to an external data source. |
| SQLLink | The part associated with the current **Object Metadata** part describes a connection to a SQL database. |
| Query | The part associated with the current **Object Metadata** part describes a query. |
| Form | The part associated with the current **Object Metadata** part describes a form. |
| Report | The part associated with the current **Object Metadata** part describes a report. |
| Macro | The part associated with the current **Object Metadata** part describes a workflow. |
| Module | The part associated with the current **Object Metadata** part describes a programming language source code. |

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_Type">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Table"/>
    <xsd:enumeration value="Link"/>
    <xsd:enumeration value="SQLLink"/>
    <xsd:enumeration value="Query"/>
    <xsd:enumeration value="Form"/>
    <xsd:enumeration value="Report"/>
    <xsd:enumeration value="Macro"/>
    <xsd:enumeration value="Module"/>
  </xsd:restriction>
</xsd:simpleType>
```

## 2.4 List Schema

The **List Schema** is determined by a series of SOAP requests made to the **Lists** web service as specified by [MS-LISTSWS]. The requests are appended together and stored in the **List Definition** part (section 2.1.4.11).

The **List Schema** MUST contain only **AddList** requests, as specified by [MS-LISTSWS] section 3.1.4.3, and **UpdateList** requests, as specified by [MS-LISTSWS] section 3.1.4.30.


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The **List Schema** MUST contain at least one **AddList** request. Each **UpdateList** request MUST contain a **listProperties** element, **newFields** element, and **updateFields** element, in that order, as specified by [MS-LISTSWS] section 3.1.4.30.2.1.

The format of the **List Schema** SHOULD conform to the following ABNF [RFC5234] grammar:

```
LISTSCHEMADEF = ROOT-OPEN-TAG AddList AddFields AddCalcFields ListProperties
FieldProperties ROOT-CLOSE-TAG
ROOT-OPEN-TAG = "<Root>"
ROOT-CLOSE-TAG = "</Root>"
```

### 2.4.1 Add Calculated Fields

This element is a SOAP request to add **calculated fields** to the **list** created in **AddList** (section 2.4.3) by calling the **UpdateList** method of the **Lists** web service specified by [MS-LISTSWS] section 3.1.4.30.

Each **field** to be added MUST have an entry under the **newFields** element as specified by [MS-LISTSWS] section 3.1.4.30.2.1.

### 2.4.2 Add Fields

The **Add Fields** element is a SOAP request to add **fields** to the **list** created in **AddList** (section 2.4.3) by calling the **UpdateList** method of the **Lists** web service specified by [MS-LISTSWS] section 3.1.4.30. It also modifies fields that were created by default in the list as specified by the **templateID** in **AddList**.

Each field to be added MUST have an entry under the **newFields** element as specified by [MS-LISTSWS] section 3.1.4.30.2.1, with the exception of fields specified under the **AddCalcFields** (section 2.4.1) element.

Each field to be modified MUST have an entry under the updateFields element.

### 2.4.3 Add List

The **Add List** element is a SOAP request that creates a new **list** by calling the **AddList** method of the **Lists** web service specified by [MS-LISTSWS] section 3.1.4.3.

The **listName** and **templateID** elements MUST be specified. All other values are ignored.

### 2.4.4 Field Properties

The **Field Properties** element is a SOAP request to modify the properties of **fields** in the **list** created in **AddList** (section 2.4.3) by calling the **UpdateList** method of the **Lists** web service specified by [MS-LISTSWS] section 3.1.4.30.

Each field to be modified MUST have an entry under the **updateFields** element.

### 2.4.5 List Properties

The **List Properties** element is a SOAP request to modify properties of the **list** created in **AddList** (section 2.4.3) by calling the **UpdateList** method of the **Lists** web service specified by [MS-LISTSWS] section 3.1.4.30. Any properties of the list not set during **AddList** MUST be set as part of this request.


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## 2.5 List Data

**List Data** describes a set of **list items** for a particular **list** schema as XML. This XML contains an inline schema that describes the shape of the list items. When **List Data** is used as the contents of a **Table Data** part (section 2.1.4.22), the schema included in this XML MUST describe the same list items as the **List Schema** in the related **List Definition** part (section 2.1.4.11).

The format of this XML MUST conform to the following ABNF [RFC5234] grammar:

```
LISTDATADEF = ROOT-OPEN-TAG SCHEMA DATAINSTANCE ROOT-CLOSE-TAG
ROOT-OPEN-TAG = "<root xmlns:xsd=\"" SCHEMA-NAMESPACE "\" xmlns:od=\""      OD-
NAMESPACE "\">"
SCHEMA-NAMESPACE = "http://www.w3.org/2001/XMLSchema"
OD-NAMESPACE = "urn:schemas-microsoft-com:officedata"
ROOT-CLOSE-TAG = "</root>"
```

### 2.5.1 Data Instance

**Data Instance** is XML that describes the data contained in the **list**. This XML MUST be an XML document that conforms to the schema specified by the **Schema** section (section 2.5.2). Each child element of the **Data Instance** SHOULD represent a single **list item** in the list.

### 2.5.2 Schema

**Schema** MUST be an XML Schema Definition (XSD), as specified by [XMLSCHEMA2], that defines the schema of the **Data Instance** (section 2.5.1). The elements and attributes corresponding to the namespace "urn:schemas-microsoft-com:officedata" MUST be ignored.


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# 3 Structure Examples

## 3.1 List Schema

The following example uses the contents of a **List Definition** part (section 2.1.4.11) to create a **list** called Contacts with the following **fields**:

- **ID** (A field of data type **Autonumber**)
- **Company** (A field of data type **Text**)
- Last Name (A field of data type **Text**)
- First Name (A field of data type **Text**)

The **List Schema** (section 2.4) is a collection of SOAP calls of the following form:

```
LISTSCHEMADEF = ROOT-OPEN-TAG AddList AddFields AddCalcFields ListProperties
FieldProperties ROOT-CLOSE-TAG
```

The ROOT-OPEN-TAG is as follows:

```
<Root>
```

The ROOT-CLOSE-TAG is as follows:

```
</Root>
```

**AddList** (section 2.4.3) consists of the following SOAP request that creates a list named Contacts by calling the **AddList** method of the **Lists** web service specified by [MS-LISTSWS] section 3.1.4.3.

```
<Envelope xmlns="http://schemas.xmlsoap.org/soap/envelope/">
  <Body>
    <AddList xmlns="http://schemas.microsoft.com/sharepoint/soap/">
      <listName>Contacts</listName>
      <description/>
      <templateID>105</templateID>
    </AddList>
  </Body>
</Envelope>
```

**AddFields** (section 2.4.2) consists of the following SOAP request that adds fields to the list by calling the **UpdateList** method of the **Lists** web service specified by [MS-LISTSWS] section 3.1.4.30.

```
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <UpdateList xmlns="http://schemas.microsoft.com/sharepoint/soap/">
      <listName>{BC5B1011-A346-43D8-A949-A99C845DEF26}</listName>
      <listProperties>
        <List EnableAttachments="FALSE" CalculatedFieldBehavior="PreserveEmptyValues"
EnforceDataValidation="TRUE"/>
      </listProperties>
      <newFields>
        <Fields>
```


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```
            <Method ID="10" AddToView="">
              <Field DisplayName="Company" Type="Text">
                <ValidationDisplayNames/>
              </Field>
            </Method>
            <Method ID="11" AddToView="">
              <Field DisplayName="Last Name" Type="Text">
                <ValidationDisplayNames/>
              </Field>
            </Method>
            <Method ID="12" AddToView="">
              <Field DisplayName="First Name" Type="Text">
                <ValidationDisplayNames/>
              </Field>
            </Method>
            <Method ID="13" AddToView="">
              <Field DisplayName=" OldID" Type="Number" Decimals="0">
                <ValidationDisplayNames/>
              </Field>
            </Method>
          </Fields>
        </newFields>
        <updateFields>
          <Fields>
            <Method ID="14">
              <Field Type="Text" Calculated="FALSE" Name="Title"
SourceID="http://schemas.microsoft.com/sharepoint/v3" StaticName="Title" ColName="nvarchar1"
DisplayName="SharePointTitle" Hidden="TRUE" FromBaseType="FALSE" Required="FALSE">
                <ValidationDisplayNames/>
              </Field>
            </Method>
            <Method ID="15">
              <Field Type="Counter" Calculated="FALSE" ColName="tp_ID" RowOrdinal="0"
ReadOnly="TRUE" Name="ID" PrimaryKey="TRUE"
SourceID="http://schemas.microsoft.com/sharepoint/v3" StaticName="ID" FromBaseType="TRUE"
DisplayName="ID">
                <ValidationDisplayNames/>
              </Field>
            </Method>
          </Fields>
        </updateFields>
        <deleteFields>
          <Fields>
          </Fields>
        </deleteFields>
        <listVersion>0</listVersion>
      </UpdateList>
    </soap:Body>
  </soap:Envelope>
```

In this example, the _OLDID, Company, Last Name and First Name fields each have an entry under the **newFields** element. There is also an entry under the **updateFields** element for each field in the list that is created with template identifier 105.

The **ListName** element contains an arbitrary GUID for the list name. It is assumed that all requests to the **List** service are intended to work on the list created by the **AddList** request.

**AddCalcFields** (section 2.4.1) is not present because the list in this example does not contain any calculated columns.

**ListProperties** (section 2.4.5) consists of the following SOAP request which modifies fields in the list by calling the **UpdateList** method of the **Lists** web service specified by [MS-LISTSWS] section 3.1.4.30.


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```
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <UpdateList xmlns="http://schemas.microsoft.com/sharepoint/soap/">
      <listName>{BC5B1011-A346-43D8-A949-A99C845DEF26}</listName>
      <listProperties>
        <List Direction="ltr"/>
      </listProperties>
      <newFields>
        <Fields>
        </Fields>
      </newFields>
      <updateFields>
        <Fields>
        </Fields>
      </updateFields>
      <deleteFields>
        <Fields>
        </Fields>
      </deleteFields>
      <listVersion>0</listVersion>
    </UpdateList>
  </soap:Body>
</soap:Envelope>
```

The **List Direction** property is set to "ltr" for the list. None of the fields are modified; hence there is no field entry under the **updateFields** element.

The **Field Properties** (section 2.4.4) consists of the following SOAP request which modifies properties of the list by calling the **UpdateList** method of the **Lists** web service specified by [MS-LISTSWS] section 3.1.4.30.

```
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <UpdateList xmlns="http://schemas.microsoft.com/sharepoint/soap/">
      <listName>{BC5B1011-A346-43D8-A949-A99C845DEF26}</listName>
      <listProperties>
        <List/>
      </listProperties>
      <newFields>
        <Fields>
        </Fields>
      </newFields>
      <updateFields>
        <Fields>
          <Method ID="16">
            <Field DisplayName="Company" Type="Text" MaxLength="50">
              <ValidationDisplayNames/>
            </Field>
          </Method>
          <Method ID="17">
            <Field DisplayName="Last Name" Type="Text" MaxLength="50">
              <ValidationDisplayNames/>
            </Field>
          </Method>
          <Method ID="18">
            <Field DisplayName="First Name" Type="Text" MaxLength="50">
              <ValidationDisplayNames/>
            </Field>
          </Method>
        </Fields>
      </updateFields>
      <deleteFields>
```


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```
        <Fields>
        </Fields>
      </deleteFields>
      <listVersion>0</listVersion>
    </UpdateList>
  </soap:Body>
</soap:Envelope>
```

The **Type** property is set to "Text" and the **MaxLength** property is set to "50" for the **Company**, **Last Name** and **First Name** fields.

All these requests are appended together and stored in the **List Definition** part (section 2.1.4.11).

## 3.2 List Data

In this example, the following is assumed.

When the template is instantiated, a **database application** is created that contains a **list** called Contacts, with the following **fields** and sample data.

| ID | Company | Last Name | First Name |
|---|---|---|---|
| 1 | Contoso | John | Smith |
| 2 | Contoso | Jane | Doe |

The **List Data** element (section 2.5) is of the following form:

```
LISTDATADEF = ROOT-OPEN-TAG SCHEMA DATAINSTANCE ROOT-CLOSE-TAG
```

The ROOT-OPEN-TAG is as follows:

```
<root xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:od="urn:schemas-microsoft-
com:officedata">
```

The ROOT-CLOSE-TAG is as follows:

```
</root>
```

The **SCHEMA** (section 2.5.2) XML is an XSD that defines the schema of the list is as follows:

```
<xsd:schema>
  <xsd:element name="dataroot">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element ref="Contacts" minOccurs="0" maxOccurs="unbounded"/>
      </xsd:sequence>
      <xsd:attribute name="generated" type="xsd:dateTime"/>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name="Contacts">
    <xsd:annotation>
      <xsd:appinfo />
    </xsd:annotation>
```


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```
      <xsd:complexType>
       <xsd:sequence>
         <xsd:element name="ID" minOccurs="1" type="xsd:int">
           <xsd:annotation>
             <xsd:appinfo />
           </xsd:annotation>
         </xsd:element>
         <xsd:element name="Company" minOccurs="0">
           <xsd:annotation>
             <xsd:appinfo />
           </xsd:annotation>
           <xsd:simpleType>
             <xsd:restriction base="xsd:string">
               <xsd:maxLength value="50"/>
             </xsd:restriction>
           </xsd:simpleType>
         </xsd:element>
         <xsd:element name="Last x0020 Name" minOccurs="0">
           <xsd:annotation>
             <xsd:appinfo/>
           </xsd:annotation>
           <xsd:simpleType>
             <xsd:restriction base="xsd:string">
               <xsd:maxLength value="50"/>
             </xsd:restriction>
           </xsd:simpleType>
         </xsd:element>
         <xsd:element name="First x0020 Name" minOccurs="0">
           <xsd:annotation>
             <xsd:appinfo />
           </xsd:annotation>
           <xsd:simpleType>
             <xsd:restriction base="xsd:string">
               <xsd:maxLength value="50"/>
             </xsd:restriction>
           </xsd:simpleType>
         </xsd:element>
       </xsd:sequence>
     </xsd:complexType>
   </xsd:element>
 </xsd:schema>
```

Note that the following elements and attributes corresponding to the namespace "urn:schemas-microsoft-com:officedata" are ignored.

```
<od:index index-name="Company" index-key="Company " primary="no" unique="no"
clustered="no" order="asc"/>
<od:index index-name="First Name" index-key="First_x0020_Name " primary="no"
unique="no" clustered="no" order="asc"/>
<od:index index-name="Last Name" index-key="Last_x0020_Name " primary="no"
unique="no" clustered="no" order="asc"/>
<od:index index-name="PrimaryKey" index-key="ID " primary="yes" unique="yes"
clustered="no" order="asc"/>
<od:tableProperty name="Orientation" type="2" value="0"/>
<od:tableProperty name="OrderByOn" type="1" value="0"/>
<od:tableProperty name="DefaultView" type="2" value="2"/>
<od:tableProperty name="WSSTemplateID" type="3" value="105"/>
<od:tableProperty name="TotalsRow" type="1" value="0"/>
<od:tableProperty name="FilterOnLoad" type="1" value="0"/>
<od:tableProperty name="OrderByOnLoad" type="1" value="1"/>
<od:tableProperty name="DisplayViewsOnSharePointSite" type="2" value="1"/>
<od:tableProperty name="StarColumnHidden" type="1" value="0"/>
<od:tableProperty name="HideNewField" type="1" value="0"/>
```


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```
<od:tableProperty name="NameMap" type="11"
value="CswOVQAAAATEHe+VQ/oRowbCBVNjaoaAAAAAClEmds2geNAAAAAAAAAAABDAG8A
bgB0AGEAYwB0AHMAAAAAAAAAeMJpgNpkFEOIk4IGF6kygAcAAAATEHe+VQ/oRowb
CBVNjaoaSQBEAAAAAAAAAAS3eiieomNGsks5hO0T0EMHAAAAExB3vlUP6EaMGwgV
TY2qGkMAbwBtAHAAYQBuAHkAAAAAAAAAqeqqJhCDiUqnFm4HUasmhgcAAAATEHe+
VQ/oRowbCBVNjaoaTABhAHMAdAAgAE4AYQBtAGUAAAAAAAAAAovBS5cL12E2owB8/
WqhFVgcAAAATEHe+VQ/oRowbCBVNjaoaRgBpAHIAcwB0ACAATgBhAG0AZQAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAADAAAAAUAAAAAAAAAAAAAAAAAAAAAAA==
"/>
<od:tableProperty name="SubdatasheetName" type="10" value="[Auto]"/>
<od:tableProperty name="GUID" type="9" value="ExB3vlUP6EaMGwgVTY2qGg==
"/>
<od:tableProperty name="BackTint" type="6" value="100"/>
<od:tableProperty name="BackShade" type="6" value="100"/>
<od:tableProperty name="ThemeFontIndex" type="4" value="-1"/>
<od:tableProperty name="AlternateBackThemeColorIndex" type="4" value="-1"/>
<od:tableProperty name="AlternateBackTint" type="6" value="100"/>
<od:tableProperty name="AlternateBackShade" type="6" value="100"/>
<od:tableProperty name="ReadOnlyWhenDisconnected" type="1" value="0"/>
<od:tableProperty name="WaitForPostProcessing" type="1" value="0"/>
<od:tableProperty name="DatasheetGridlinesThemeColorIndex" type="4" value="-1"/>
<od:tableProperty name="DatasheetGridlinesTint" type="6" value="100"/>
<od:tableProperty name="DatasheetGridlinesShade" type="6" value="100"/>
<od:tableProperty name="DatasheetForeThemeColorIndex" type="4" value="-1"/>
<od:tableProperty name="DatasheetForeTint" type="6" value="100"/>
<od:tableProperty name="DatasheetForeShade" type="6" value="100"/>
<od:tableProperty name="PublishToWeb" type="2" value="2"/>

<od:fieldProperty name="ColumnWidth" type="3" value="960"/>
<od:fieldProperty name="ColumnOrder" type="3" value="1"/>
<od:fieldProperty name="ColumnHidden" type="1" value="0"/>
<od:fieldProperty name="WSSFieldID" type="10" value="ID"/>
<od:fieldProperty name="AggregateType" type="4" value="-1"/>
<od:fieldProperty name="RowSourceType" type="10" value="Table/Query"/>
<od:fieldProperty name="BoundColumn" type="3" value="1"/>
<od:fieldProperty name="ColumnCount" type="3" value="1"/>
<od:fieldProperty name="ColumnHeads" type="1" value="0"/>
<od:fieldProperty name="AllowValueListEdits" type="1" value="0"/>
<od:fieldProperty name="TextAlign" type="2" value="0"/>
<od:fieldProperty name="ShowOnlyRowSourceValues" type="1" value="0"/>
<od:fieldProperty name="GUID" type="9" value="eMJpgNpkFEOIk4IGF6kygA==
"/>
<od:fieldProperty name="ResultType" type="2" value="0"/>

<od:fieldProperty name="ColumnWidth" type="3" value="-1"/>
<od:fieldProperty name="ColumnOrder" type="3" value="0"/>
<od:fieldProperty name="ColumnHidden" type="1" value="0"/>
<od:fieldProperty name="Required" type="1" value="0"/>
<od:fieldProperty name="AllowZeroLength" type="1" value="0"/>
<od:fieldProperty name="DisplayControl" type="3" value="109"/>
<od:fieldProperty name="IMEMode" type="2" value="0"/>
<od:fieldProperty name="IMESentenceMode" type="2" value="0"/>
<od:fieldProperty name="UnicodeCompression" type="1" value="1"/>
<od:fieldProperty name="TextAlign" type="2" value="0"/>
<od:fieldProperty name="AggregateType" type="4" value="-1"/>
<od:fieldProperty name="WSSFieldID" type="10" value="Company"/>
<od:fieldProperty name="GUID" type="9" value="BLd6KJ6iY0aySzmE7RPQQw==
"/>
<od:fieldProperty name="ResultType" type="2" value="0"/>

<od:fieldProperty name="ColumnWidth" type="3" value="-1"/>
```


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```
<od:fieldProperty name="ColumnOrder" type="3" value="0"/>
<od:fieldProperty name="ColumnHidden" type="1" value="0"/>
<od:fieldProperty name="Required" type="1" value="0"/>
<od:fieldProperty name="AllowZeroLength" type="1" value="0"/>
<od:fieldProperty name="DisplayControl" type="3" value="109"/>
<od:fieldProperty name="IMEMode" type="2" value="0"/>
<od:fieldProperty name="IMESentenceMode" type="2" value="0"/>
<od:fieldProperty name="UnicodeCompression" type="1" value="1"/>
<od:fieldProperty name="TextAlign" type="2" value="0"/>
<od:fieldProperty name="AggregateType" type="4" value="-1"/>
<od:fieldProperty name="WSSFieldID" type="10" value="Title"/>
<od:fieldProperty name="GUID" type="9" value="qeqqJhCDiUqnFm4HUasmhg==

<od:fieldProperty name="ColumnWidth" type="3" value="-1"/>
<od:fieldProperty name="ColumnOrder" type="3" value="0"/>
<od:fieldProperty name="ColumnHidden" type="1" value="0"/>
<od:fieldProperty name="Required" type="1" value="0"/>
<od:fieldProperty name="AllowZeroLength" type="1" value="0"/>
<od:fieldProperty name="DisplayControl" type="3" value="109"/>
<od:fieldProperty name="IMEMode" type="2" value="0"/>
<od:fieldProperty name="IMESentenceMode" type="2" value="0"/>
<od:fieldProperty name="UnicodeCompression" type="1" value="1"/>
<od:fieldProperty name="TextAlign" type="2" value="0"/>
<od:fieldProperty name="AggregateType" type="4" value="-1"/>
<od:fieldProperty name="WSSFieldID" type="10" value="FirstName"/>
<od:fieldProperty name="GUID" type="9" value="ovBS5cL12E2owB8/WqhFVg==
"/>
<od:fieldProperty name="ResultType" type="2" value="0"/>
```

The **Data Instance** (section 2.5.1) XML that describes the data contained in the list is as follows:

```
<dataroot xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" generated="2009-05-
14T12:06:59">
  <Contacts>
    <ID>1</ID>
    <Company>Contoso</Company>
    <Last_x0020_Name>John</Last_x0020_Name>
    <First_x0020_Name>Smith</First_x0020_Name>
  </Contacts>
  <Contacts>
    <ID>2</ID>
    <Company>Contoso</Company>
    <Last_x0020_Name>Jane</Last_x0020_Name>
    <First_x0020_Name>Doe</First_x0020_Name>
  </Contacts>
</dataroot>
```

Note that the preceding XML is an instance of the schema of the list as specified by the **Schema**.

## 3.3 Images

In this example, the **database template** contains a definition of **Form** ([MS-AXL] section 2.1.2) that contains a **Shared Image** ([MS-AXL] section 2.1.6) of type **Image** (section 2.1.4.6).

The following figure shows the **Image** in the **Form**:


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**Figure 1 Shared Resource Image in Form**

The following **Image** exists with the file name FormLogo-2-name.jpg:

**Figure 2 Image FormLogo-2-name.jpg**

A **Resource** part (section 2.1.4.21) named FormLogo-2-name.txt contains the name of the shared resource **Image**. The contents of FormLogo-2-name.txt are as follows:

```
Form Logo
```

The **Template Metadata** (section 2.2) **Part** (section 2.1.2) contains an entry in **Relationship** (section 2.1.4.19) **Part** called template.xml.rels, where FormLogo-2-name.jpg is the target. The XML for the **Relationship** is as follows:

```
<Relationship Id="FormLogo-2"
Type="http://schemas.microsoft.com/office/2007/relationships/shared-image"
Target="database/resources/FormLogo-2.jpg" />
```

The **Resource Part** contains an entry in **Relationship Part** called FormLogo-2.jpg.rels, where FormLogo-2-name.txt is the target. The XML for the **Relationship** is as follows:

```
<Relationship Id="name"
Type="http://schemas.microsoft.com/office/2007/relationships/resource-name"
Target="FormLogo-2-name.txt" />
```


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# 4 Security

## 4.1 Security Considerations for Implementers

None.

## 4.2 Index of Security Fields

None.


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# 5 Appendix A: Full XML Schemas

For ease of implementation, the following sections provide the full syntax for this protocol.

| Schema name | prefix | Section |
|---|---|---|
| http://schemas.microsoft.com/office/access/2005/04/template/start | Unassigned | Section 5.1 |
| http://schemas.microsoft.com/office/access/2005/04/template/object-metadata | Unassigned | Section 5.2 |

## 5.1 http://schemas.microsoft.com/office/access/2005/04/template/start Schema

```
<xsd:schema

targetNamespace="http://schemas.microsoft.com/office/access/2005/04/template/start"
  xmlns="http://schemas.microsoft.com/office/access/2005/04/template/start"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:complexType name="CT_Template">
    <xsd:sequence>
      <xsd:element name="TemplateFormat" type="xsd:unsignedInt" minOccurs="0" />
      <xsd:element name="FlipRightToLeft" type="xsd:unsignedInt" />
      <xsd:element name="PerformLocalizationFixup" type="xsd:unsignedInt" />
      <xsd:element name="CollatingOrder" type="xsd:unsignedInt" minOccurs="0" />
      <xsd:element name="DataLocale" type="xsd:unsignedInt" minOccurs="0" />
      <xsd:element name="UILocale" type="xsd:unsignedInt" minOccurs="0" />
      <xsd:element name="RequiredAccessVersion" type="xsd:string" />
      <xsd:element name="AccessServicesVersion" type="xsd:string" />
      <xsd:element name="Type" type="xsd:string" />
      <xsd:element name="PerformFontFixup" type="xsd:unsignedInt" minOccurs="0" />
      <xsd:element name="VariationIdentifier" type="xsd:string" minOccurs="0" />
    </xsd:sequence>
  </xsd:complexType>
  <xsd:element name="Template" type="CT_Template" />
</xsd:schema>
```

## 5.2 http://schemas.microsoft.com/office/access/2005/04/template/object-metadata Schema

```
<xsd:schema

targetNamespace="http://schemas.microsoft.com/office/access/2005/04/template/object
-metadata"
  xmlns="http://schemas.microsoft.com/office/access/2005/04/template/object-
metadata"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:simpleType name="ST_Type">
    <xsd:restriction base="xsd:string">
      <xsd:enumeration value="Table" />
      <xsd:enumeration value="Link" />
      <xsd:enumeration value="SQLLink" />
      <xsd:enumeration value="Query" />
      <xsd:enumeration value="Form" />
```


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```
        <xsd:enumeration value="Report" />
        <xsd:enumeration value="Macro" />
        <xsd:enumeration value="Module" />
      </xsd:restriction>
    </xsd:simpleType>
    <xsd:complexType name="CT_NameMap">
      <xsd:sequence>
        <xsd:any maxOccurs="unbounded" />
      </xsd:sequence>
    </xsd:complexType>
    <xsd:complexType name="CT_AccessObject">
      <xsd:sequence>
        <xsd:element name="Type" type="ST_Type" />
        <xsd:element name="Name" type="xsd:string" />
        <xsd:element name="NameMap" type="CT_NameMap" minOccurs="0" />
      </xsd:sequence>
    </xsd:complexType>
    <xsd:element name="AccessObject" type="CT_AccessObject" />
  </xsd:schema>
```


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# 6 Appendix B: Product Behavior

The information in this specification is applicable to the following Microsoft products or supplemental software. References to product versions include updates to those products.

- Microsoft Access 2010
- Microsoft SharePoint Server 2010
- Microsoft Access 2013
- Microsoft SharePoint Server 2013
- Microsoft Access 2016
- Microsoft SharePoint Server 2016
- Microsoft Access 2019
- Microsoft SharePoint Server 2019
- Microsoft Access 2021
- Microsoft SharePoint Server Subscription Edition

Exceptions, if any, are noted in this section. If an update version, service pack or Knowledge Base (KB) number appears with a product name, the behavior changed in that update. The new behavior also applies to subsequent updates unless otherwise specified. If a product edition appears with the product version, behavior is different in that product edition.

Unless otherwise specified, any statement of optional behavior in this specification that is prescribed using the terms "SHOULD" or "SHOULD NOT" implies product behavior in accordance with the SHOULD or SHOULD NOT prescription. Unless otherwise specified, the term "MAY" implies that the product does not follow the prescription.


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# 7 Change Tracking

No table of changes is available. The document is either new or has had no changes since its last release.


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