

Data element

In metadata, the term **data element** is an atomic unit of data that has precise meaning or precise semantics. A data element has:

1. An identification such as a data element name
2. A clear data element definition
3. One or more representation terms
4. Optional enumerated values Code (metadata)
5. A list of synonyms to data elements in other metadata registries Synonym ring

Data elements usage can be discovered by inspection of software applications or application data files through a process of manual or automated Application Discovery and Understanding. Once data elements are discovered they can be registered in a metadata registry.

In telecommunication, the term **data element** has the following components:

1. A named unit of data that, in some contexts, is considered indivisible and in other contexts may consist of data items.
2. A named identifier of each of the entities and their attributes that are represented in a database.
3. A basic unit of information built on standard structures having a unique meaning and distinct units or values.
4. In electronic record-keeping, a combination of characters or bytes referring to one separate item of information, such as name, address, or age.

In the areas of databases and data systems more generally a data element is a concept forming part of a data model. As an element of data representation, a collection of data elements forms a data structure.^[1]

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In practice

In practice, data elements (fields, columns, attributes, etc.) are sometimes "over loaded", meaning a given data element will have multiple potential meanings. While a known bad practice, overloading is nevertheless a very real factor or barrier to understanding what a system is doing.

See also

- Application Discovery and Understanding
- Data element definition
- Data dictionary
- Data hierarchy