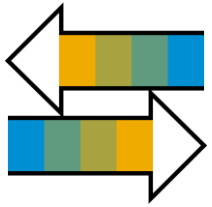
Week 3: Add Enterprise Qualities

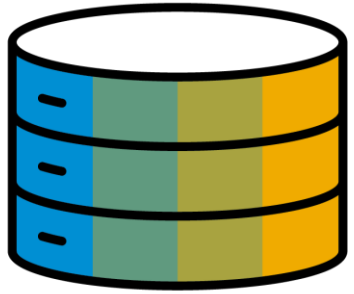
Unit 6: Accessing Native SAP HANA Tables and Views

Setup

There is an existing database artifact on your SAP HANA and you want to make use of it in your SAP Cloud Application Programming Model project.

entity Books …





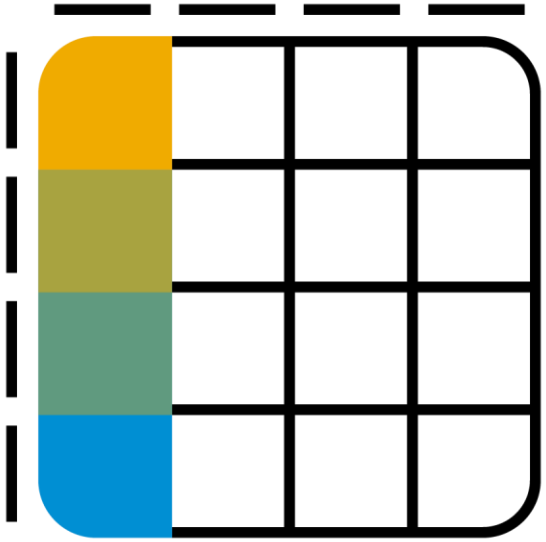
COLUMN TABLE Books …

Facade entities

Access existing SAP HANA:

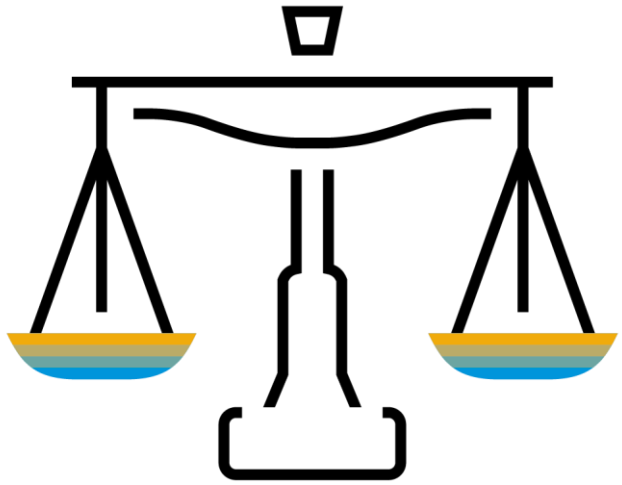
- Database tables
- SQL views
- Table functions
- Calculation views
  - Where possible, with or without parameters, too

with the help of facade entity in the programming model project and the @cds.persistence.exists annotation



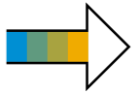
Make the object known to CDS

- Define an entity that matches the signature of the existing database object.
  - Name the entity identically to the existing database object
  - The names of the facade entity's elements should match the names of the existing database object's column names
  - Match the types of the database object's columns
  - The parameter names and types should match too.
- Add the annotation @cds.persistence.exists to it.
  - @cds.persistence.exists vs. @cds.persistence.skip



Tables and views without parameters

```
COLUMN TABLE DATA_MODEL_BOOKSHOP_BOOKS (
   ID integer,
   THE_TITLE nvarchar(100),
   primary key ( ID )
)
```

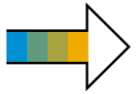


```
namespace data.model.bookshop;

@cds.persistence.exists
 entity Books {
    key id : Integer;
    the_title : String(100);
 }
```

- Define the facade entity in such a way that the resulting database names match those of the table.
- @cds.persistence.exists denotes that a native database object already exists that should be used during runtime

Tables and views with parameters

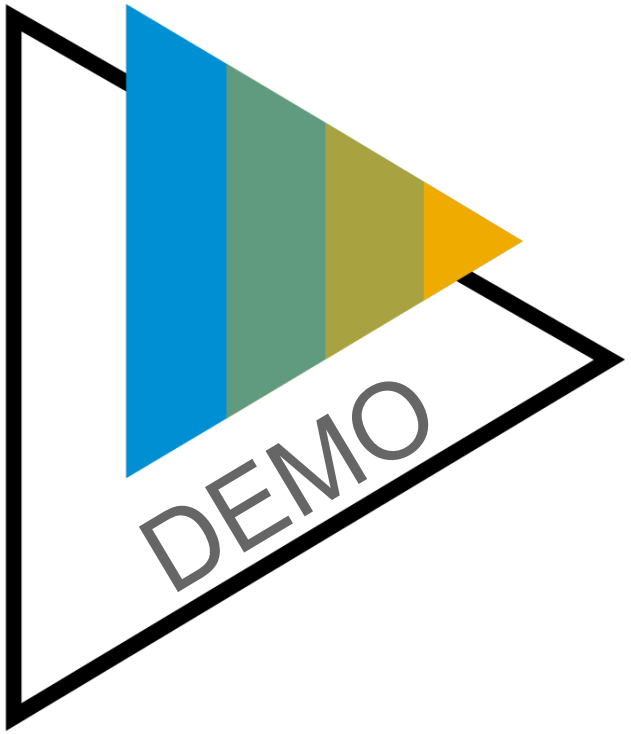
```
VIEW DATA_MODEL_BOOKSHOP_BOOKINFO (in AUTHOR
nvarchar(50)) AS SELECT

   ID,
   'The book: ' || THE_TITLE || ' and the author ' || :AUTHOR AS
                                        BOOK_AUTHOR_INFO
FROM DATA_MODEL_BOOKSHOP_BOOKS;
```



```
namespace data.model.bookshop;

@cds.persistence.exists
 entity BooksInfo(AUTHOR : String(50)) {
   key id : Integer;
   book_author_info : String;
 }
```

- Associations to artifacts annotated with @cds.persistence.exists are ignored from the defining database objects
- All usage of such associations produces an error

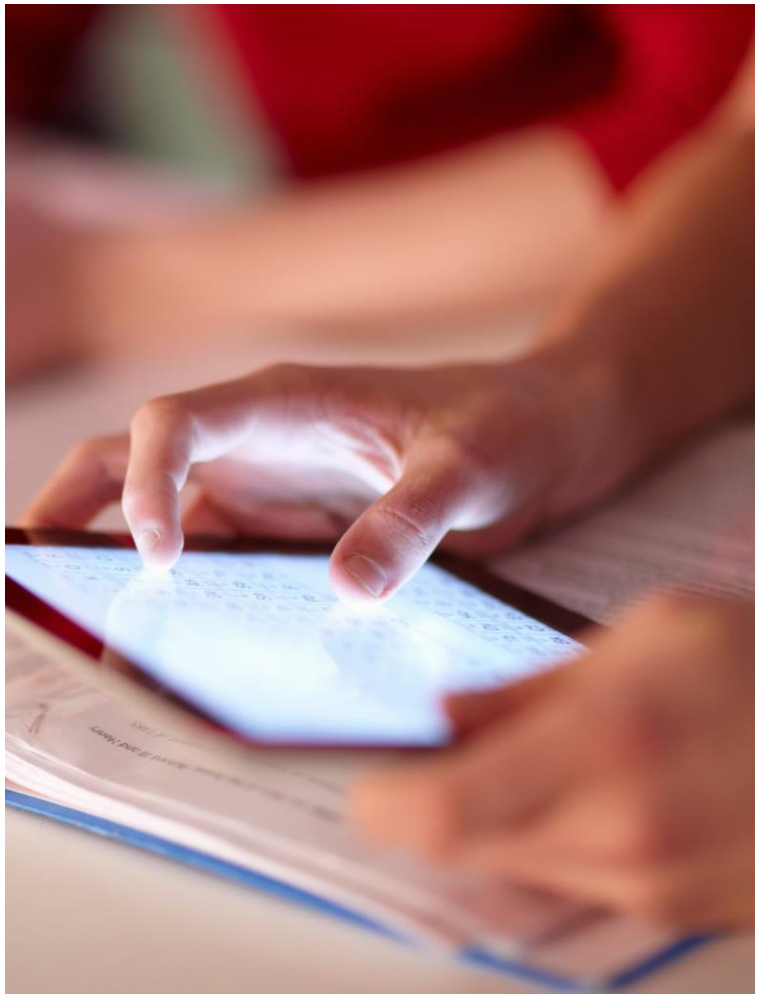
Demo



What you've learned in this unit

Use in SAP HANA native objects in a Cloud Application Programming Model:

- How to use tables and views without parameters
- How to use tables and views with parameters
- How to make the object known to CDS



Further reading

Additional Material

- Native SAP HANA

Thank you.

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