

28 IDENTIFYING ILF

Problem description

A municipal tax administration system has a collection module in which payments are recorded. These payments relate to real-estate tax, waste tax, sewage charges and tourist taxes. The payments received are stored in four tables whose structure is documented below.

PAYMENT_REAL-ESTATE-TAX	PAYMENT_WASTE-TAX	PAYMENT_SEWAGE-CHARGES	PAYMENT_TOURIST-TAX
PaymentNumber	PaymentNumber	PaymentNumber	PaymentNumber
Amount	Amount	Amount	Amount
FiscalYear	FiscalYear	FiscalYear	FiscalYear
SocialSecurityNumber	SocialSecurityNumber	SocialSecurityNumber	
ChamberOfCommerceNr			ChamberOfCommerceNr
PaymentDate	PaymentDate	PaymentDate	PaymentDate
AssessmentNumber			
	TaxationNumber	TaxationNumber	
			ClaimNumber
AccountNumber	AccountNumber	AccountNumber	AccountNumber
PeriodSerialNumber	PeriodSerialNumber	PeriodSerialNumber	PeriodSerialNumber
PaymentReference	PaymentReference	PaymentReference	PaymentReference
IndicationCollectionPayment	IndicationCollectionPayment	IndicationCollectionPayment	

All cases are about bank transfer payments. There is no essential difference between the assessment number, taxation number and claim number; these are sheer fiscally-legal designations. The system determines, based on the payment reference of a payment received (in which an indication of the tax category is included) in which of the four entities the concerned payment is booked. The procedure for all payments received is the same: the entries are collected daily in an output file for the general ledger system. The collection module provides the same functionality to monitor the status of payments for all types of payments.

How many ILF should be identified in this situation?

Discussion

The definition of an ILF is:

An internal logical file is a *logical group of permanent data seen from the perspective of the user* that meets each of the following criteria:

- It is *used* by the application to be counted
- It is *maintained* by the application to be counted

The aforementioned entities meet the listed criteria: they are both used and maintained by the information system to be counted. However, the phrase, "from the perspective of the user" is crucial. The guideline states the following on this subject:

"... a group of data that an experienced user considers as a significant and useful unit or object. An equivalent to this kind of logical group of data is an object type in data modeling."

For users, the four different types of taxes are also four different things. Taxes and the accompanying regulations are indeed mutually substantively totally different. The designer of the above model has wanted to connect to the different taxes and opted to accommodate four types of payments in four separate tables; these are largely similar in structure. Logically, however, they all concern one object type *PAYMENT*, of which one of the data element types could be: TaxType. For the valuation of the logical file the additional data element type will be counted and no additional record types are distinguished.

In a situation like this it is recommended to adjust the functional design in order to avoid discrepancy between the count and the design.

Solution

Count one ILF with 1 RET and 14 DET's.

Reference to the standard

5.1