

## Schema

title: JADN Schema Syntax  
module: jadrn  
version: 1.0 wd01  
description: Syntax of a JSON Abstract Schema Notation (JADN) module.

### 3.2 Structure Types

#### 3.2.1 JADN

Definition of a JADN file

##### JADN (Record)

| ID | Name  | Type       | #    | Description                         |
|----|-------|------------|------|-------------------------------------|
| 1  | meta  | SchemaMeta | 1    | Information about the schema module |
| 2  | types | SchemaType | 1..n | Type definitions                    |

#### 3.2.2 SchemaMeta

Meta-information about this schema

##### SchemaMeta (Map)

| ID | Name        | Type   | #    | Description              |
|----|-------------|--------|------|--------------------------|
| 1  | module      | String | 1    | Module name              |
| 2  | title       | String | 0..1 |                          |
| 3  | version     | String | 0..1 | Module version           |
| 4  | description | String | 0..1 |                          |
| 5  | imports     | Import | 0..n | List of imported modules |

#### 3.2.3 Import

##### Import (Array)

| ID | Name | Type   | # | Description                        |
|----|------|--------|---|------------------------------------|
| 1  | nsid | String | 1 | Namespace identifier               |
| 2  | name | String | 1 | Unique name of the defining module |

#### 3.2.4 SchemaType

##### SchemaType (Array)

| ID | Name        | Type      | #    | Description  |
|----|-------------|-----------|------|--|
| 1  | name        | String    | 1    |  |
| 2  | type        | JADN-Type | 1    | TODO: Need * option to autogenerate enum from choice |
| 3  | options     | String    | 1..n |  |
| 4  | description | String    | 1    |  |
| 5  | fields      | JADN-Type | 1..n |  |

### 3.2.5 JADN-Type

#### JADN-Type (Choice)

| ID | Name       | Type      | Description                                |
|----|------------|-----------|--|
| 1  | Binary     | Null      | Octet sequence                             |
| 2  | Boolean    | Null      | True or False                              |
| 3  | Integer    | Null      | Whole number                               |
| 4  | Number     | Null      | Real number                                |
| 5  | Null       | Null      | Nothing                                    |
| 6  | String     | Null      | Character sequence                         |
| 7  | Array      | FullField | Ordered list of fields                     |
| 8  | ArrayOf    | Null      | Ordered list of fields of a specified type |
| 9  | Choice     | FullField | One of a set of named fields               |
| 10 | Enumerated | EnumField | One of a set of id:name pairs              |
| 11 | Map        | FullField | Unordered set of named fields              |
| 12 | Record     | FullField | Ordered list of named fields               |

### 3.2.6 EnumField

Field definition for Enumerated types

#### EnumField (Array)

| ID | Name | Type    | # | Description       |
|----|------|---------|---|-------------------|
| 1  | id   | Integer | 1 | Field ID          |
| 2  | name | String  | 1 | Field name        |
| 3  | desc | String  | 1 | Field description |

### 3.2.7 FullField

Field definition for types other than Enumerated

#### FullField (Array)

| ID | Name | Type    | #    | Description                  |
|----|------|---------|------|------------------------------|
| 1  | id   | Integer | 1    | Field ID or ordinal position |
| 2  | name | String  | 1    | Field name                   |
| 3  | type | String  | 1    | Field type                   |
| 4  | opts | String  | 0..n | Field optiona                |
| 5  | desc | String  | 1    | Field description            |

## 3.3 Primitive Types

| Name | Type | Description |
|------|------|-------------|
|------|------|-------------|