

Core / Built-in Types

The following table lists the built-in types available to all CDS models, and can be used to define entity elements or custom types as follows:

```
entity Books {  
    key ID : UUID;  
    title : String(111);  
    stock : Integer;  
    price : Price;  
}  
type Price : Decimal;
```

These types are used to define the structure of entities and services, and are mapped to respective database types when the model is deployed.

CDS Type	Remarks	ANSI SQL ⁽¹⁾
<i>UUID</i>	CAP generates RFC 4122 -compliant UUIDs ⁽²⁾	NVARCHAR(36)
<i>Boolean</i>	Values: <i>true</i> , <i>false</i> , <i>null</i> , <i>0</i> , <i>1</i>	BOOLEAN
<i>Integer</i>	Same as <i>Int32</i> by default	INTEGER
<i>Int16</i>	Signed 16-bit integer, range [-2^{15} ... $+2^{15}$]	SMALLINT
<i>Int32</i>	Signed 32-bit integer, range [-2^{31} ... $+2^{31}$]	INTEGER
<i>Int64</i>	Signed 64-bit integer, range [-2^{63} ... $+2^{63}$]	BIGINT
<i>UInt8</i>	Unsigned 8-bit integer, range [0 ... 255]	TINYINT ⁽³⁾
<i>Decimal</i> (<i>prec</i> , <i>scale</i>)	A <i>decfloat</i> type is used if arguments are omitted	DECIMAL
<i>Double</i>	Floating point with binary mantissa	DOUBLE

CDS Type	Remarks	ANSI SQL ⁽¹⁾
<i>Date</i>	e.g. 2022-12-31	<i>DATE</i>
<i>Time</i>	e.g. 23:59:59	<i>TIME</i>
<i>Datetime</i>	sec precision	<i>TIMESTAMP</i>
<i>Timestamp</i>	μs precision, with up to 7 fractional digits	<i>TIMESTAMP</i>
<i>String (length)</i>	Default <i>length</i> : 255; on HANA: 5000 ⁽⁴⁾⁽⁵⁾	<i>NVARCHAR</i>
<i>Binary (length)</i>	Default <i>length</i> : 255; on HANA: 5000 ⁽⁴⁾⁽⁶⁾	<i>VARBINARY</i>
<i>LargeBinary</i>	Unlimited data, usually streamed at runtime	<i>BLOB</i>
<i>LargeString</i>	Unlimited data, usually streamed at runtime	<i>NCLOB</i>
<i>Map</i>	Mapped to <i>NCLOB</i> for HANA.	JSON type
<i>Vector (dimension)</i>	Requires SAP HANA Cloud QRC 1/2024, or later	<i>REAL_VECTOR</i>

⁽¹⁾ Concrete mappings to specific databases may differ.

⁽²⁾ See also **Best Practices**.

⁽³⁾ *SMALLINT* on PostgreSQL and H2.

⁽⁴⁾ Productive apps should always use an explicit length. Use the default only for rapid prototyping.

⁽⁵⁾ Configurable through `cds.cdsc.defaultStringLength`.

⁽⁶⁾ Configurable through `cds.cdsc.defaultBinaryLength`.

See also...

- ↳ Additional Reuse Types and Aspects by [@sap/cds/common](#)
- ↳ Mapping to OData EDM types
- ↳ HANA-native Data Types

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