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Practical Guide to ABAP®

Part 1: Conceptual Design, Development, Debugging

- ▶ Getting the most out of ABAP
- ▶ Approaches to debugging from beginner to advanced
- ▶ Guide for understanding and using the SAP Data Dictionary
- ▶ Expert ABAP development techniques

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2 SAP Data Dictionary

The basis of any ABAP program is the data processed by the program. Before writing the first line of code, the developer must know where the data to be processed can be found and how the data is stored in the SAP system.

An SAP system has tens of thousands of database tables. They contain data or are used as check tables for entries in the database tables. A central tool, the SAP Data Dictionary, contains the overview of this wealth of information.

Information about tables and data structures and their relationships to each other are managed in the SAP Data Dictionary. It serves to create tables and define fields, as well as to assign data types.

Experience dealing with this Data Dictionary is a fundamental prerequisite for an ABAP developer. You can call it with TRANSACTION SE11 (see Figure 2.1).

2.1 SE11—Entry to ABAP dictionary

The SAP ABAP Data Dictionary provides data to create, modify, test, activate, delete, and copy:

- ▶ Tables
- ▶ Views
- ▶ Data types (data elements, structures, and table types)
- ▶ Type groups
- ▶ Domains
- ▶ Search help
- ▶ Lock objects

In addition, it offers a set of tools for setting the properties of the dictionary objects, their extensions, their uses, and their environmental analyses.

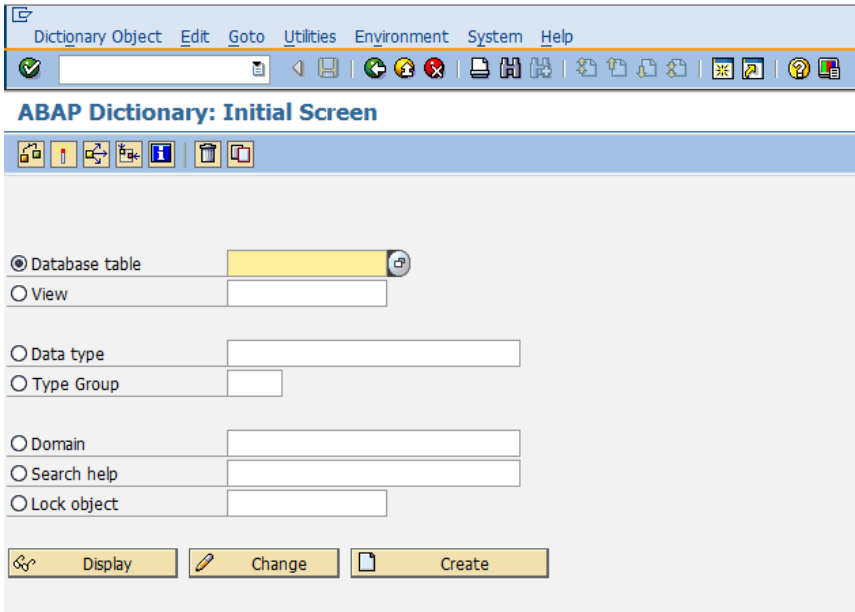



Figure 2.1: Transaction SE11—the SAP ABAP Data Dictionary

Environment analysis



By clicking the  icon, you come to the environmental analysis of a dictionary object. The environment analysis shows the relation of a dictionary object to other dictionary objects (see Figure 2.2).

The screenshot shows the SAP Environment Analysis tool interface. It features a menu bar (Objects, Edit, Goto, Settings, Utilities, Environment, System, Help) and a toolbar with various icons. Below the toolbar, there are four tables displaying analysis results:

Data element	Short text	Package
<input checked="" type="checkbox"/> BU_BP_VALID_FROM	Validity Start BUT000 BP Data	S_BUPA_GENERAL
<input type="checkbox"/> BU_BP_VALID_TO	Validity End BUT000 BP Data	S_BUPA_GENERAL
<input type="checkbox"/> BU_PARTNER	Business Partner Number	S_BUPA_GENERAL
<input type="checkbox"/> BU_XPCPT	Business Purpose Completed Flag	S_BUPA_GENERAL
<input type="checkbox"/> MANDT	Client	SZS

Search Help Name	Short Description	Package
<input type="checkbox"/> BUPA	Business Partner	S_BUPA_GENERAL


Structure name	Short Description	Package
<input type="checkbox"/> BUS000_DAT	BP: General Data I (Data Fields - External)	S_BUPA_GENERAL
<input type="checkbox"/> BUS000_INT	BP: General Data I (Data Fields - Internal)	S_BUPA_GENERAL

Table Name	Short text	Package
<input type="checkbox"/> T000	Clients	STRM

Figure 2.2: Environment analysis of tables

Where-used list



By clicking the WHERE-USED LIST  icon, you can analyze which SAP objects (programs, classes, etc.) a dictionary object uses. Figure 2.3 shows an example of the where-used list of the TABLE BUT000 (business partner).

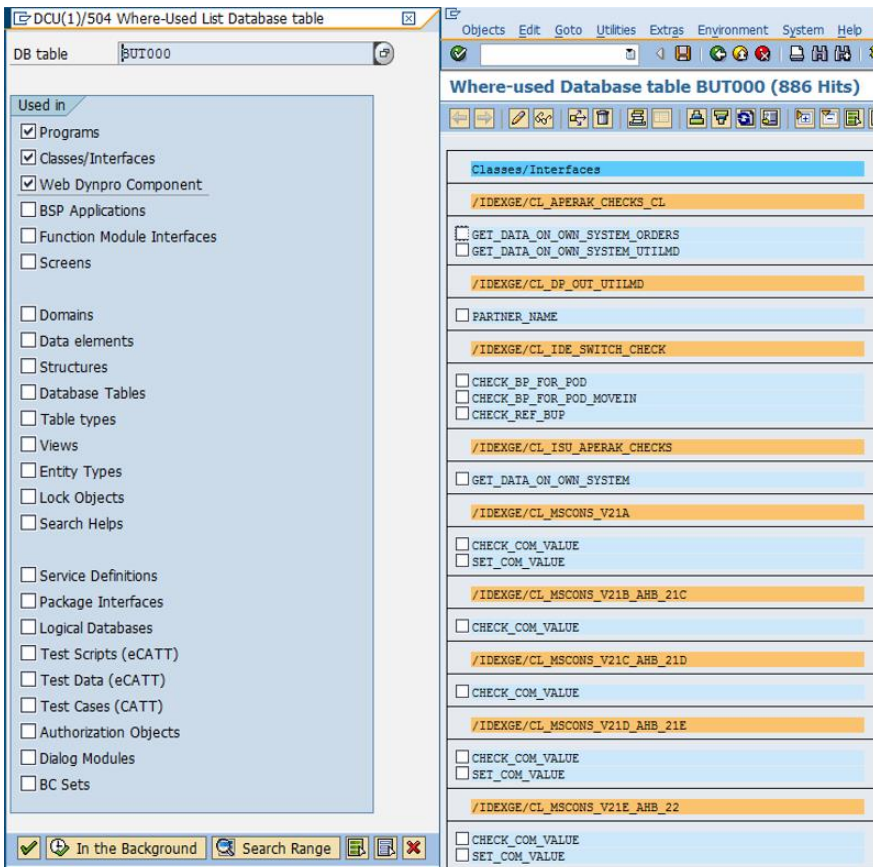


Figure 2.3: Where-used list of database tables

2.2 Table properties

If a table, such as the one in Figure 2.4, owns the first key field MANDT or CLIENT with the data element MANDT, the table is client-specific. This means that the table entries are valid, visible, and changeable only in the named SAP client.

Tables without these key fields are client-independent. That means the table entries are valid, visible, and changeable in every SAP client of the SAP system (see Figure 2.5).

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