Structure

Alex Gönczy

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What Is Structure ?

ZAUTHOR_STR - Author

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Flat Structure

Nested Structure

Deep Structure

ZAUTHOR_STR - Author

Author ID	Work Email	Address	Website
CHAR 4	CHAR 50	CHAR 100	ZWEBSITE

ZWEBSITE
ZURL

ZAUTHOR_STR - Author

Author ID	Work Email	Address	Website
CHAR 4	CHAR 50	ZADDRESS	ZWEBSITE

ZADDRESS_STR - Address

City	ZIP Code	...
ZCITYID	ZZIPCODE	...

ZWEBSITE
ZURL

ZAUTHOR_STR - Author

Author ID	Work Email	Addresses	Website
CHAR 4	CHAR 50	ZADDRESSES	ZWEBSITE

ZADDRESSES_TT

Addresses
ZADDRESS
ZADDRESS

ZWEBSITE
ZURL

ZADDRESS_STR - Address

City	ZIP Code	...
ZCITYID	ZZIPCODE	...

pluralsight

ZAUTHOR_STR - Author

Author ID	First Name	Last Name	Address	Work Email	Website	…
…	…	…	…	…	…	…

ABAP Program #1

DATA author TYPE zauthor_str.

ABAP Program #2

DATA author TYPE zauthor_str.

ABAP Program #3

DATA author TYPE zauthor_str.

ABAP Program #4

DATA author TYPE zauthor_str.

ABAP Program #5

DATA author TYPE zauthor_str.

ABAP Program #6

DATA author TYPE zauthor_str.

ABAP Program #7

DATA author TYPE zauthor_str.

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Development Workflow

ZORDER_STR
Order

ZORDERITEM_STR
Order Item

ZBOOK_STR
Book

ZCUSTOMER_STR
Customer

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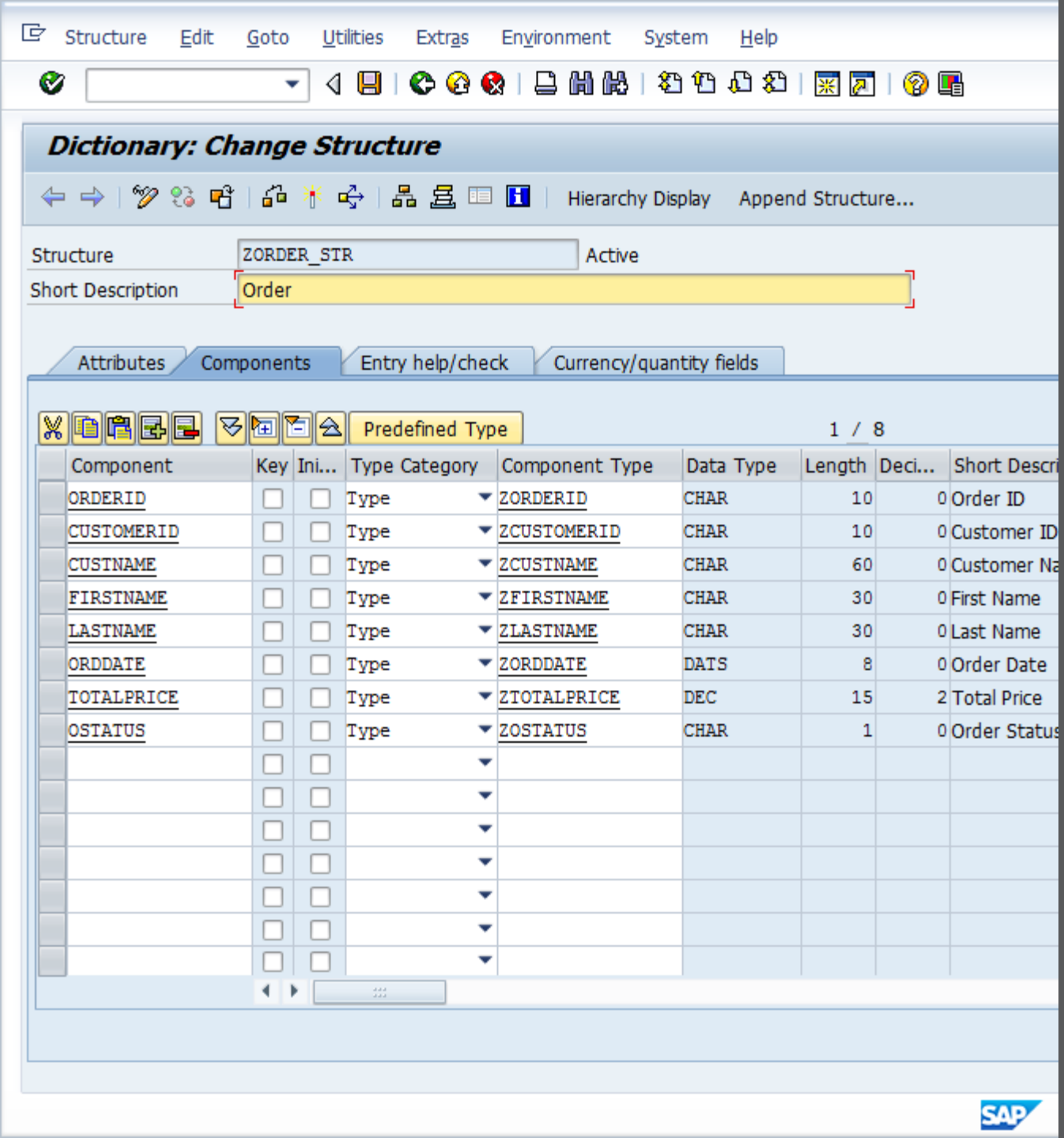

ZORDER_STR

Order

Component	Type
ORDERID	ZORDERID
CUSTOMERID	ZCUSTOMERID
CUSTNAME	ZCUSTNAME
FIRSTNAME	ZFIRSTNAME
LASTNAME	ZLASTNAME
ORDDATE	ZORDDATE
TOTALPRICE	ZTOTALPRICE
OSTATUS	ZOSTATUS

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ZORDERITEM_STR

Order Item

Component	Type
ORDERID	ZORDERID
BOOKID	ZBOOKID
BOOKTITLE	ZBOOKTITLE
CUSTOMERID	ZCUSTOMERID
ORDDATE	ZORDDATE
TOTALPRICE	ZTOTALPRICE
QUANTITY	ZQUANTITY
UNITPRICE	ZUNITPRICE

ZBOOK_STR

Book

Component	Type
BOOKID	ZBOOKID
BOOKTITLE	ZBOOKTITLE
AUTHORID	ZAUTHORID
PUBLISHERID	ZPUBLISHERID
PUBLDATE	ZPUBLDATE
UNITPRICE	ZUNITPRICE
FIRSTNAME	ZFIRSTNAME
LASTNAME	ZLASTNAME
AUTNAME	ZAUTNAME
PUBNAME	ZPUBNAME

ZCUSTOMER_STR

Customer

Component	Type
CUSTOMERID	ZCUSTOMERID
FIRSTNAME	ZFIRSTNAME
LASTNAME	ZLASTNAME
PERSEMAIL	ZPERSEMAIL
MOBPHONE	ZMOBPHONE
SADDRID	ZSADDRID
BADDRID	ZBADDRID
FSADDR	ZFSADDR
FBADDR	ZFBADDR

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ZORDERITEM_STR
Order Item

Component	Type
ORDERID	ZORDERID
BOOKID	ZBOOKID
BOOKTITLE	ZBOOKTITLE
CUSTOMERID	ZCUSTOMERID
ORDDATE	ZORDDATE
TOTALPRICE	ZTOTALPRICE
QUANTITY	ZQUANTITY
UNITPRICE	ZUNITPRICE

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Book

Component	Type
BOOKID	ZBOOKID
BOOKTITLE	ZBOOKTITLE
AUTHORID	ZAUTHORID
PUBLISHERID	ZPUBLISHERID
PUBLDATE	ZPUBLDATE
UNITPRICE	ZUNITPRICE
FIRSTNAME	ZFIRSTNAME
LASTNAME	ZLASTNAME
AUTNAME	ZAUTNAME
PUBNAME	ZPUBNAME

ZCUSTOMER_STR
Customer

PER MAIL	Z RSEMAIL
MOBI	MOBPHONE
SADDRI	ZSADDRID
BADDRID	ZBADDRID
FSADDR	ZFSADDR
FBADDR	ZFBADDR

Next
Complex Data Types: Structure

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Structure

Complex Data Types: Structure

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ZADDRESSES_TT

Addresses
ZADDRESS
ZADDRESS

ZWEBSITE
ZURL

ZADDRESS_STR - Address

City	ZIP Code	...
ZCITYID	ZZIPCODE	...

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Flat Structure

Author ID	Work Email	Address	Website
A001	vel.pede.blandit@felis.co.uk	491 Dusty G. E. Str., Colchester AL40533, United States	www.felis.co.uk

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Nested Structure

Author ID	Work Email	Address	Website
A001	vel.pede.blandit@felis.co.uk	<table><tr><th>No</th><th>Street</th><th>City</th><th>ZIP Code</th><th>Country</th></tr><tr><td>491</td><td>Dusty G. E. Str.</td><td>Colchester</td><td>AL40533</td><td>United States</td></tr></table>	www.felis.co.uk

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Deep Structure

Author ID	Work Email	Addresses	Website
A001	vel.pede.blandit@felis.co.uk	<table><tr><th>No</th><th>Street</th><th>City</th><th>ZIP Code</th><th>Country</th></tr><tr><td>491</td><td>Dusty G. E. Str.</td><td>Colchester</td><td>AL40533</td><td>United States</td></tr><tr><td>365</td><td>Cozy Edge Str.</td><td>Cleveland</td><td>OH52415</td><td>United States</td></tr></table>	www.felis.co.uk

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ABAP Program #1

```
TYPES:
  BEGIN OF author_str,
    author_id    TYPE …
    first_name  TYPE …
  END OF author_str …

DATA author TYPE author_str.
```

ABAP Program #3

```
TYPES:
  BEGIN OF author_str,
    author_id    TYPE …
    first_name  TYPE …
  END OF author_str …

DATA author TYPE author_str.
```

ABAP Program #5

```
TYPES:
  BEGIN OF author_str,
    author_id    TYPE …
    first_name  TYPE …
  END OF author_str …

DATA author TYPE author_str.
```

ABAP Program #7

```
TYPES:
  BEGIN OF author_str,
    author_id    TYPE …
    first_name  TYPE …
  END OF author_str …

DATA author TYPE author_str.
```

ABAP Program #2

```
TYPES:
  BEGIN OF author_str,
    author_id    TYPE …
    first_name  TYPE …
  END OF author_str …

DATA author TYPE author_str.
```

ABAP Program #4

```
TYPES:
  BEGIN OF author_str,
    author_id    TYPE …
    first_name  TYPE …
  END OF author_str …

DATA author TYPE author_str.
```

ABAP Program #6

```
TYPES:
  BEGIN OF author_str,
    author_id    TYPE …
    first_name  TYPE …
  END OF author_str …

DATA author TYPE author_str.
```

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ABAP Program #1

```
TYPES:
BEGIN OF author_str,
  author_id   TYPE …
  first_name  TYPE …
END OF author_str …

DATA author TYPE author_str.
```

ABAP Program #2

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TYPES:
BEGIN OF author_str,
  author_id   TYPE …
  first_name  TYPE …
END OF author_str …

DATA author TYPE author_str.
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TYPES:
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  first_name  TYPE …
END OF author_str …

DATA author TYPE author_str.
```

ABAP Program #7

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TYPES:
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  first_name  TYPE …
END OF author_str …

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  END OF author_str …

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    first_name   TYPE …
  END OF author_str …

DATA author TYPE author_str.
```

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  BEGIN OF author_str,
    author_id    TYPE …
    first_name   TYPE …
  END OF author_str …

DATA author TYPE author_str.
```

ABAP Program #4

```
TYPES:
  BEGIN OF author_str,
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    first_name   TYPE …
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TYPES:
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    first_name   TYPE …
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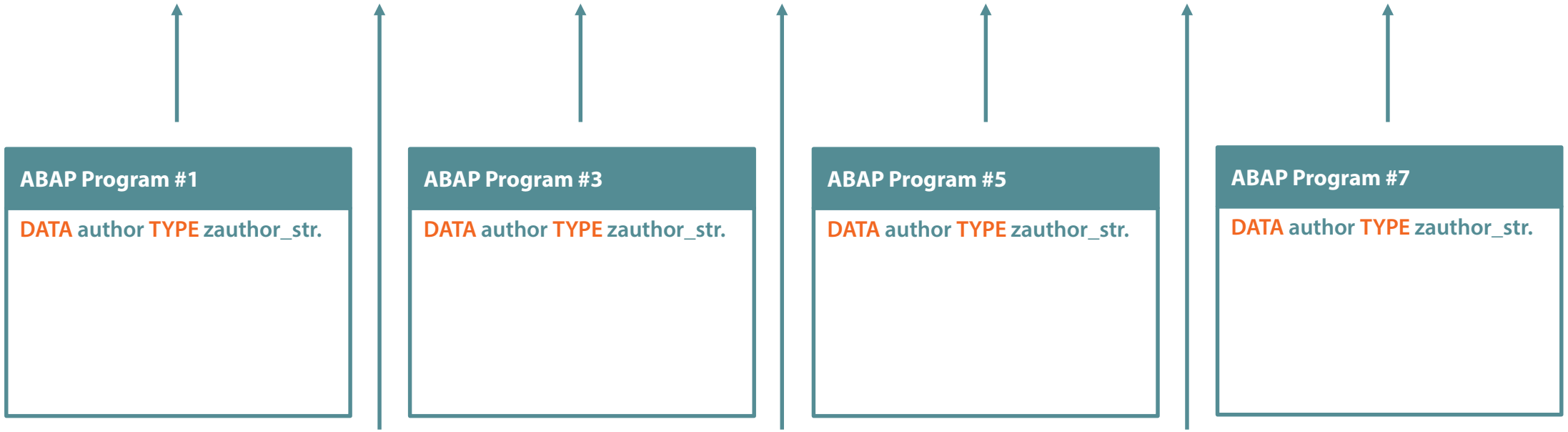

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Where to Define Structures ?

Locally

Copy & Paste

High Maintenance Costs

Low Consistency

Globally

High Reusability

Low Maintenance Costs

High Consistency

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Where to Define Structures ?

Locally

Copy & Paste

High Maintenance Costs

Low Consistency

Simple

Globally

High Reusability

Low Maintenance Costs

High Consistency

Complex

pluralsight

Where to Define Structures ?

Locally

Copy & Paste

Low Maintenance Costs

Low Consistency

Simple

Globally

High

High

High

Complex

Next

Development Workflow: Structure

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Structure

Development Workflow: Structure

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List of Potential Structures

ZORDER_STR
Order

ZORDERITEM_STR
Order Item

ZBOOK_STR
Book

ZCUSTOMER_STR
Customer

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Development Workflow

ZORDER_STR
Order

ZORDERITEM_STR
Order Item

ZBOOK_STR
Book

ZCUSTOMER_STR
Customer

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Development Workflow

ZORDER_STR

Order

ZORDERITEM_STR

Order Item

Next

Demo: Creating Structures

ZCUSTOMER_

Customer

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Group Exercises

Attendee

Instructor

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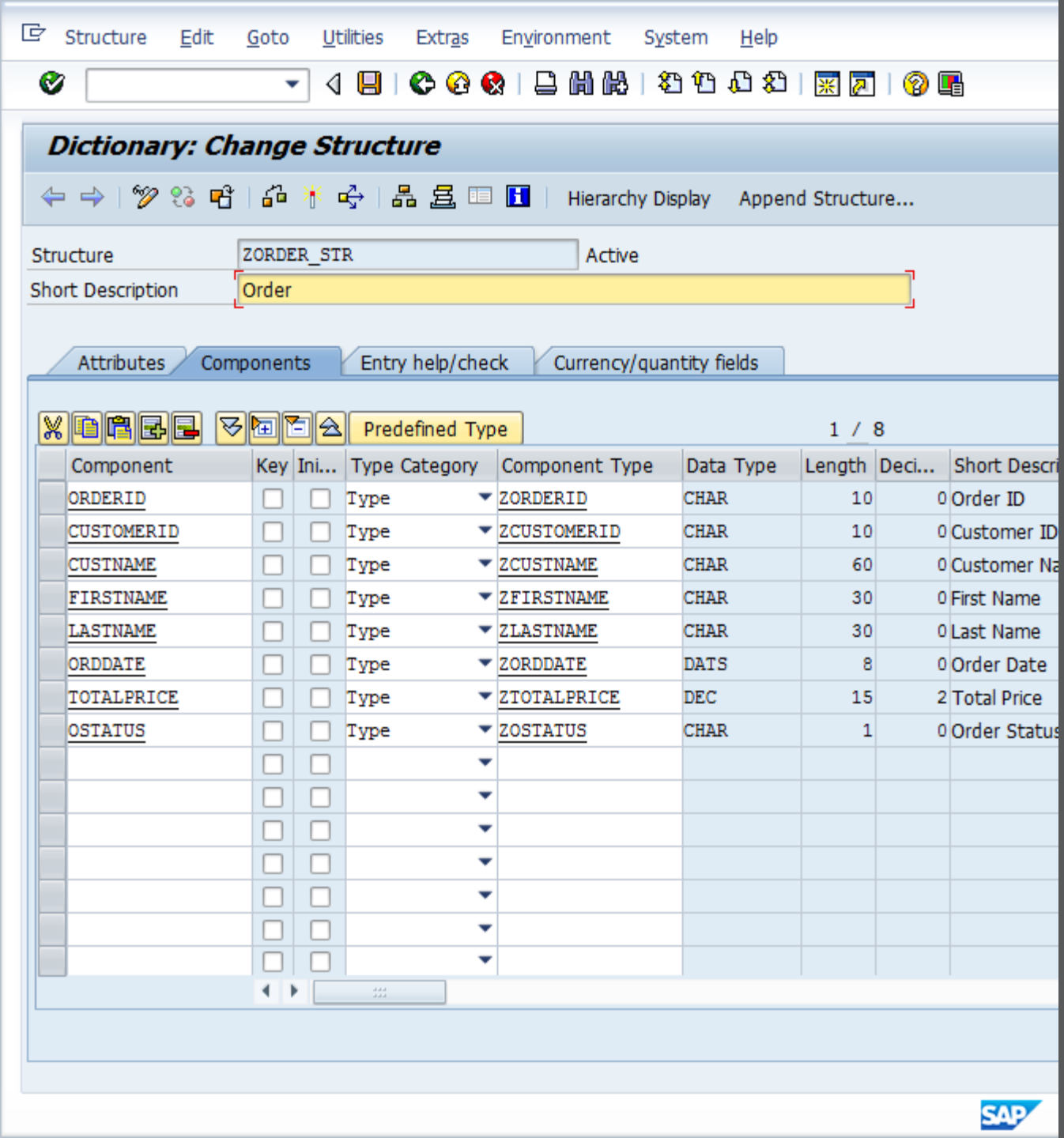

ZORDER_STR

Order

Component	Type
ORDERID	ZORDERID
CUSTOMERID	ZCUSTOMERID
CUSTNAME	ZCUSTNAME
FIRSTNAME	ZFIRSTNAME
LASTNAME	ZLASTNAME
ORDDATE	ZORDDATE
TOTALPRICE	ZTOTALPRICE
OSTATUS	ZOSTATUS

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Individual Exercises

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ZORDERITEM_STR

Order Item

Component	Type
ORDERID	ZORDERID
BOOKID	ZBOOKID
BOOKTITLE	ZBOOKTITLE
CUSTOMERID	ZCUSTOMERID
ORDDATE	ZORDDATE
TOTALPRICE	ZTOTALPRICE
QUANTITY	ZQUANTITY
UNITPRICE	ZUNITPRICE

ZBOOK_STR

Book

Component	Type
BOOKID	ZBOOKID
BOOKTITLE	ZBOOKTITLE
AUTHORID	ZAUTHORID
PUBLISHERID	ZPUBLISHERID
PUBLDATE	ZPUBLDATE
UNITPRICE	ZUNITPRICE
FIRSTNAME	ZFIRSTNAME
LASTNAME	ZLASTNAME
AUTNAME	ZAUTNAME
PUBNAME	ZPUBNAME

ZCUSTOMER_STR

Customer

Component	Type
CUSTOMERID	ZCUSTOMERID
FIRSTNAME	ZFIRSTNAME
LASTNAME	ZLASTNAME
PERSEMAIL	ZPERSEMAIL
MOBPHONE	ZMOBPHONE
SADDRID	ZSADDRID
BADDRID	ZBADDRID
FSADDR	ZFSADDR
FBADDR	ZFBADDR

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Flat Structure

Nested Structure

Deep Structure

ZAUTHOR_STR - Author

Author ID	Work Email	Address	Website
CHAR 4	CHAR 50	CHAR 100	ZWEBSITE

ZWEBSITE
ZURL

ZAUTHOR_STR - Author

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ZADDRESS_STR - Address

City	ZIP Code	...
ZCITYID	ZZIPCODE	...

ZWEBSITE
ZURL

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Author ID	Work Email	Addresses	Website
CHAR 4	CHAR 50	ZADDRESSES	ZWEBSITE

ZADDRESSES_TT

Addresses
ZADDRESS
ZADDRESS

ZWEBSITE
ZURL

ZADDRESS_STR - Address

City	ZIP Code	...
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Where to Define Structures ?

Locally

Copy & Paste

High Maintenance Costs

Low Consistency

Simple

Globally

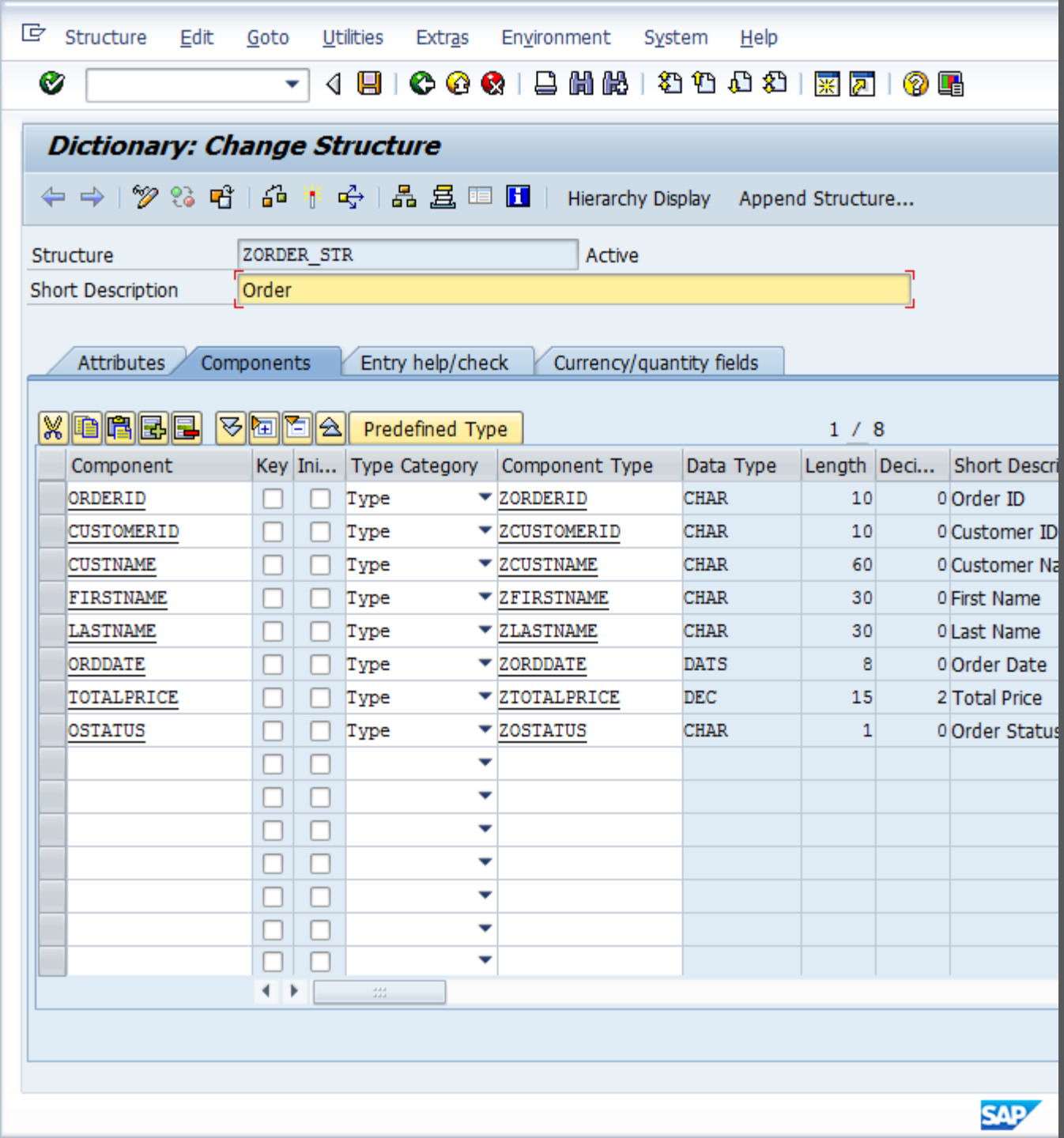
High Reusability

Low Maintenance Costs

High Consistency

Complex

pluralsight



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Order

Component	Type
ORDERID	ZORDERID
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OSTATUS	ZOSTATUS

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ZORDERITEM_STR

Order Item

Component	Type
ORDERID	ZORDERID
BOOKID	ZBOOKID
BOOKTITLE	ZBOOKTITLE
CUSTOMERID	ZCUSTOMERID
ORDDATE	ZORDDATE
TOTALPRICE	ZTOTALPRICE
QUANTITY	ZQUANTITY
UNITPRICE	ZUNITPRICE

ZBOOK_STR

Book

Component	Type
BOOKID	ZBOOKID
BOOKTITLE	ZBOOKTITLE
AUTHORID	ZAUTHORID
PUBLISHERID	ZPUBLISHERID
PUBLDATE	ZPUBLDATE
UNITPRICE	ZUNITPRICE
FIRSTNAME	ZFIRSTNAME
LASTNAME	ZLASTNAME
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Customer

Component	Type
CUSTOMERID	ZCUSTOMERID
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MOBPHONE	ZMOBPHONE
SADDRID	ZSADDRID
BADDRID	ZBADDRID
FSADDR	ZFSADDR
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KEEP IT
SIMPLE

KEEP IT
SIMPLE
Next Module
Table Types