

# *Enterprise Code Tables*

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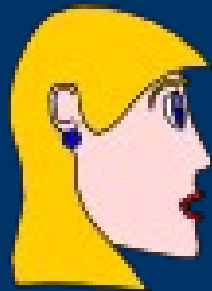
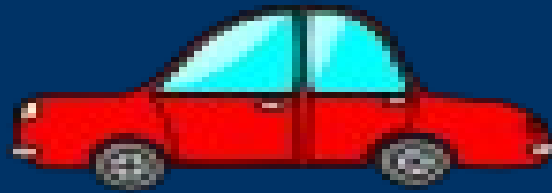


# *Overview*

- What is a code table?
- Why use code tables?
- Code Tables and Lists of Values



# Why use Codes?



Red

Crimson



# Code Tables and LOVs

Color:  Red  
 Green  
 Blue  
 Orange

```
<table border="0">
<tr>
<td>Color:</td>
<td><input type="radio" name="color"
value="R"> Red</td>
</tr>
<tr>
<td>&nbsp;</td>
<td><input type="radio" name="color"
value="G"> Green</td>
</tr>
<tr>
<td>&nbsp;</td>
<td><input type="radio" name="color"
value="B"> Blue</td>
</tr>
<tr>
<td>&nbsp;</td>
<td><input type="radio" name="color"
value="O"> Orange</td>
</tr>
</table>
```

# *First Cut*

- Code/Description
- Code Categories
- Problems with the simple view.



# *Simple Code Table*

## Color Codes

Code	VARCHAR2(1)
Description	VARCHAR2(30)

# A Set of Code Tables

## Color Codes

Code	VARCHAR2(1)
Description	VARCHAR2(30)
Swatch	BLOB

## Car Maker Codes

Code	VARCHAR2(10)
Description	VARCHAR2(30)

## Model Codes

Code	VARCHAR2(15)
Description	VARCHAR2(30)

# *Problems with the Simple View*

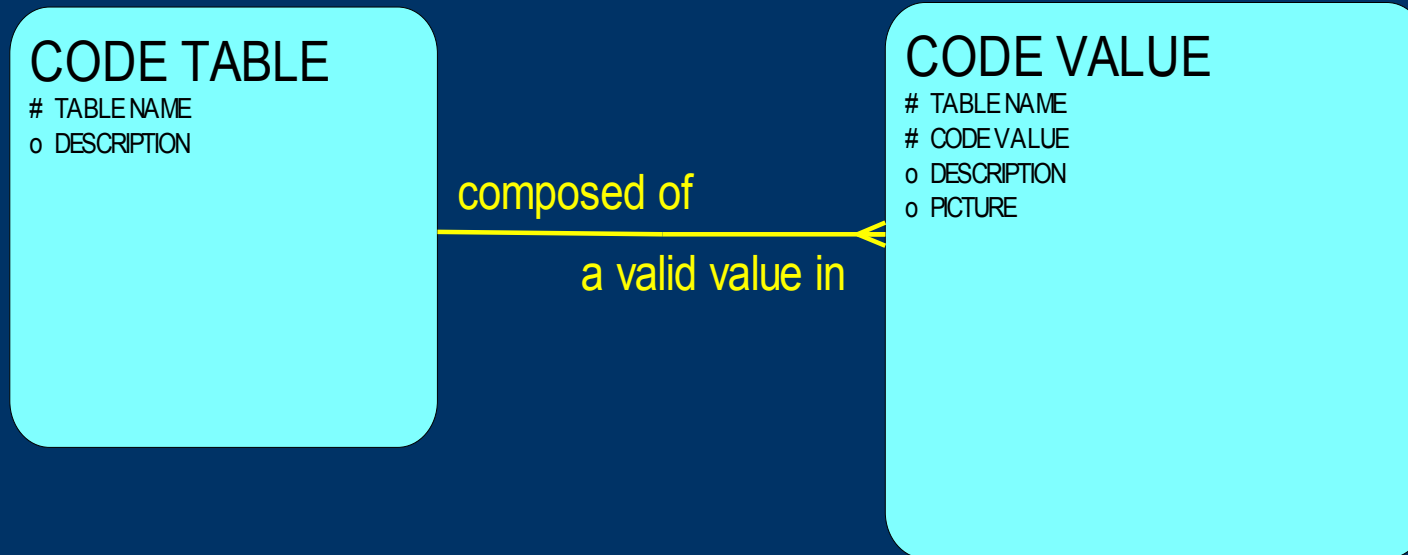
- Many Tables to maintain
    - Need one maintenance module per table
    - Yet these tables are very similar
  - Need a new code table?
    - Create a new table
    - And the maintenance module
  - How many State Code tables do we need?
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# *Rethinking the code table*

- Let's draw a model
- The two table design
- Advantages of two tables rather than many



# The Two Table Model



# *Advantages of the Two Table Model*

- One module to maintain any code table
- Can standardize lookup functions

```
CREATE PACKAGE code_util IS
```

```
    FUNCTION get_description (
```

```
        p_table_name code_values.table_name%TYPE,
```

```
        p_code_value code_values.code_value%TYPE)
```

```
    RETURN code_values.description%TYPE;
```

- Can standardize other functions too
  - FUNCTION pop\_list



# *Enterprise Code Tables*

- We are not alone
- The COMMON schema
- Designing for sharing and re-use.

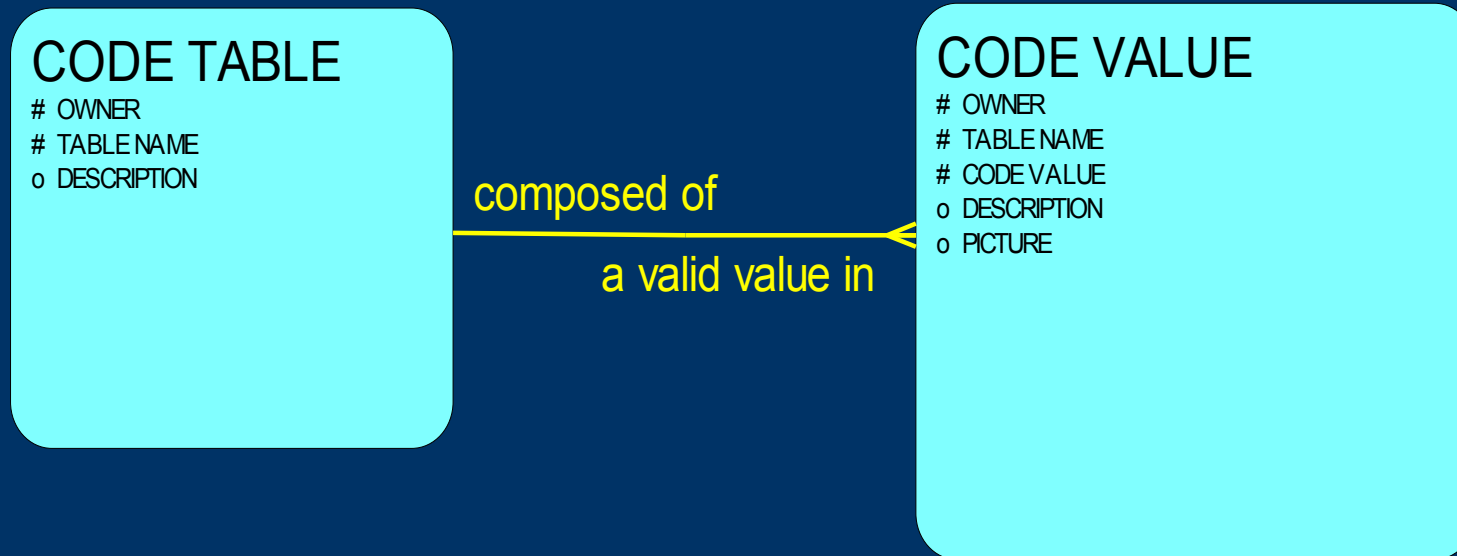


# *Why Share the Code Tables*

- Many code tables are used by more than one application
  - FIPS\_STATE\_CODES
  - PROGRAM\_TYPE
- Reuse the maintenance modules and function package



# Enterprise Two Table Model



# *Features of the Enterprise Code Table*

- Created in a shared schema
    - Mine is called COMMON
  - New column, OWNER, says who owns the table
    - Controls who may update a code table
    - Create views, USER\_CODE\_TABLES and USER\_CODE\_VALUES, where OWNER=USER
    - Or write rules for VPDB
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# *Enhancements*

- Hierarchical Code Tables
  - Is the code available?
    - Active/Inactive Switch
    - Date Range
  - Code History
  - Code Ranges
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# Why Hierarchical Code Tables?

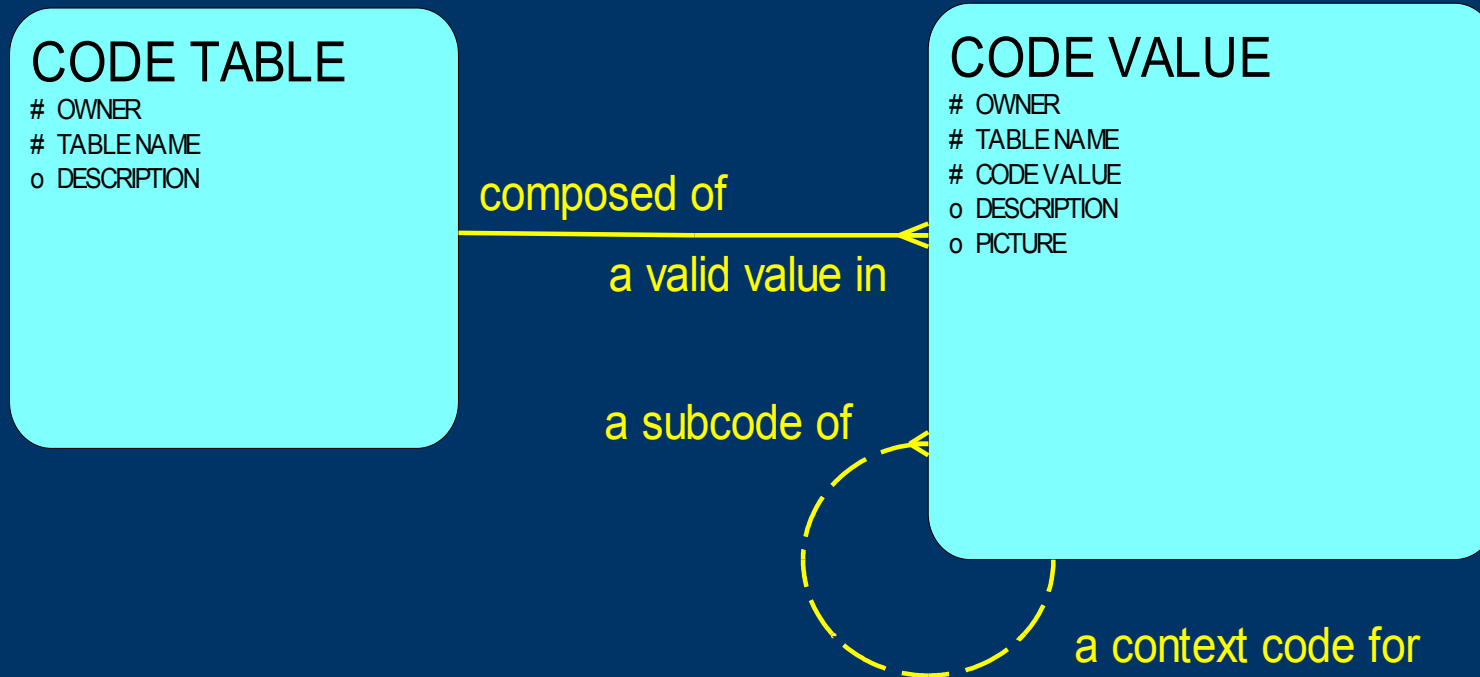
- Some Code Tables depend on others
- Like:
  - Models
    - Colors
  - States
    - Counties
    - Cities



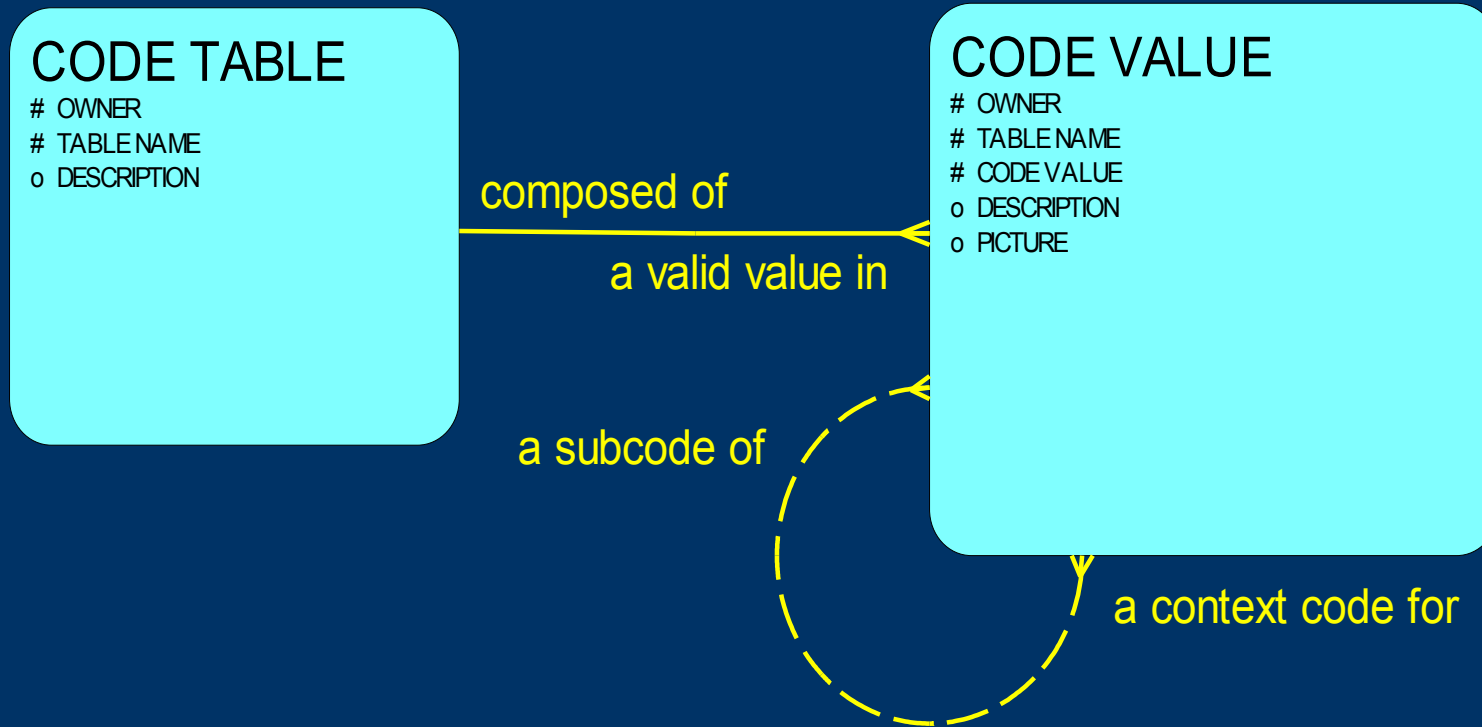
I love the "Z", but does it come in yellow?



# Hierarchical Code Tables - V1



# Hierarchical Code Tables - V2



# *Is the Code Available?*

- Can't delete codes
  - Need old codes for historical reports
- But need to make unavailable for new data
  - Active/Inactive Switch
  - Date range – Code available during range
    - Can enter a code before it is valid
    - Can specify end of range in advance



# *Code History*

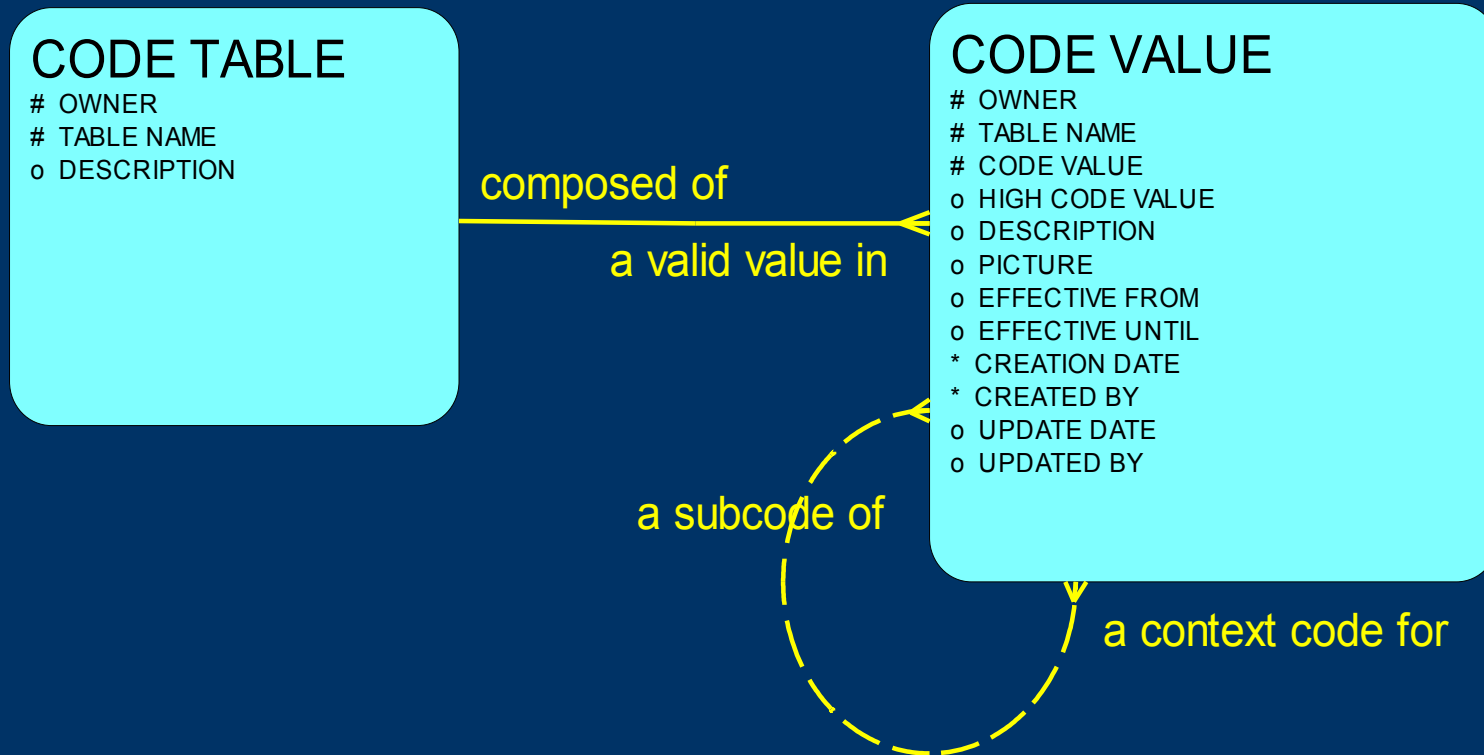
- We may want to know
  - Who inserted the code and when
  - Who changed it and when
- Might have been active/inactive several times



# Code Ranges

- Codes may have ranges of valid values, not lists
- Ranges may be used for summary reporting
  - Example: Ages 0-4, 5-10, 11-17, 18+
- Better in a code table than hard-coded in modules

# Final Design



# Design as Implemented

CODE_TABLES (COMMON)			
# *	789	123	CDTBL_ID
*	A		OWNER
*	A		TABLE_NAME
○	A		DESCRIPTION

CDVAL\_CDTBL\_FK

CODE_VALUES (COMMON)			
# *	789	123	CDVAL_ID
*	A		OWNER
*	A		TABLE_NAME
*	A		CODE_VALUE
○	A		HIGH_CODE_VALUE
○	A		DESCRIPTION
○	789		PICTURE
○	63		EFFECTIVE_FROM
○	63		EFFECTIVE_UNTIL
*	63		CREATION_DATE
*	A		CREATED_BY
○	63		UPDATE_DATE
○	A		UPDATED_BY
*	789		CDTBL_ID

ASSIGN_CODE_VALUE_NETWORK (COMMON)			
# *	789		CDVAL_ID
# *	789		CDVAL_ID_A_CONTEXT_CODE_FOR

CDVAL CDVAL SUBCODE FK

CDVAL CDVAL CNTXT CODE FK



# *Conclusions*

- Code Tables are integral to most applications
  - The Two Table design gives great re-usability and flexibility
  - Add an Owner to make this an Enterprise Code Table
  - Enhance to meet your needs
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# *About the Speaker*

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