Domain

Alex Gönczy

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pluralsight

Domain

Two-Level Domain Concept: Domain

pluralsight

Fields

Structure

Author ID	Work Email	Website

Table Type

Personal Email

Database Table

Publisher ID	Work Email	Website

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Fields

Structure

Author ID	Work Email	Website
CHAR 4	CHAR 50	CHAR 50

Table Type

Personal Email
CHAR 50

Database Table

Publisher ID	Work Email	Website
CHAR 4	CHAR 50	CHAR 50

pluralsight

Fields

Structure

Author ID	Work Email	Website

Table Type

Personal Email

Database Table

Publisher ID	Work Email	Website

Data Elements

ZAUTHORID	ZWORKEMAIL	ZPERSEMAIL	ZWEBSITE	ZPUBLISHERID
CHAR 4	CHAR 50	CHAR 50	CHAR 50	CHAR 4

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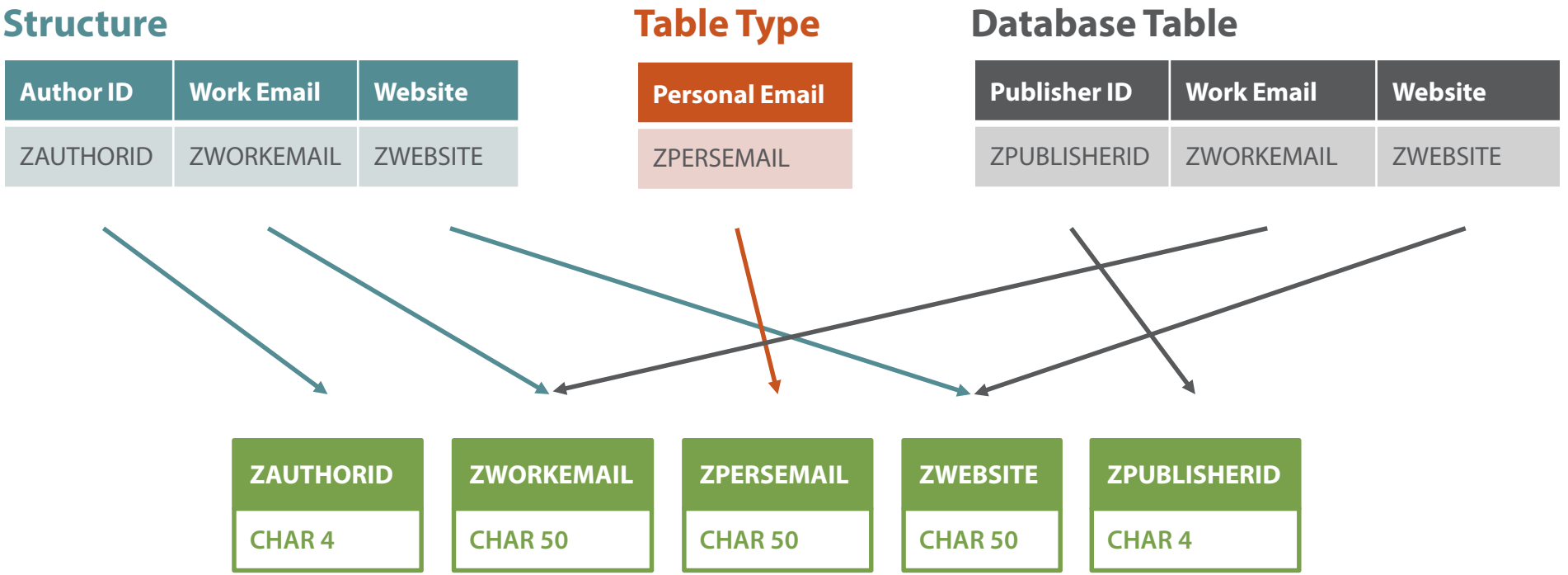
Field

Data Elements



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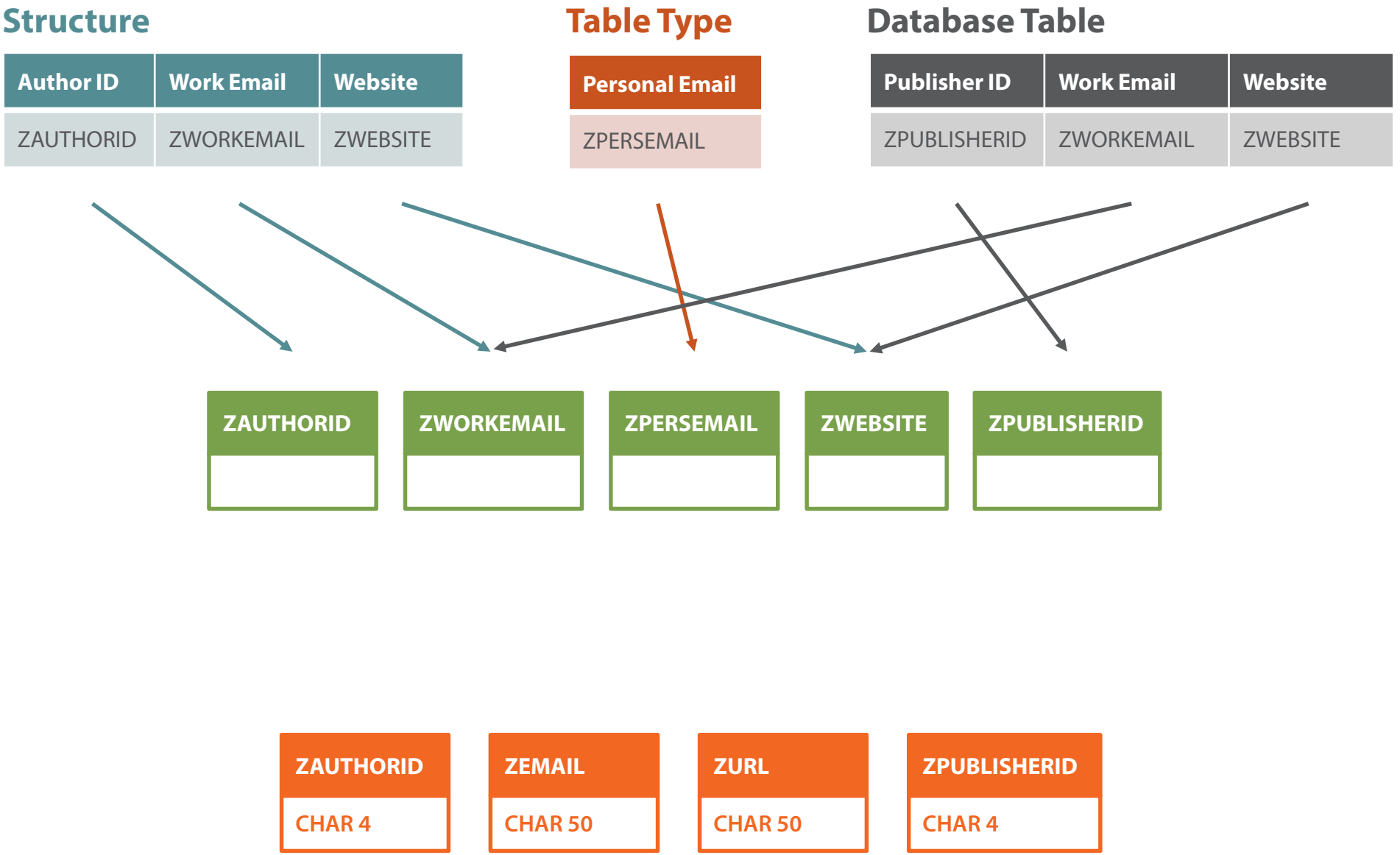
Fields

Data Elements

Domains



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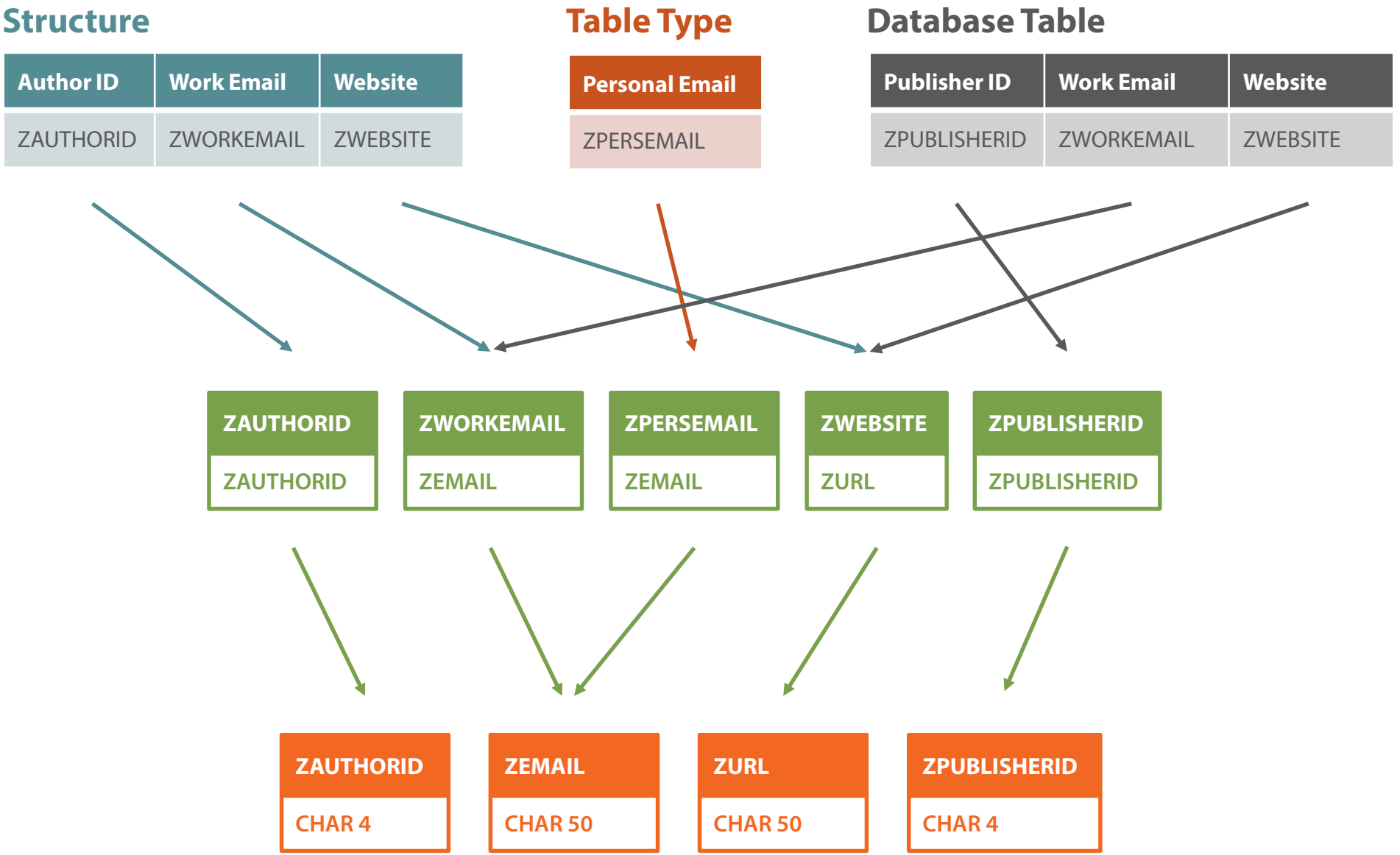
Fields

Data Elements

Domains



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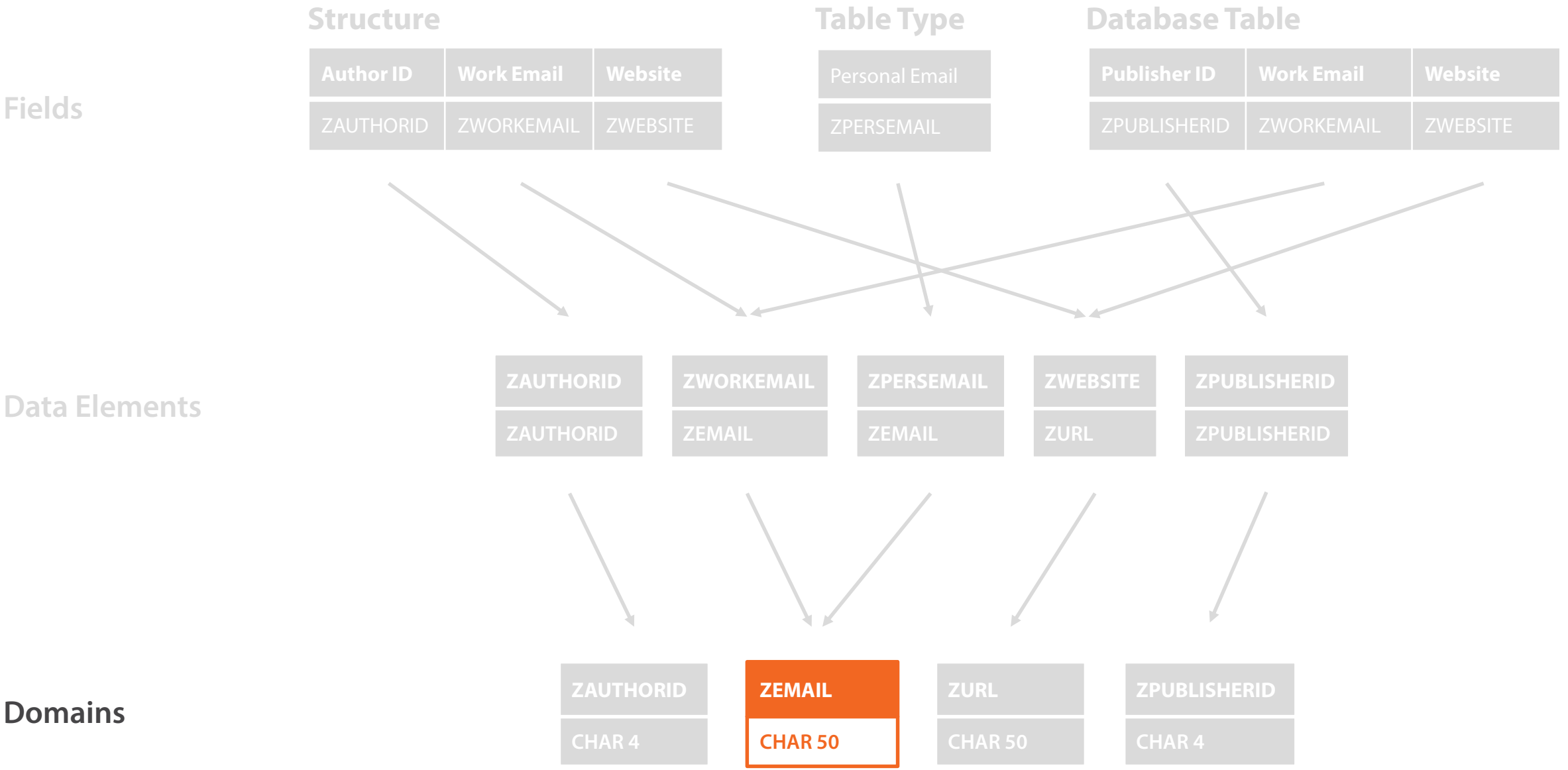
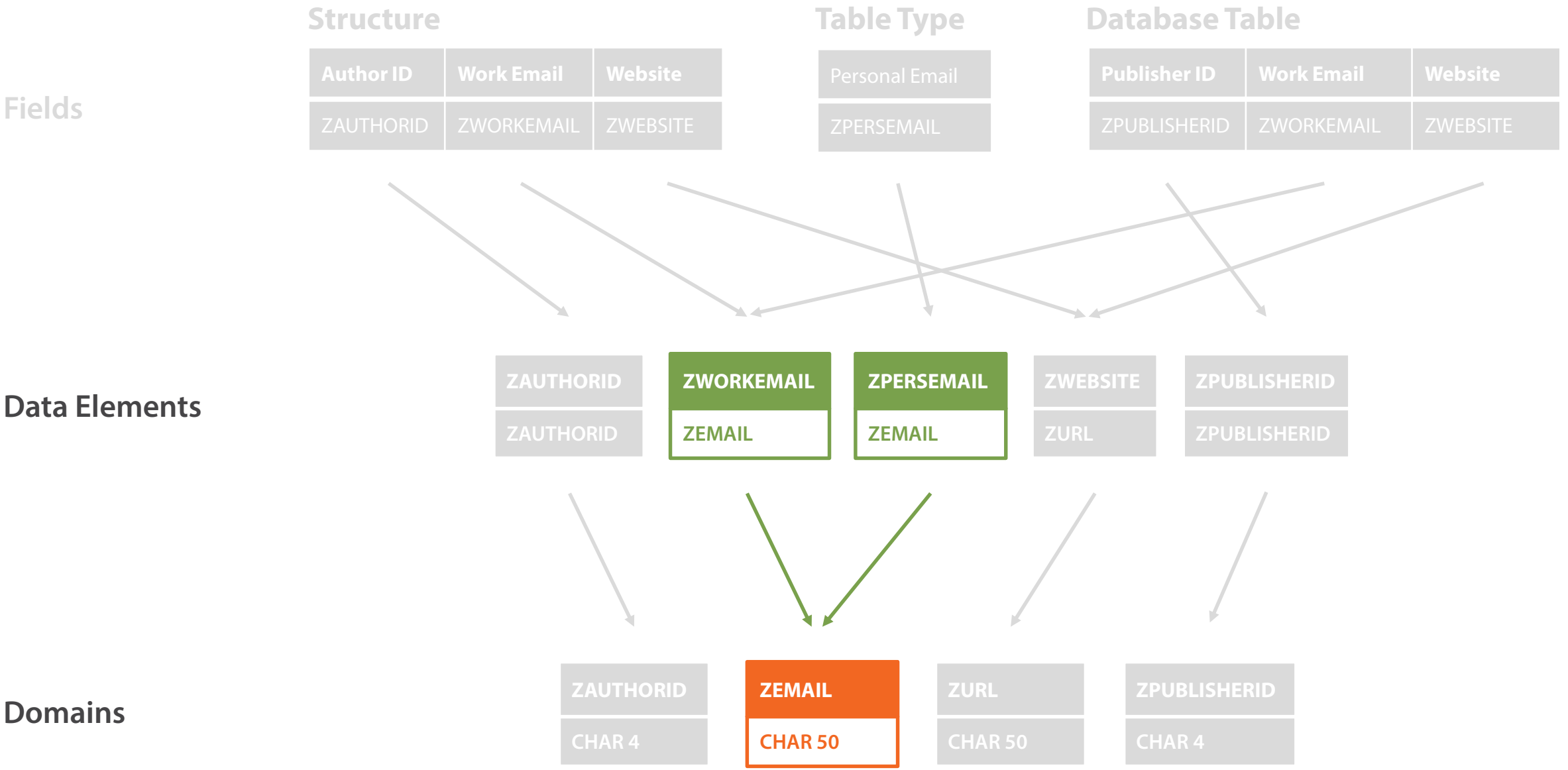
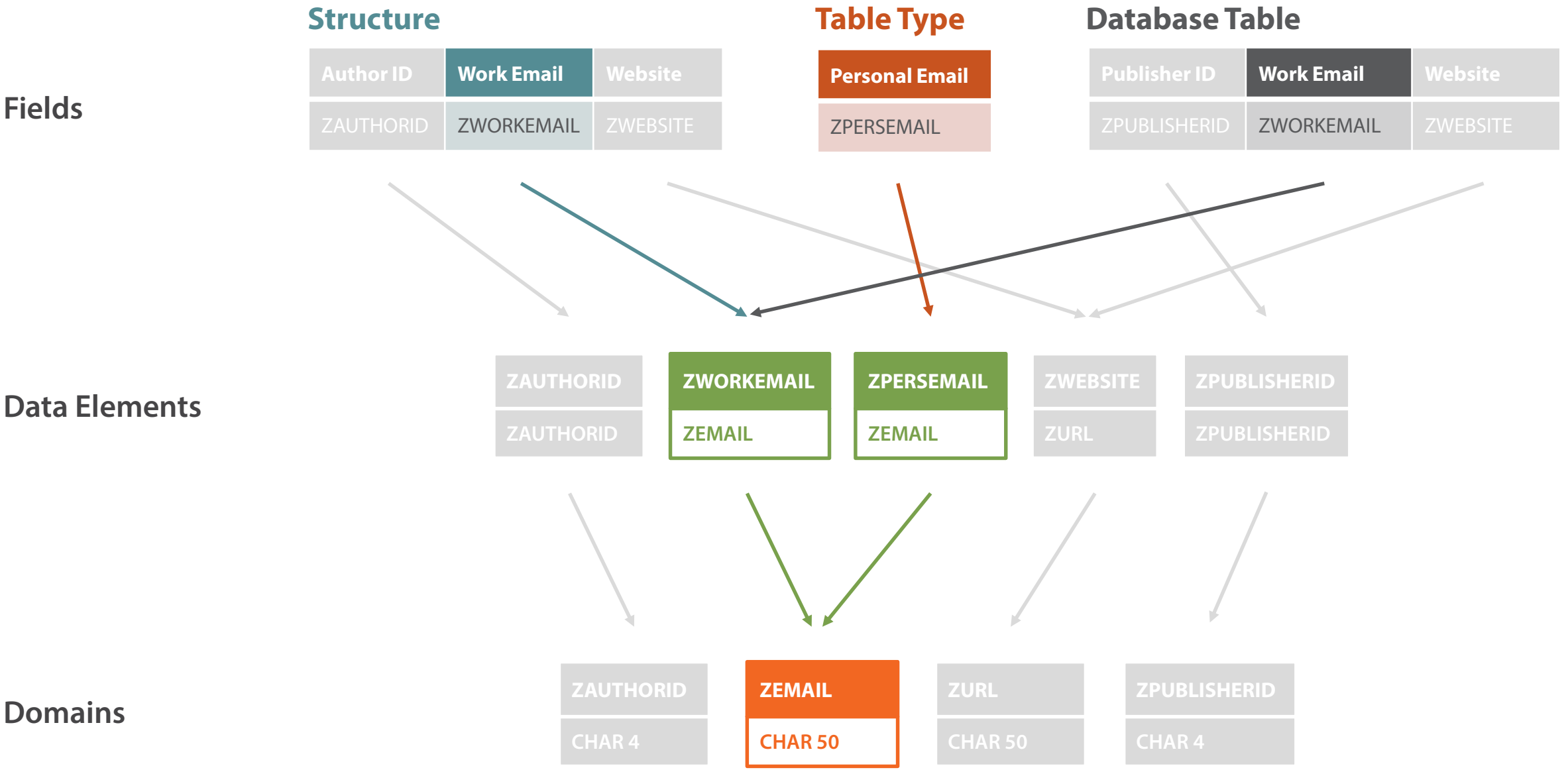


pluralsight



pluralsight



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Fields

Data Elements

Domains

Structure

Author ID	Work Email	Website
ZAUTHORID	ZWORKEMAIL	ZWEBSITE

Table Type

Personal Email
ZPERSEMAIL

Database Table

Publisher ID	Work Email	Website
ZPUBLISHERID	ZWORKEMAIL	ZWEBSITE

ZAUTHORID	ZWORKEMAIL	ZPERSEMAIL
ZAUTHORID	ZEMAIL	ZEMAIL

ZAUTHORID	ZEMAIL	ZURL	ZPUBLISHERID
CHAR 4	CHAR 50	CHAR 50	CHAR 4

Definition

Two-Level Domain Concept

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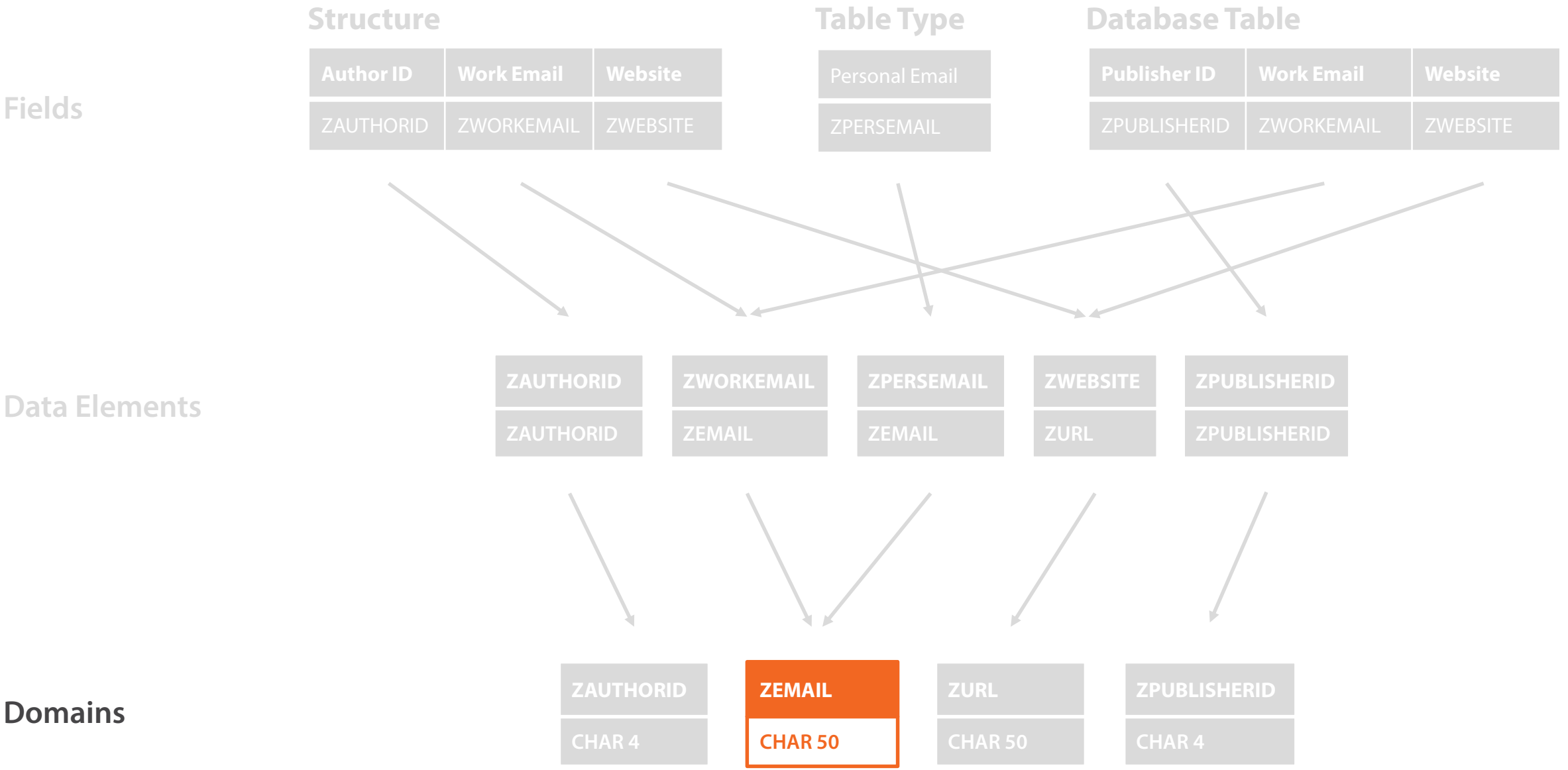
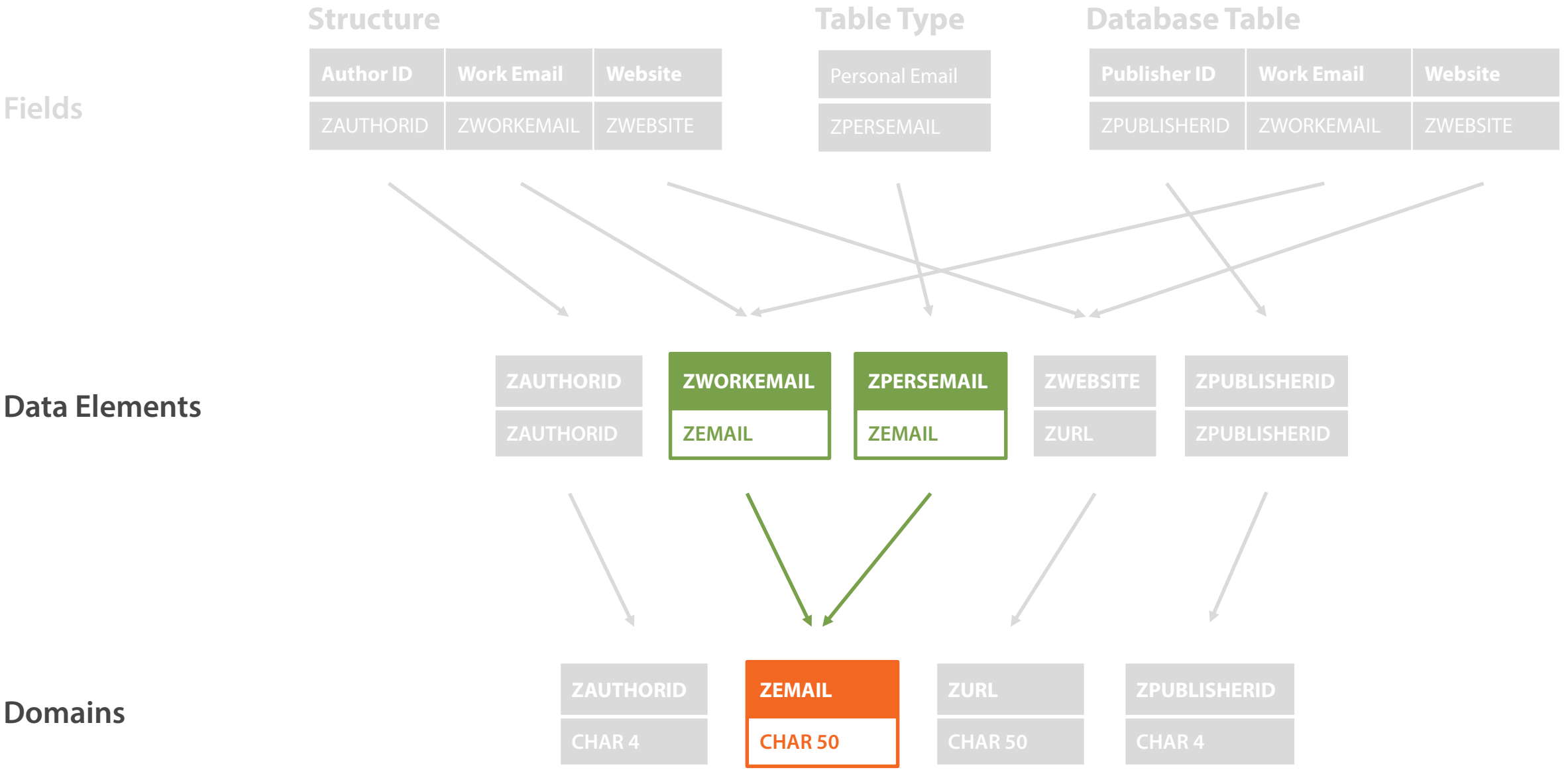
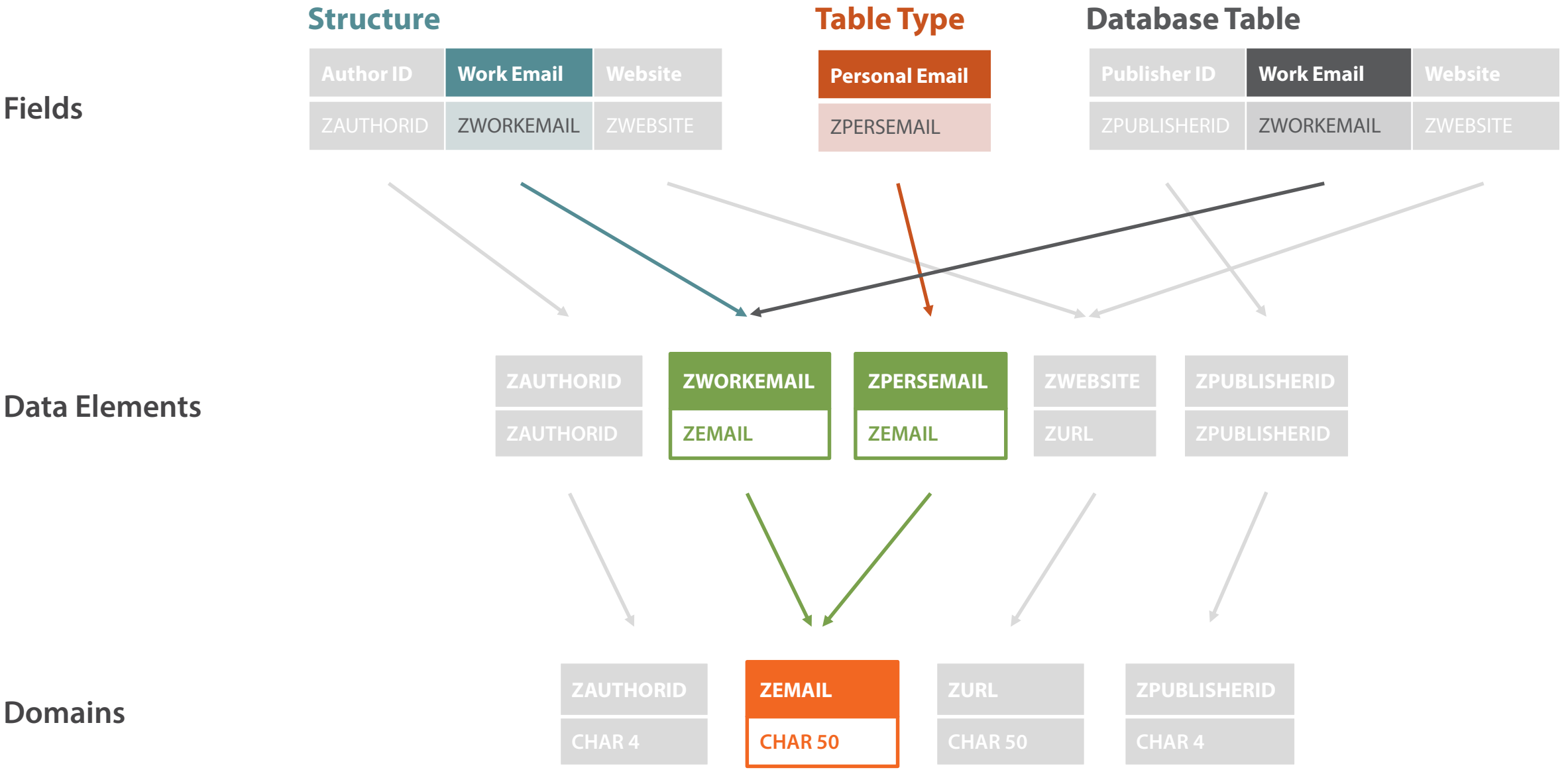


pluralsight



pluralsight



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Benefits of Two-Level Domain Concept

Reusability

Centralized Maintenance

Next

Decrease the Maintenance Cost with Domains

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Domain

Decrease the Maintenance Cost with Domains

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ABAP Dictionary Design

Built-in Types

Two-Level Domain Concept

pluralsight

ABAP Dictionary Design

Built-in Types

Two-Level Domain Concept

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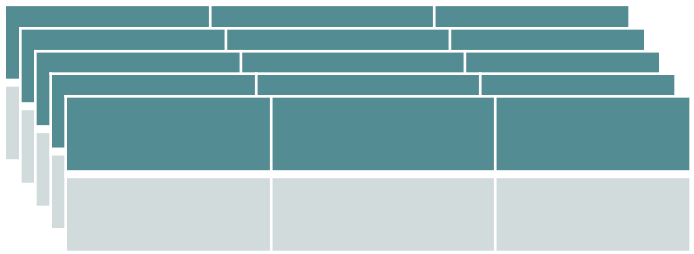
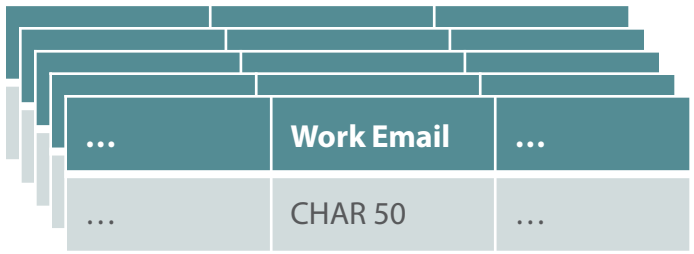
Structure



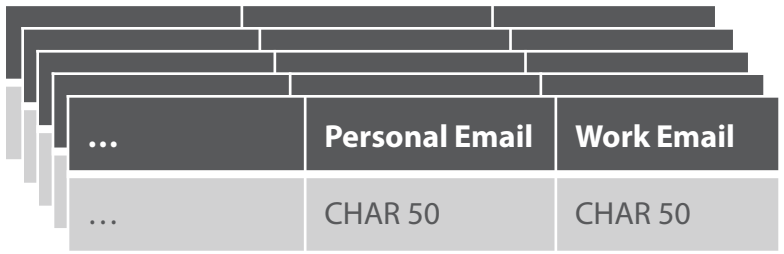
Database Table

pluralsight

Structure



Database Table



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Structure

…	Work Email	…
…	CHAR **60**	…

Database Table

…	Personal Email	Work Email
…	CHAR 60	CHAR 60

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ABAP Dictionary Design

Built-in Types

Two-Level Domain Concept

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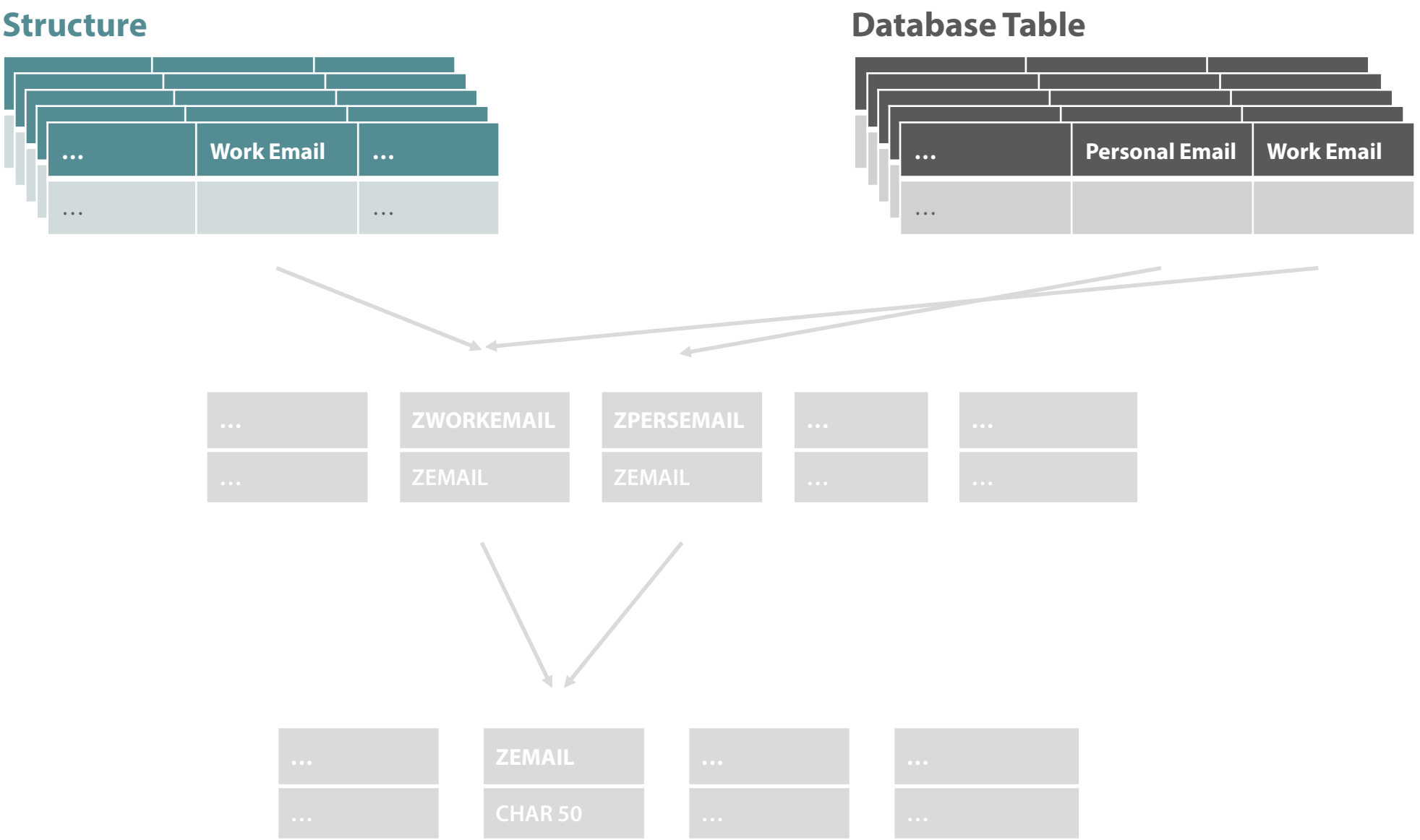
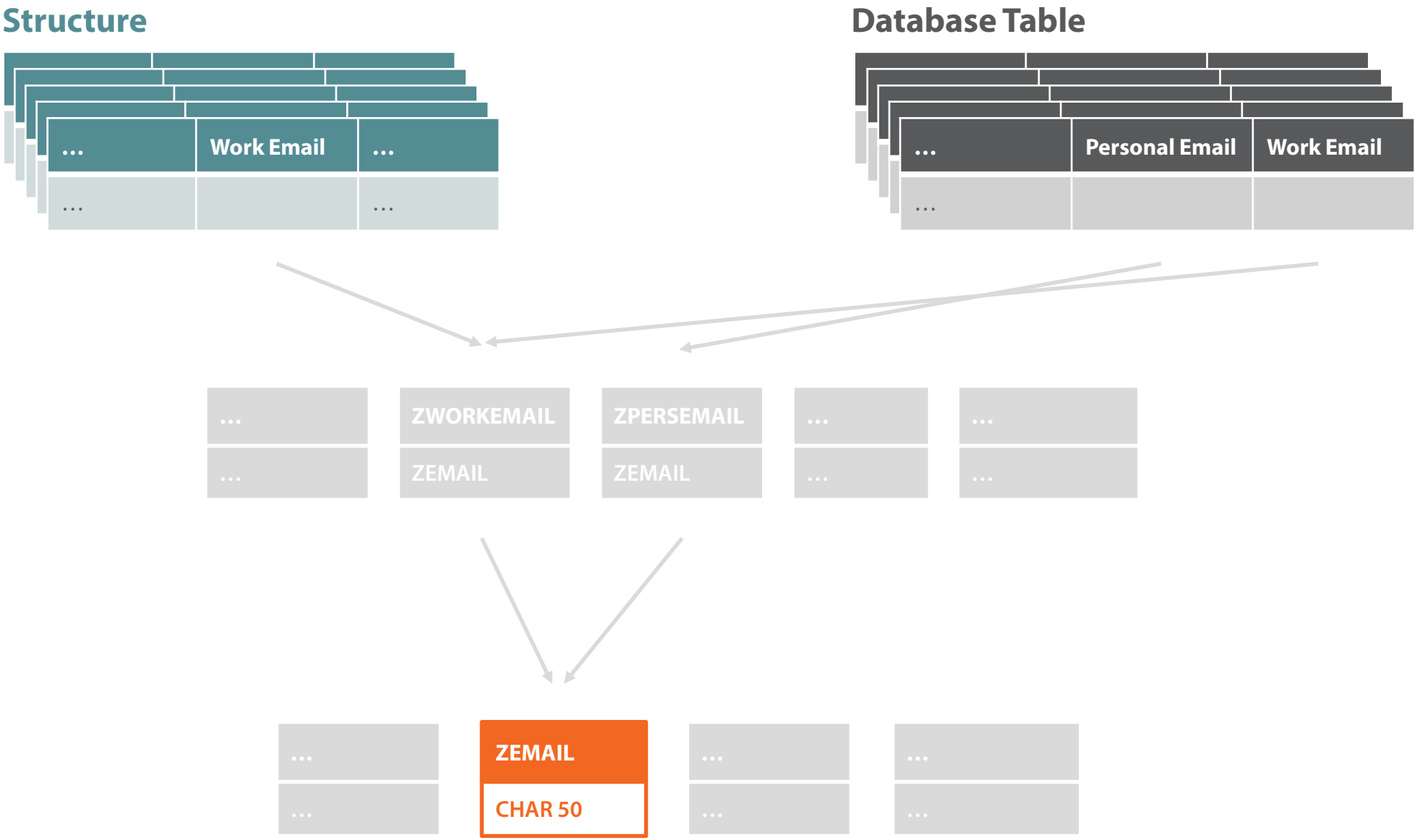
ABAP Dictionary Design

Built-in Types

Two-Level Domain Concept

pluralsight


Structure
...
Work Email
...
...
...
Database Table
...
Personal Email
Work Email
...
...
ZWORKEMAIL
ZPERSEMAIL
...
...
...
ZEMAIL
ZEMAIL
...
...
ZEMAIL
...
...
CHAR 50
...
...


Structure
...
Work Email
...
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...
Database Table
...
Personal Email
Work Email
...
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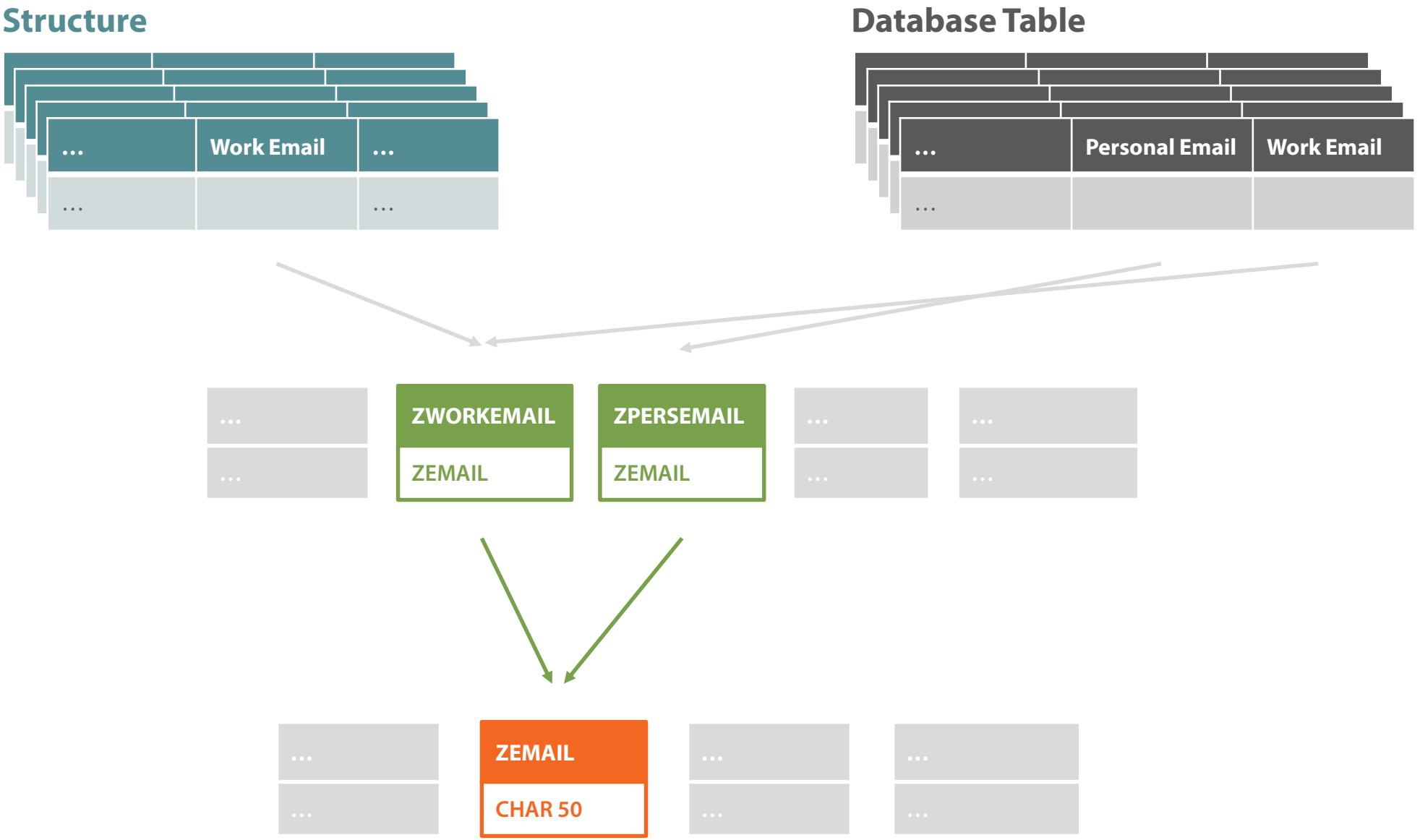
ZWORKEMAIL
ZEMAIL
ZPERSEMAIL
ZEMAIL
ZEMAIL
CHAR 50


Structure
...
Work Email
...
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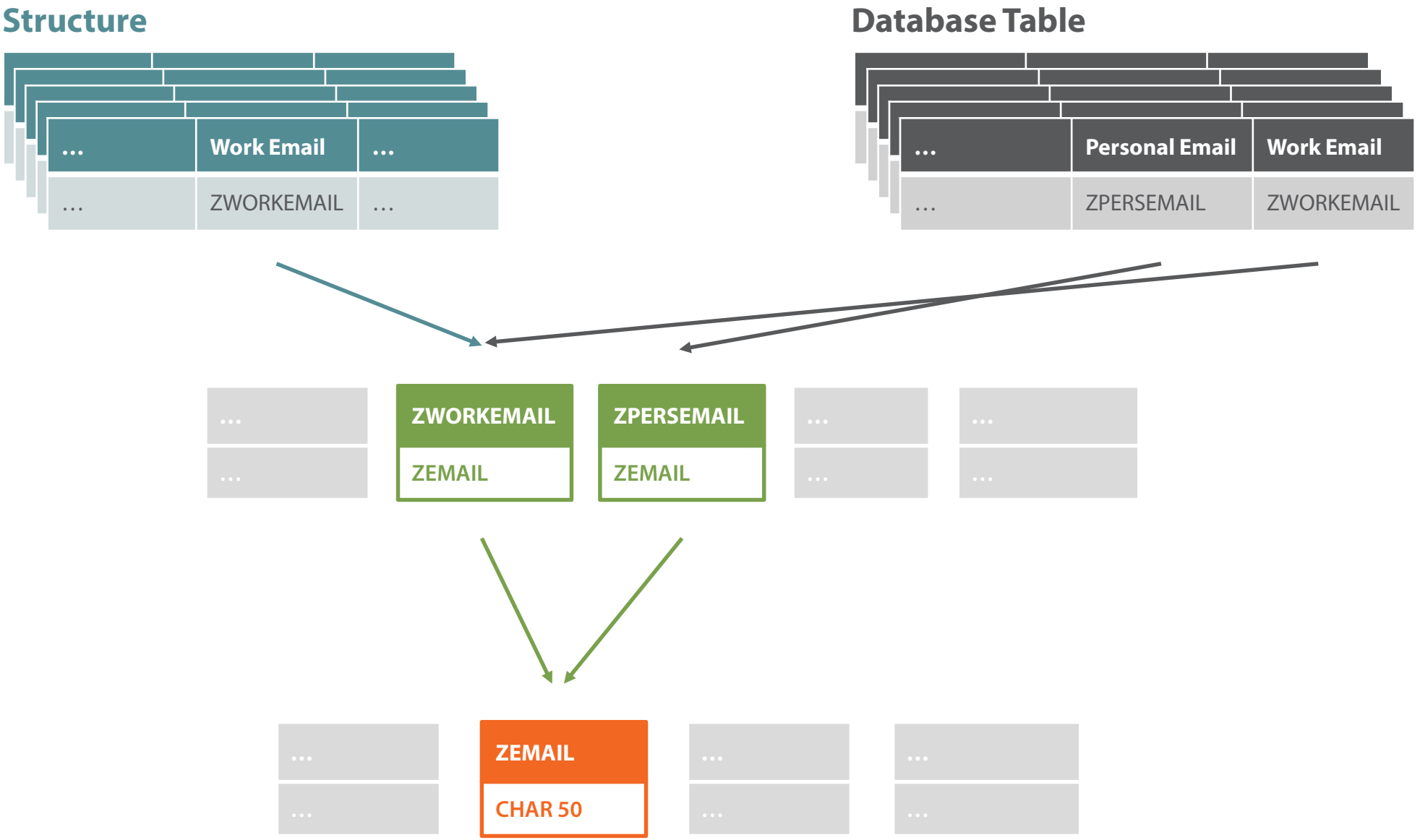
Database Table
...
Personal Email
Work Email
...
ZWORKEMAIL
ZEMAIL
ZPERSEMAIL
ZEMAIL
ZEMAIL
CHAR 50



pluralsight

Structure

...	Work Email	...
...	ZWORKEMAIL	...

Database Table

...	Personal Email	Work Email
...	ZPERSEMAIL	ZWORKEMAIL

...	ZWORKEMAIL	ZPERSEMAIL	...	...
...	ZEMAIL	ZEMAIL	...	...

...	ZEMAIL	...	...
...	CHAR 60	...	...

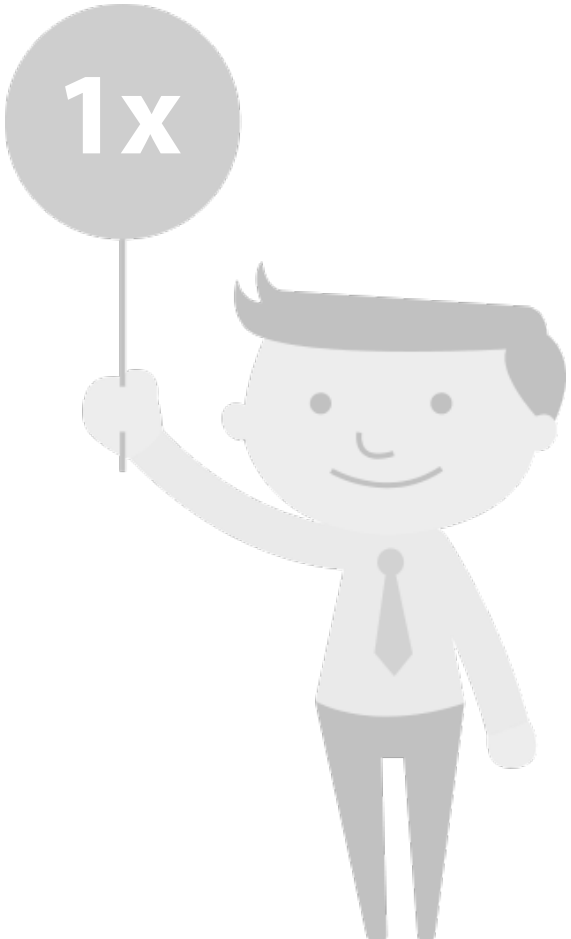
pluralsight

Structure

...	Work Email	...
...	ZWORKEMAIL	...

Database Table

...	Personal Email	Work Email
...	ZPERSEMAIL	ZWORKEMAIL



...	ZWORKEMAIL	ZPERSEMAIL
...	ZEMAIL	ZEMAIL

...	ZEMAIL	...	...
...	CHAR 60	...	...

Next

Provide Consistency with Domains

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Domain

Provide Consistency with Domains

pluralsight

Provide Consistency with Domains

Meta-Data Consistency

Data Consistency

pluralsight

Provide Consistency with Domains

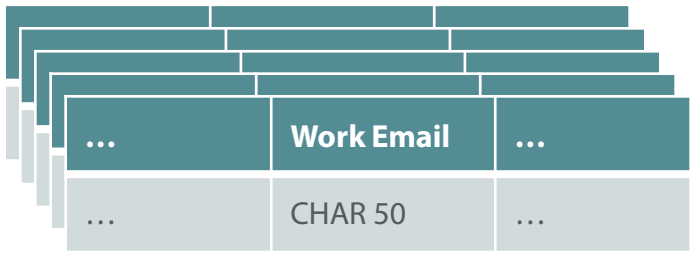
Meta-Data Consistency

Data Consistency

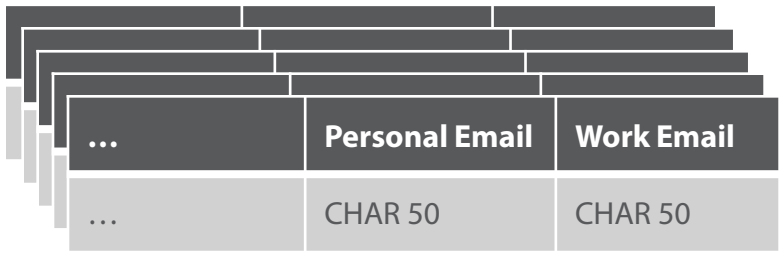
pluralsight

15x

Structure



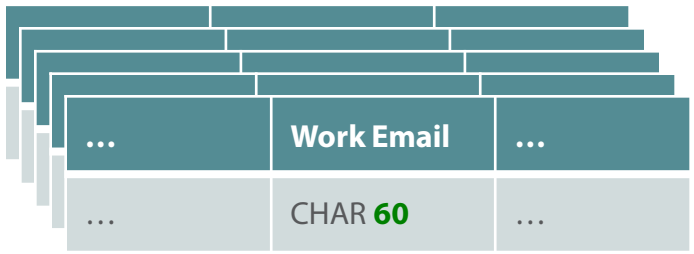
Database Table



pluralsight

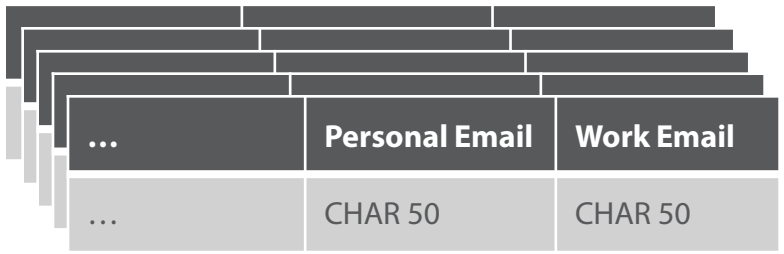
15x

Structure



Correct

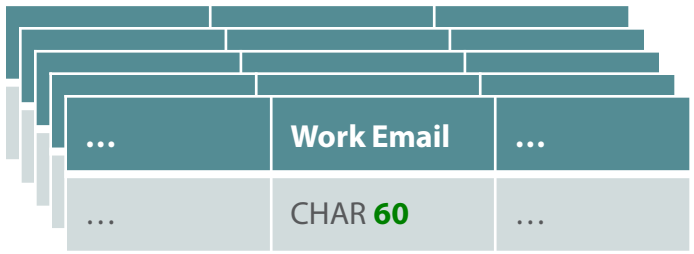
Database Table



pluralsight

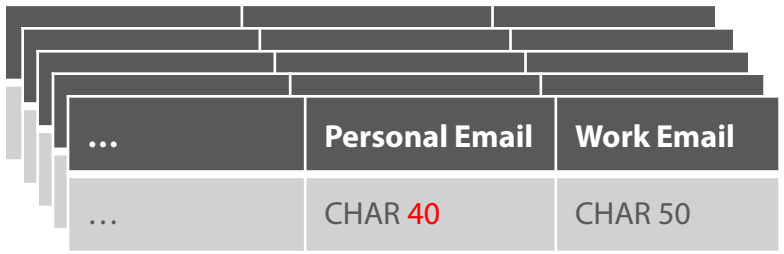
15x

Structure



Correct

Database Table



Typo

pluralsight

15x

Structure

...	Work Email	...
...	CHAR **60**	...

Correct

Database Table

...	Personal Email	Work Email
...	CHAR 40	CHAR **50**

Typo Missed

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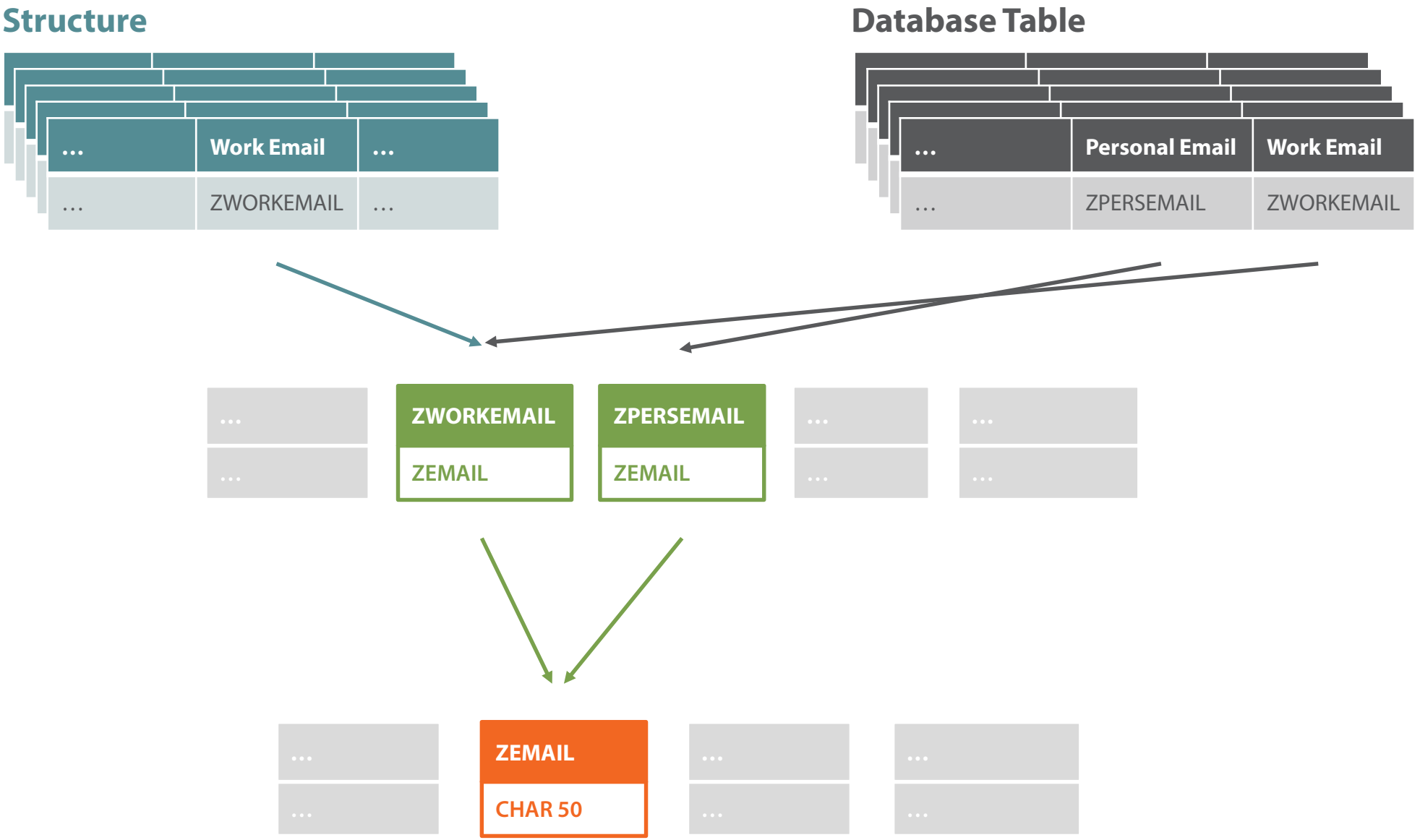

pluralsight

Structure

...	Work Email	...
...	ZWORKEMAIL	...

Database Table

...	Personal Email	Work Email
...	ZPERSEMAIL	ZWORKEMAIL

...	ZWORKEMAIL	ZPERSEMAIL	...	...
...	ZEMAIL	ZEMAIL	...	...

1x

...	ZEMAIL	...	...
...	CHAR 60	...	...

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Provide Consistency with Domains

Meta-Data Consistency

Data Consistency

pluralsight

Provide Consistency with Domains

Meta-Data Consistency

Data Consistency

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Customer

…	Customer Rating	…
…	INT	…

Vendor

…	…	Vendor Rating
…	…	INT

Employee

…	Employee Rating	…
…	INT	…

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Customer

…	Customer Rating	…
…	INT	…

Vendor

…	…	Vendor Rating
…	…	INT

Employee

…	Employee Rating	…
…	INT	…

pluralsight

Customer

…	Customer Rating	…
…	INT	…

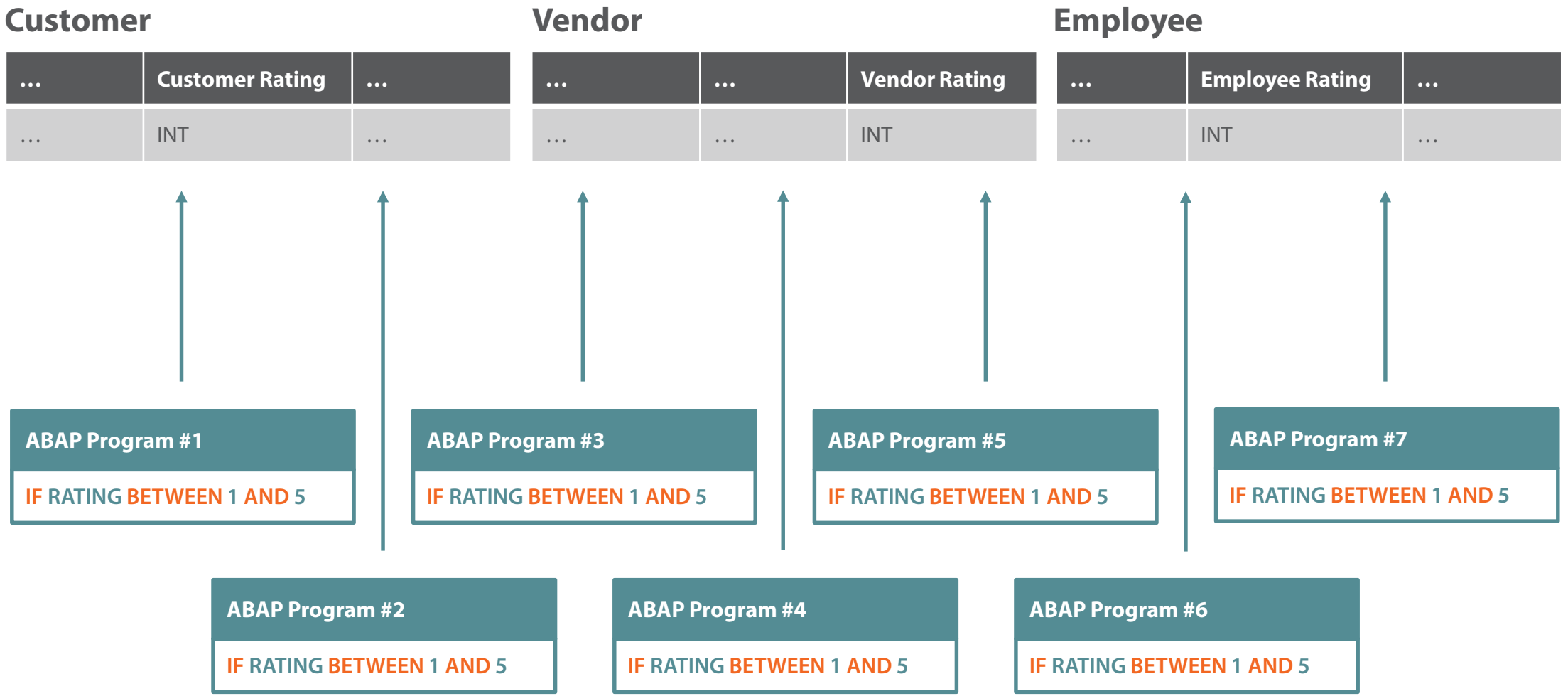
Vendor

…	…	Vendor Rating
…	…	INT

Employee

…	Employee Rating	…
…	INT	…

pluralsight



pluralsight

Customer

…	Customer Rating	…
…	INT	…

Vendor

…	…	Vendor Rating
…	…	INT

Employee

…	Employee Rating	…
…	INT	…

ABAP Program #1

IF RA 5

ABAP Program #3

IF RATING BETWEEN 1 AND 5

ABAP Program #5

IF RATING BETWEEN 1 AND 5

ABAP Program #7

IF RATING BETWEEN 1 AND 5

AP Program #2

F RATING BETWEEN 1 AND 5

ABAP Program #4

IF RATING BETWEEN 1 AND 5

ABAP Program #6

IF RATING BETWEEN 1 AND 5

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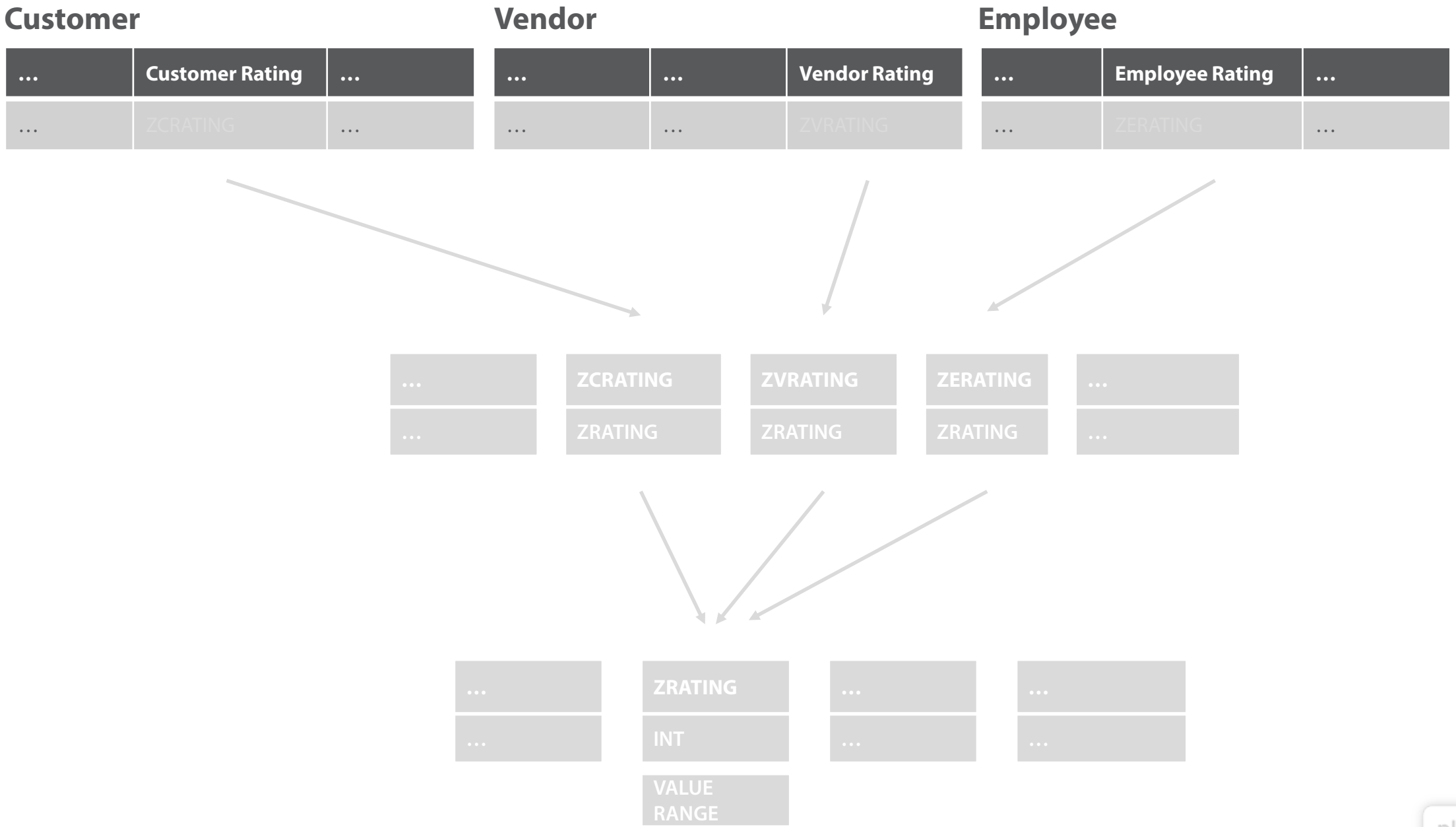
Customer
...
Customer Rating
...
...
ZCRATING
...
Vendor
...
...
Vendor Rating
...
...
ZVRATING
Employee
...
Employee Rating
...
...
ZERATING
...
...
ZCRATING
ZVRATING
ZERATING
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...
ZRATING
ZRATING
ZRATING
...
...
ZRATING
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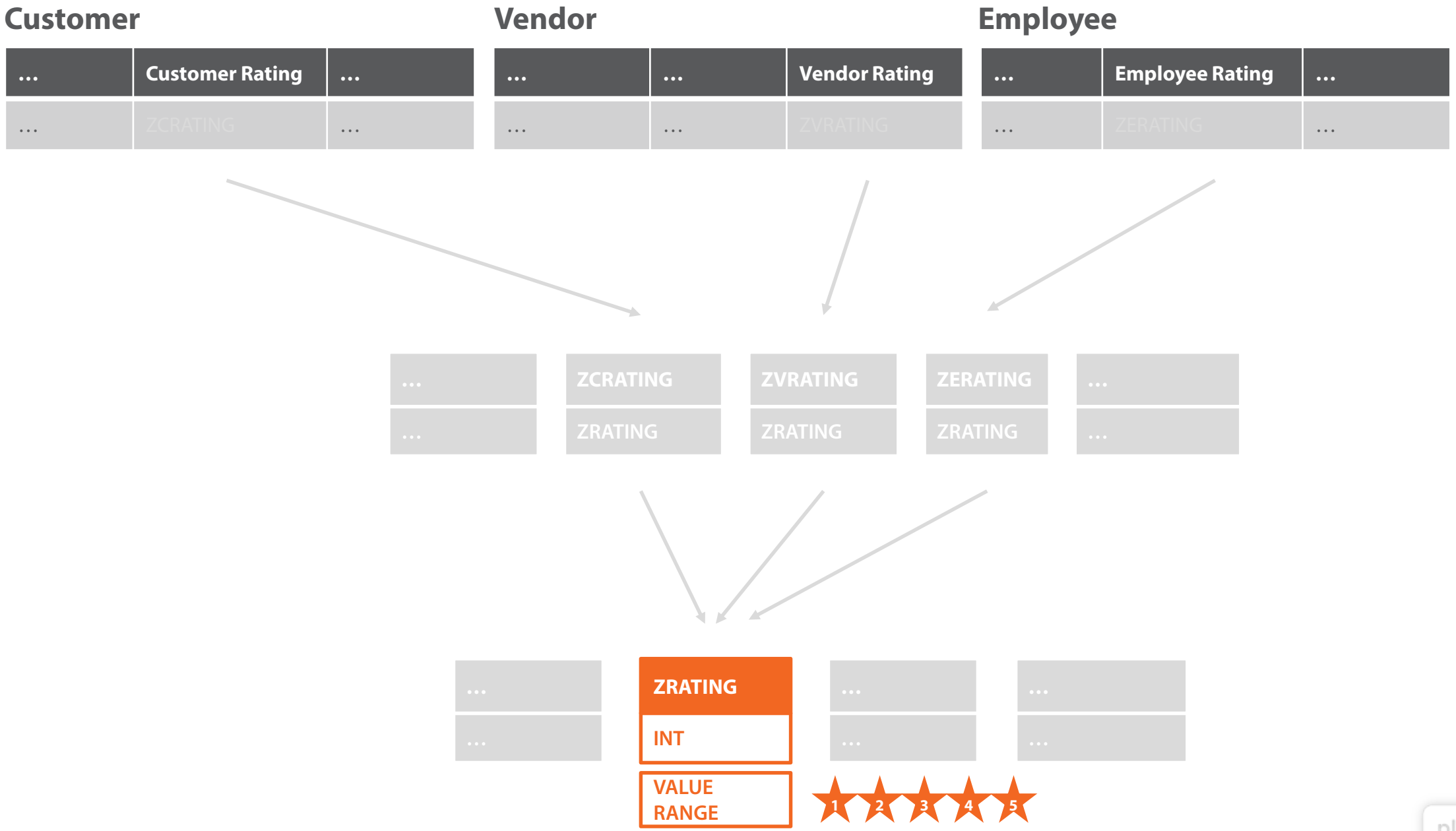
...
...
...
INT
...
...
VALUE RANGE


Customer
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Customer Rating
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ZCRATING
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Vendor
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Vendor Rating
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...
ZVRATING
Employee
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...
ZERATING
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...
ZCRATING
ZVRATING
ZERATING
...
...
ZRATING
ZRATING
ZRATING
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...
ZRATING
INT
VALUE RANGE
1
2
3
4
5
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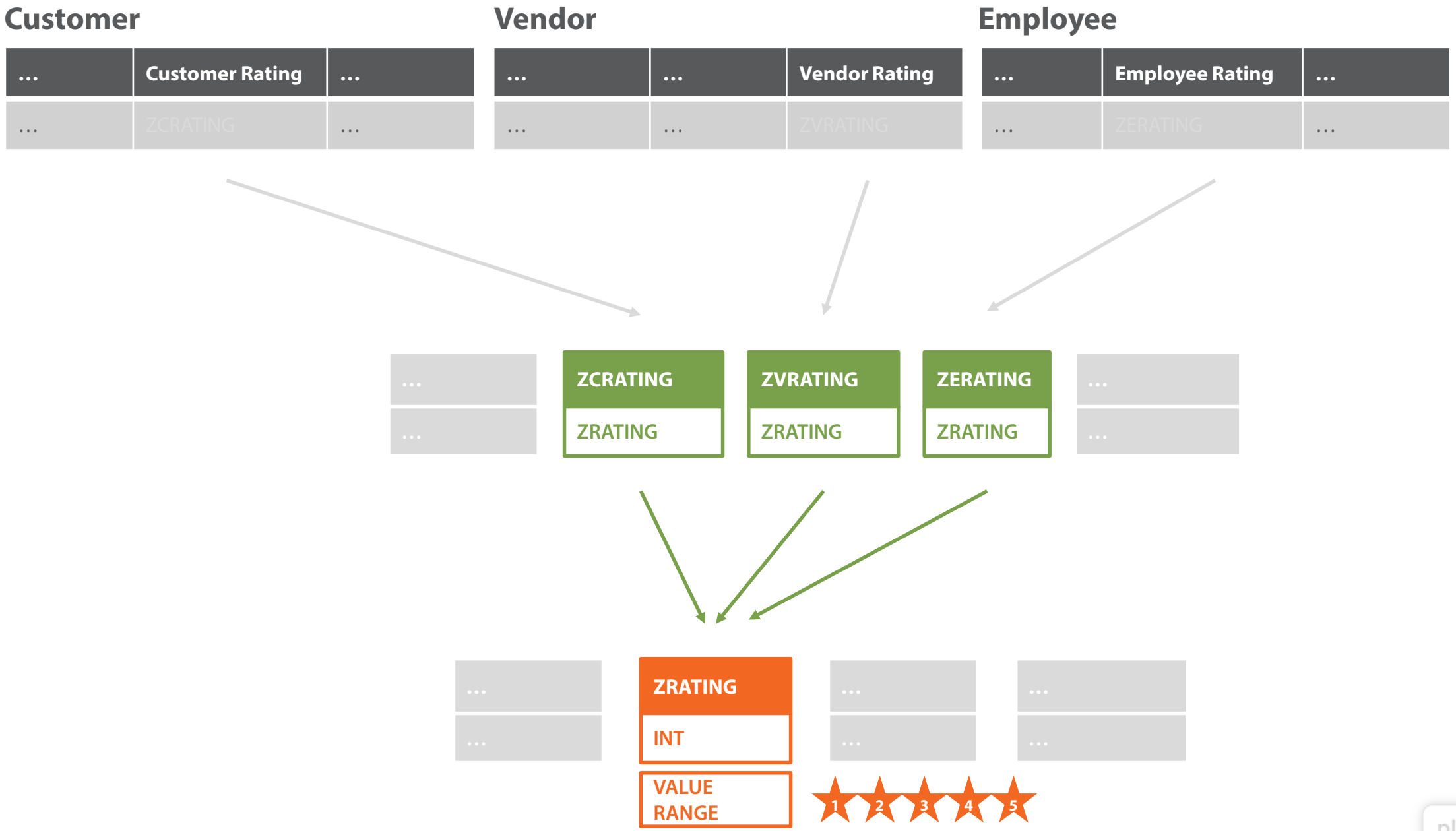
Customer
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Customer Rating
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ZCRATING
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Vendor
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...
Vendor Rating
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...
ZVRATING
Employee
...
Employee Rating
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...
ZERATING
...
...
ZCRATING
ZRATING
ZVRATING
ZRATING
ZERATING
ZRATING
...
...
...
...
...
...
...
...
ZRATING
INT
VALUE RANGE
1
2
3
4
5

Customer

...	Customer Rating	...
...	ZCRATING	...

Vendor

...	...	Vendor Rating
...	...	ZVRATING

Employee

...	Employee Rating	...
...	ZERATING	...

...	ZCRATING	ZVRATING	ZERATING	...
...	ZRATING	ZRATING	ZRATING	...

...	ZRATING	...	...
...	INT	...	...
	VALUE RANGE		

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```
PARAMETERS rating TYPE i.
```

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~~PARAMETERS rating TYPE i.~~

```
PARAMETERS rating TYPE zcrating.
```

Doesn't protect from Direct Updates!

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~~PARAMETERS rating TYPE i.~~

PARAMETERS rating TYPE zcrating.

Customer Rating

Customer Rating (1) 5 Entries found

Customer Rating	Short text
1	Poor
2	Fair
3	Good
4	Very Good
5	Excellent

Next

Development Workflow: Domain

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Domain

Development Workflow: Domain

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Order

Order Item

Customer

Book

Publisher

Author

Address

Street

City

State

Country

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List of Potential Domains

ZOSTATUS	ZDATE	ZPRICE	ZEMAIL	ZQUANTITY	ZTITLE	ZPHONE	ZURL
CHAR 1	DATS	DEC 15+2	CHAR 50	DEC 5+0	CHAR 100	CHAR 30	CHAR 50

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List of Potential Domains

ZOSTATUS	ZDATE	ZPRICE	ZEMAIL	ZQUANTITY	ZTITLE	ZPHONE	ZURL
CHAR 1	DATS	DEC 15+2	CHAR 50	DEC 5+0	CHAR 100	CHAR 30	CHAR 50
ZTEXT	**ZLTEXT**	**ZORDERID**	**ZBOOKID**	**ZCUSTOMERID**	**ZAUTHORID**	**ZPUBLISHERID**	**ZZIPCODE**
CHAR 30	CHAR 80	CHAR 10	CHAR 10	CHAR 10	CHAR 4	CHAR 4	CHAR 6
ZSTATEID	**ZCOUNTRYID**	**ZADDRESSID**	**ZSTREETID**	**ZCITYID**			
CHAR 4	CHAR 4	CHAR 10	CHAR 10	CHAR 4			

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Development Workflow

ZOSTATUS
CHAR 1

ZDATE
DATS

ZPRICE
DEC 15+2

ZEMAIL
CHAR 50

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Development Workflow

ZOSTATUS
CHAR 1

ZDATE
DATS

ZPRICE
DEC 15+2

ZEMAIL
CHAR 50

ZQUANTITY	ZTITLE	ZURL	ZPHONE	ZZIPCODE
DEC 5+0	CHAR 100	CHAR 50	CHAR 30	CHAR 6

ZTEXT	ZLTEXT	ZSTREETID	ZCITYID	ZSTATEID
CHAR 30	CHAR 80	CHAR 10	CHAR 4	CHAR 4

ZCOUNTRYID	ZADDRESSID	ZORDERID	ZBOOKID	ZAUTHORID
CHAR 4	CHAR 10	CHAR 10	CHAR 10	CHAR 4

ZPUBLISHERID	ZCUSTOMERID
CHAR 4	CHAR 10

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Development Workflow

ZOSTATUS
CHAR 1

ZDATE
DATS

ZPRICE
DEC 15+2

ZEMAIL
CHAR 50

ZQUANTITY
DEC 5+0

ZTITLE
CHAR 100

ZURL
CHAR 50

ZPHONE
CHAR 30

ZZIPCODE
CHAR 6

ZTEXT
CHAR 30

ZLTEXT
CHAR 80

ZCOUNTRYID
CHAR 4

ZADDRESSID
CHAR 10

ZORDER
CHAR 10

ZBOOKID

ZAUTHORID
CHAR 4

ZPUBLISHERID
CHAR 4

ZCUSTOMERID
CHAR 10

Next
Demo: Creating Domain

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Group Exercises

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Group Exercises

Attendee

pluralsight

Group Exercises

Attendee

Instructor

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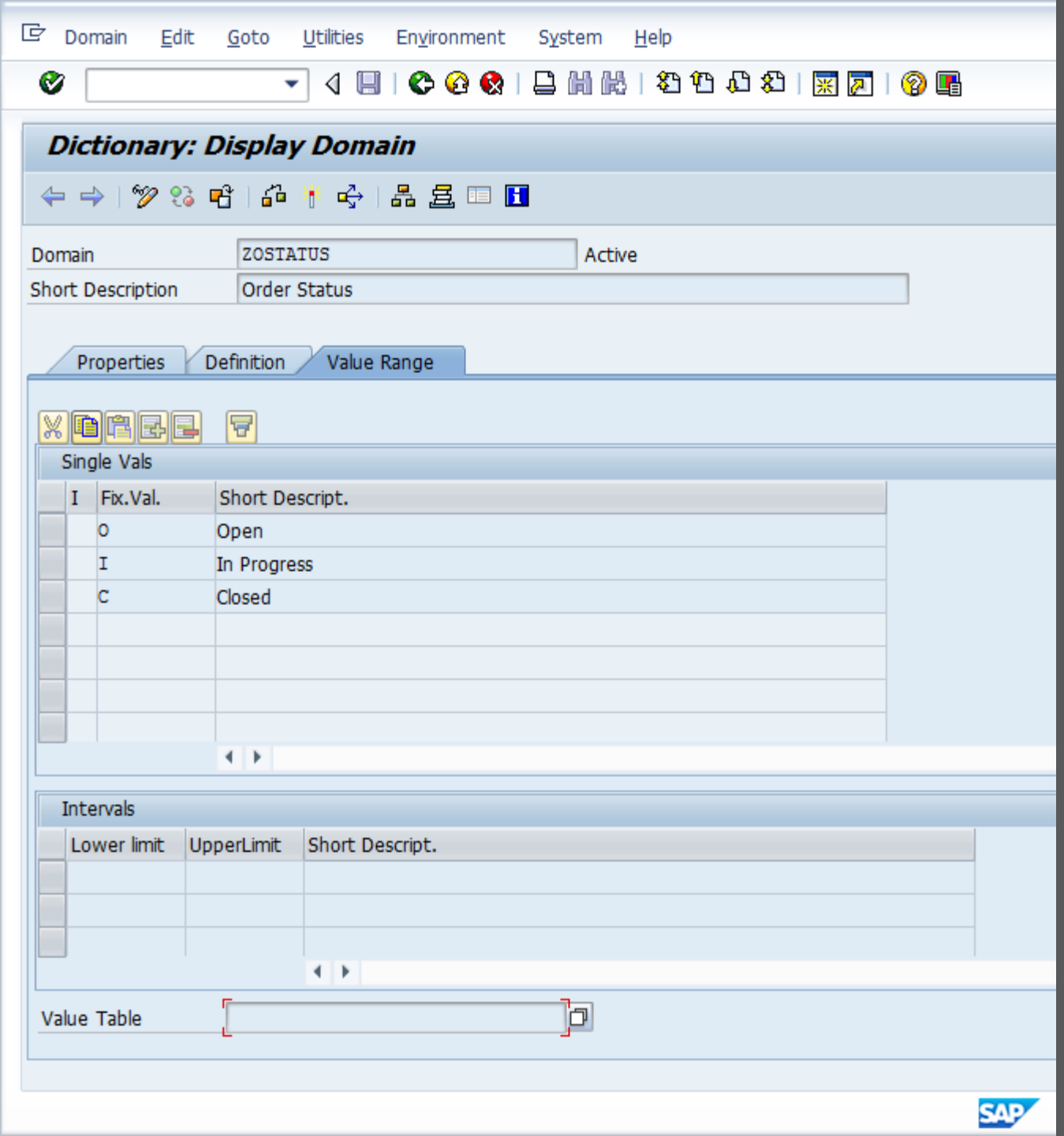

ZOSTATUS

Order Status

Data Type	CHAR
No. Characters	1
Decimal Places	N/A
Output Length	1
Conversion Routine	–
Sign	N/A
Lower Case	–
Value Range	Open | In Progress | Closed

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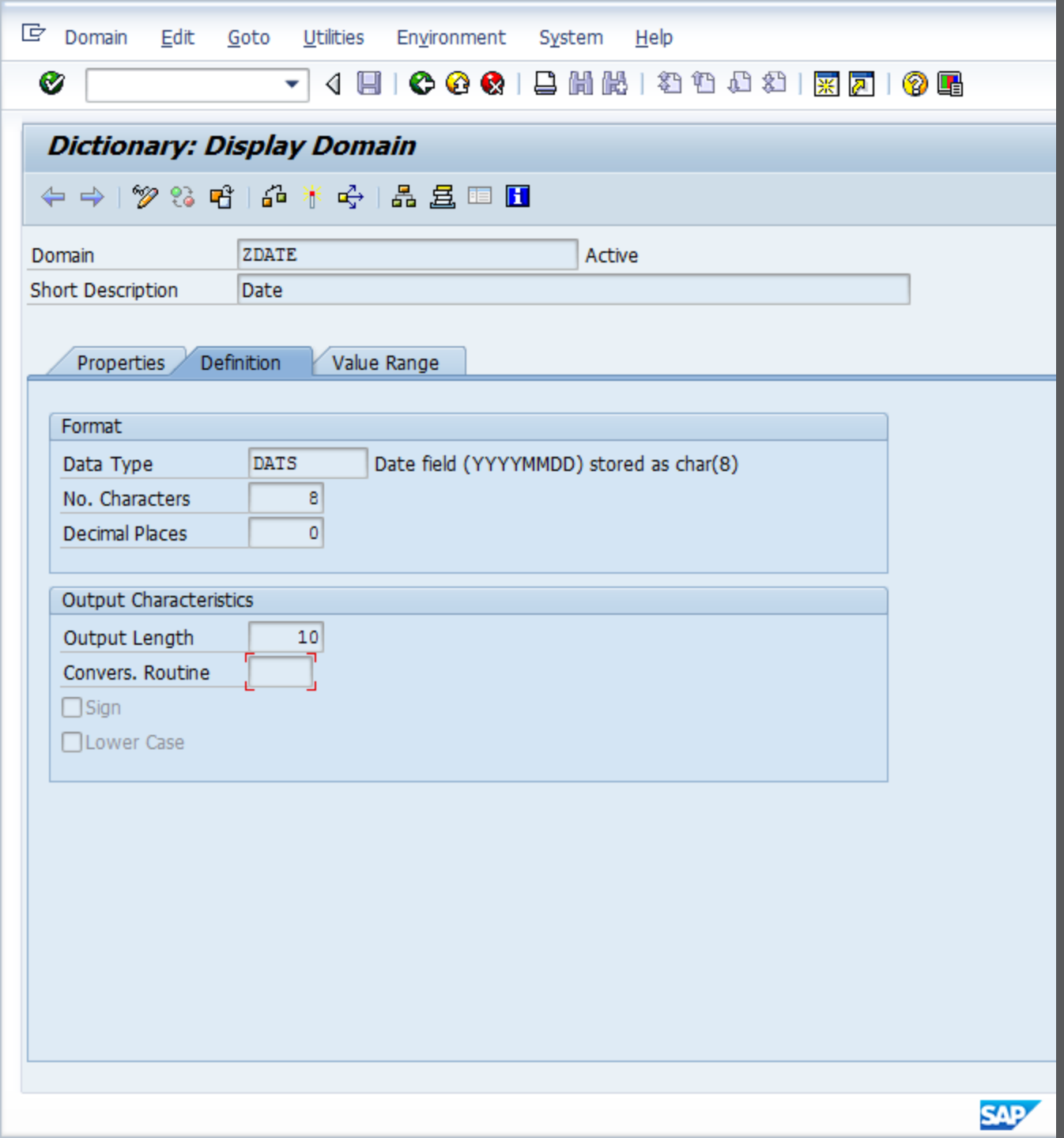

ZDATE

Date

Data Type	DATS
No. Characters	8
Decimal Places	N/A
Output Length	10
Conversion Routine	–
Sign	N/A
Lower Case	N/A
Value Range	N/A

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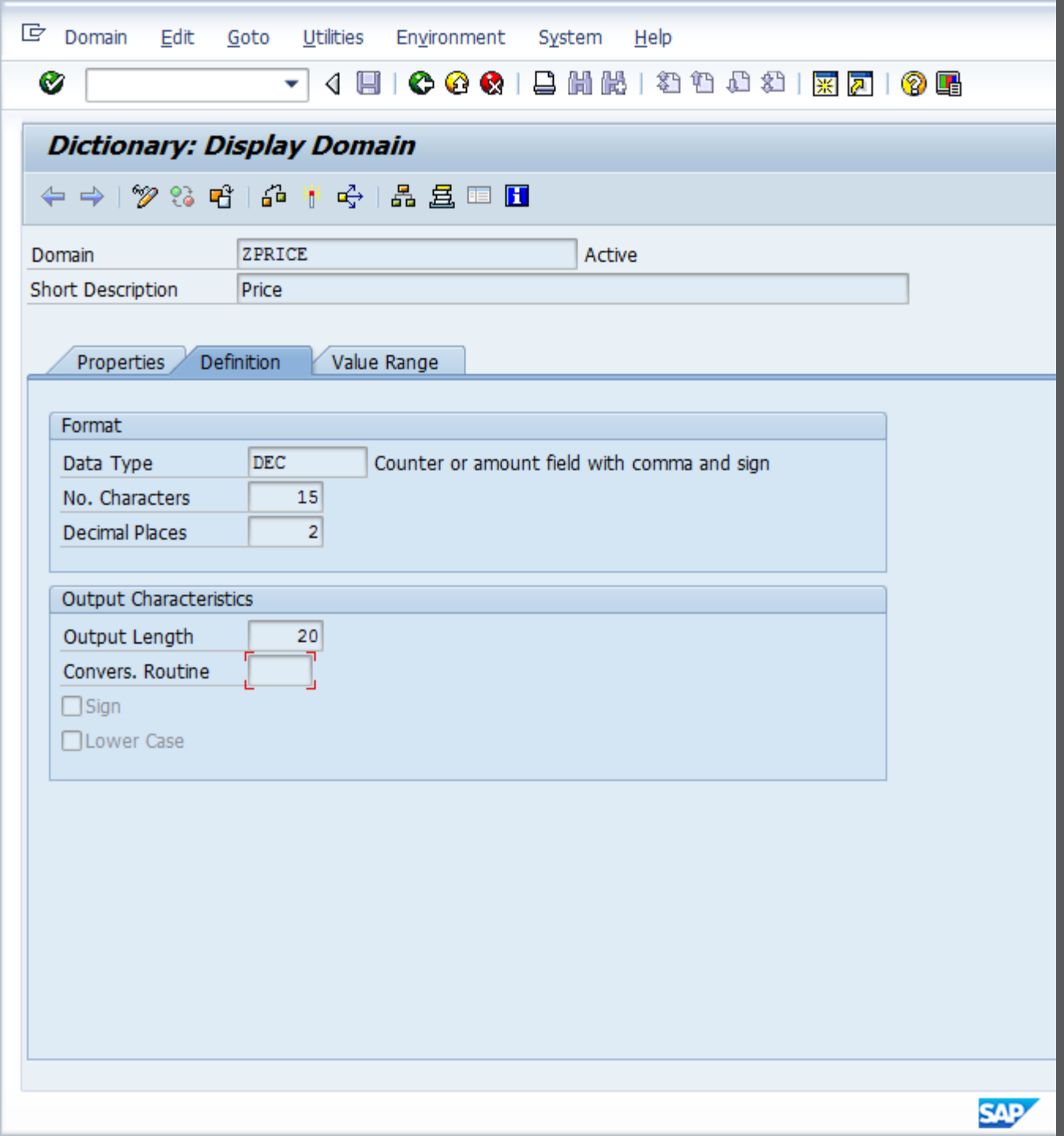

ZPRICE

Price

Data Type	DEC
No. Characters	15
Decimal Places	2
Output Length	20
Conversion Routine	–
Sign	–
Lower Case	N/A
Value Range	–

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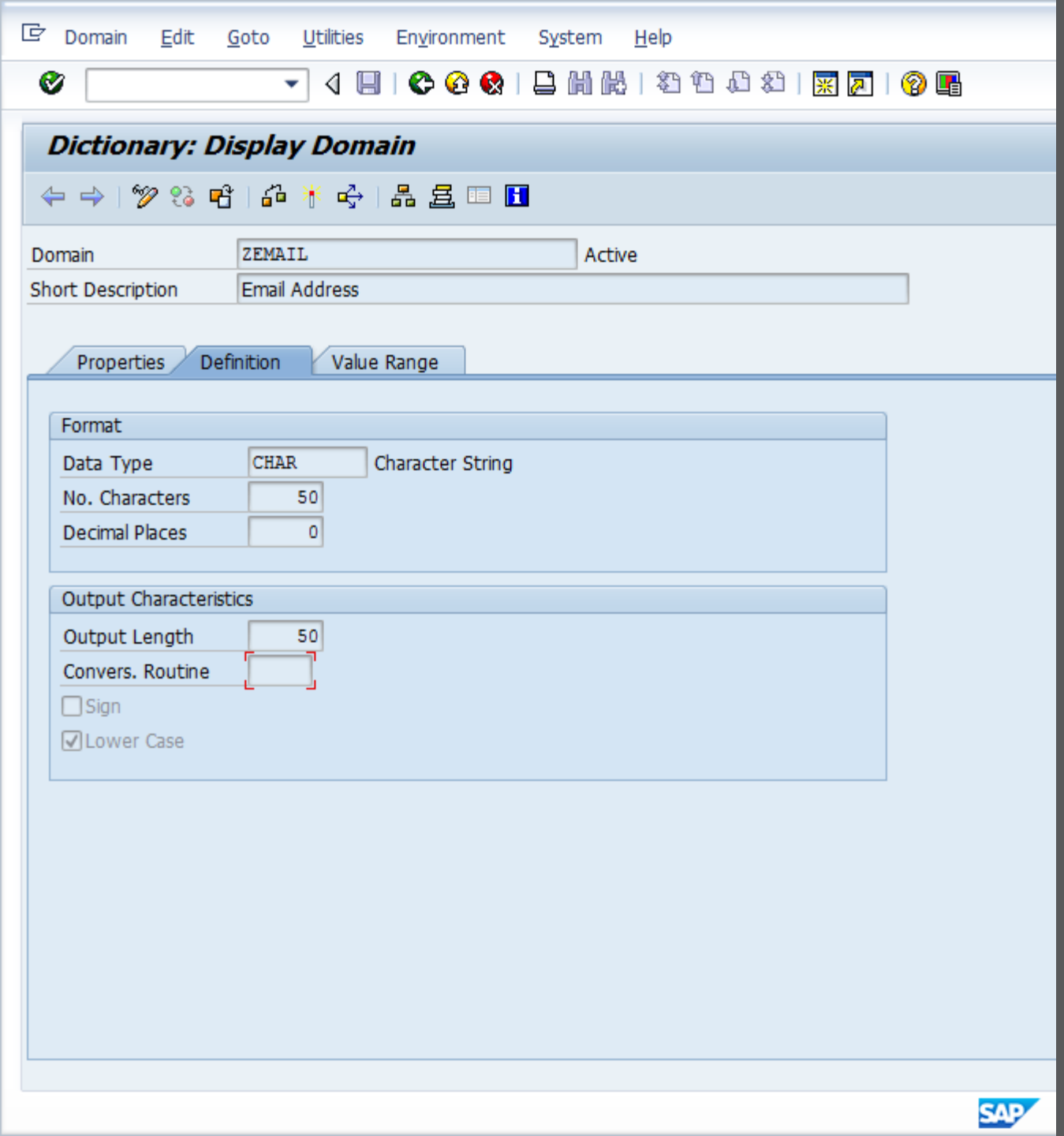

ZEMAIL

Email Address

Data Type	CHAR
No. Characters	50
Decimal Places	N/A
Output Length	50
Conversion Routine	–
Sign	N/A
Lower Case	X
Value Range	–

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Individual Exercises

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Individual Exercises

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ZQUANTITY
Quantity

Data Type	DEC
No. Characters	5
Decimal Places	0
Output Length	6
Conversion Routine	–
Sign	–
Lower Case	N/A
Value Range	–

ZTITLE
Title

Data Type	CHAR
No. Characters	100
Decimal Places	N/A
Output Length	100
Conversion Routine	–
Sign	N/A
Lower Case	X
Value Range	–

ZPHONE
Phone Number

Data Type	CHAR
No. Characters	30
Decimal Places	N/A
Output Length	30
Conversion Routine	–
Sign	N/A
Lower Case	–
Value Range	–

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ZURL
URL

Data Type	CHAR
No. Characters	50
Decimal Places	N/A
Output Length	50
Conversion Routine	–
Sign	N/A
Lower Case	X
Value Range	–

ZTEXT
Short Text

Data Type	CHAR
No. Characters	30
Decimal Places	N/A
Output Length	30
Conversion Routine	–
Sign	N/A
Lower Case	X
Value Range	–

ZLTEXT
Long Text

Data Type	CHAR
No. Characters	80
Decimal Places	N/A
Output Length	80
Conversion Routine	–
Sign	N/A
Lower Case	X
Value Range	–

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ZORDERID
Order ID

Data Type	CHAR
No. Characters	10
Decimal Places	N/A
Output Length	10
Conversion Routine	–
Sign	N/A
Lower Case	–
Value Range	–

ZBOOKID
Book ID

Data Type	CHAR
No. Characters	10
Decimal Places	N/A
Output Length	10
Conversion Routine	–
Sign	N/A
Lower Case	–
Value Range	–

ZCUSTOMERID
Customer ID

Data Type	CHAR
No. Characters	10
Decimal Places	N/A
Output Length	10
Conversion Routine	–
Sign	N/A
Lower Case	–
Value Range	–

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ZAUTHORID
Author ID

Data Type	CHAR
No. Characters	4
Decimal Places	N/A
Output Length	4
Conversion Routine	–
Sign	N/A
Lower Case	–
Value Range	–

ZPUBLISHERID
Publisher ID

Data Type	CHAR
No. Characters	4
Decimal Places	N/A
Output Length	4
Conversion Routine	–
Sign	N/A
Lower Case	–
Value Range	–

ZZIPCODE
ZIP Code

Data Type	CHAR
No. Characters	6
Decimal Places	N/A
Output Length	6
Conversion Routine	–
Sign	N/A
Lower Case	–
Value Range	–

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ZSTATEID
State ID

Data Type	CHAR
No. Characters	4
Decimal Places	N/A
Output Length	4
Conversion Routine	–
Sign	N/A
Lower Case	–
Value Range	–

ZCOUNTRYID
Country ID

Data Type	CHAR
No. Characters	4
Decimal Places	N/A
Output Length	4
Conversion Routine	–
Sign	N/A
Lower Case	–
Value Range	–

ZADDRESSID
Address ID

Data Type	CHAR
No. Characters	10
Decimal Places	N/A
Output Length	10
Conversion Routine	–
Sign	N/A
Lower Case	–
Value Range	–

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ZSTREETID

Street ID

Data Type	CHAR
No. Characters	10
Decimal Places	N/A
Output Length	10
Conversion Routine	–
Sign	N/A
Lower Case	–
Value Range	–

ZCITYID

City ID

Data Type	CHAR
No. Characters	4
Decimal Places	N/A
Output Length	4
Conversion Routine	–
Sign	N/A
Lower Case	–
Value Range	–

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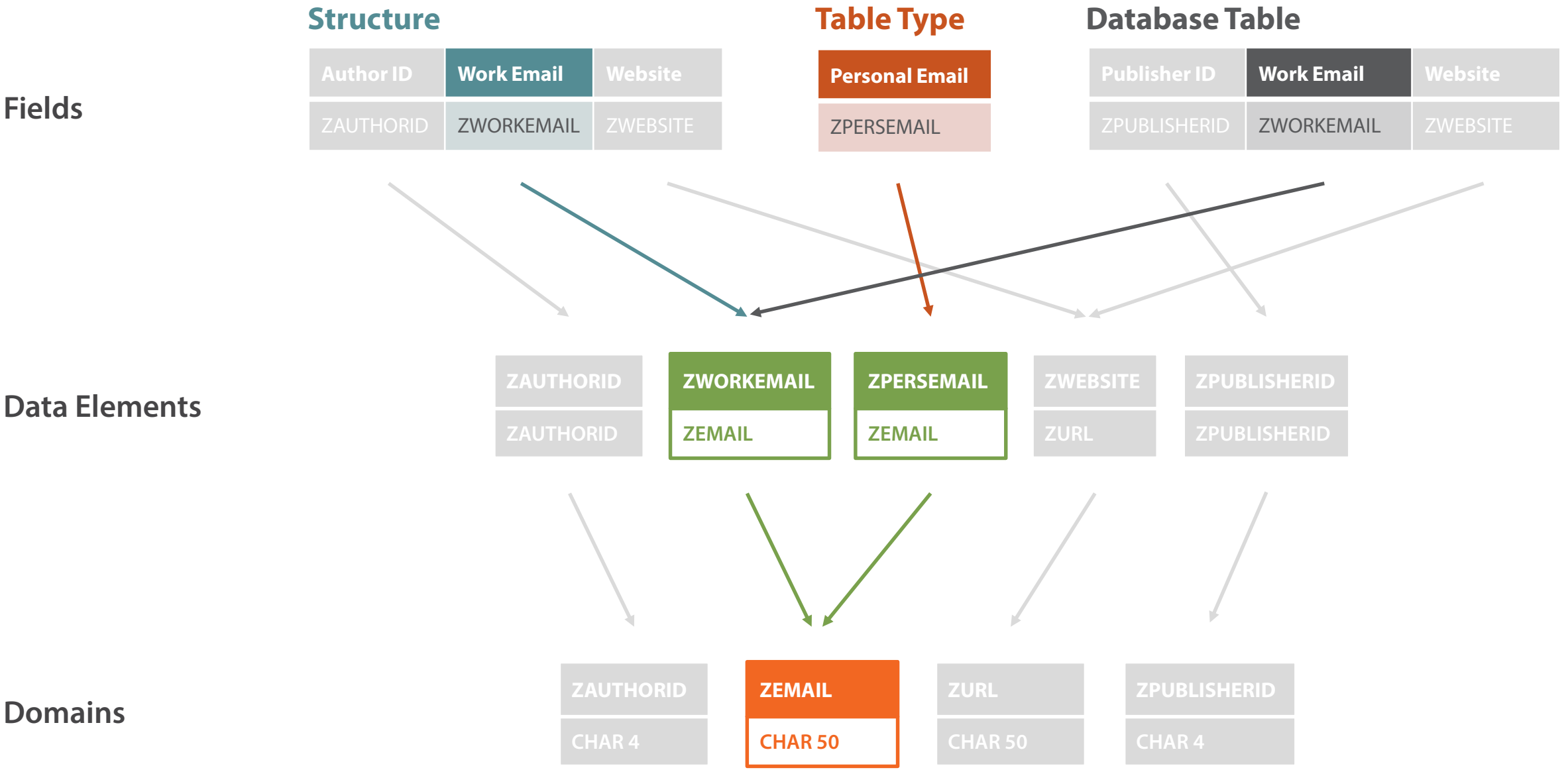

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Structure

…	Work Email	…
…	CHAR **60**	…

Database Table

…	Personal Email	Work Email
…	CHAR 60	CHAR 60

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Structure

...	Work Email	...
...	ZWORKEMAIL	...

Database Table

...	Personal Email	Work Email
...	ZPERSEMAIL	ZWORKEMAIL

...	ZWORKEMAIL	ZPERSEMAIL	...	...
...	ZEMAIL	ZEMAIL	...	...

...	ZEMAIL	...	...
...	CHAR 60	...	...

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15x

Structure

...	Work Email	...
...	CHAR **60**	...

Correct

Database Table

...	Personal Email	Work Email
...	CHAR 40	CHAR **50**

Typo Missed

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Structure

...	Work Email	...
...	ZWORKEMAIL	...

Database Table

...	Personal Email	Work Email
...	ZPERSEMAIL	ZWORKEMAIL

...	ZWORKEMAIL	ZPERSEMAIL	...	...
...	ZEMAIL	ZEMAIL	...	...

1x

...	ZEMAIL	...	...
...	CHAR 60	...	...

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Customer

…	Customer Rating	…
…	INT	…

Vendor

…	…	Vendor Rating
…	…	INT

Employee

…	Employee Rating	…
…	INT	…

ABAP Program #1

IF RA 5

ABAP Program #3

IF RATING BETWEEN 1 AND 5

ABAP Program #5

IF RATING BETWEEN 1 AND 5

ABAP Program #7

IF RATING BETWEEN 1 AND 5

AP Program #2

F RATING BETWEEN 1 AND 5

ABAP Program #4

IF RATING BETWEEN 1 AND 5

ABAP Program #6

IF RATING BETWEEN 1 AND 5

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Customer

...	Customer Rating	...
...	ZCRATING	...

Vendor

...	...	Vendor Rating
...	...	ZVRATING

Employee

...	Employee Rating	...
...	ZERATING	...

...	ZCRATING	ZVRATING	ZERATING	...
...	ZRATING	ZRATING	ZRATING	...

...	ZRATING	...	...
...	INT	...	...
	VALUE RANGE		

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Implemented Domains

ZOSTATUS	ZDATE	ZPRICE	ZEMAIL	ZQUANTITY	ZTITLE	ZPHONE	ZURL
CHAR 1	DATS	DEC 15+2	CHAR 50	DEC 5+0	CHAR 100	CHAR 30	CHAR 50
ZTEXT	**ZLTEXT**	**ZORDERID**	**ZBOOKID**	**ZCUSTOMERID**	**ZAUTHORID**	**ZPUBLISHERID**	**ZZIPCODE**
CHAR 30	CHAR 80	CHAR 10	CHAR 10	CHAR 10	CHAR 4	CHAR 4	CHAR 6
ZSTATEID	**ZCOUNTRYID**	**ZADDRESSID**	**ZSTREETID**	**ZCITYID**			
CHAR 4	CHAR 4	CHAR 10	CHAR 10	CHAR 4			

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Next Module
Data Elements

ZEMAIL	ZQUANTITY	ZTITLE	ZPHONE	ZURL			
CHAR 50	DEC 5+0	CHAR 100	CHAR 30	CHAR 50			
ZBOOKID	ZCUSTOMERID	ZAUTHORID	ZPUBLISHERID	ZZIPCODE			
CHAR 10	CHAR 10	CHAR 4	CHAR 4	CHAR 6			
ZSTREETID	ZCITYID						
CHAR 10	CHAR 4						

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