

ABAP QUERY

Abstract

This white paper gives a brief introduction on advanced ABAP concepts and detailed steps to create ABAP Query.

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Advanced ABAP Concept – ABAP Query

This white paper gives a brief introduction on advanced ABAP concepts and detailed steps to create ABAP Query. Before getting into that in detail, let's start with basic overview of ABAP.

1. Introduction

1.1 Basics of ABAP

SAP (System Application & Products) is one of the best **ERP** Applications in the market. The application has been assembled in such a versatile way that it handles the entire functional department within an organization. Today major companies including Microsoft and IBM are using SAP to run their own businesses.

A very high level programming language created by SAP is **ABAP** (Advanced Business Application Programming) which is used to develop applications for SAP R/3 system, a widely-installed business application subsystem. **ABAP** is thus not only a mature language that has proven itself in the practical field, but – on the basis of its evolutionary strategy – it continues to be suited to the requirements of business programming. With the quality of its application programs, it has made SAP a world leader in the development of business software.

1.2 Advanced ABAP

Following are the advanced topics, among these we are going to deal with ABAP Query,

ABAP Query

ALE, IDOC

BADI

Logical Database

LSMW

ABAP Code Optimization

RFC and BAPI

SAP Workflow

2. ABAP Query

2.1 Definition

ABAP Query is a functional tool used to develop simple report by writing queries instead of writing ABAP report program i.e. without ABAP coding. All you need is to join the table and drag and drop field that you wish to occur in the report.

Following are the types of reports developed by ABAP Query Tool,

Basic List: - This is a Simple report.

Statistics: - Report containing statistical functions like Average & Percentage

Ranked List: - Report written for analytical purpose.

2.2 Creation of ABAP Query

There are three steps for creating ABAP Query,

Create User Group (SQ03):- Specify the users who should be authorized to run the query.

Create Infoset (SQ02):- Indicates from which part of the SAP database the data is going to be retrieved and how the data is to be retrieved by the query.

Create Queries (SQ01):- Create the query and arrange the layout.

2.3 Case Scenario

Let we learn the creation of ABAP Query with a scenario of generating **Purchase Order Detail Report**. The report has following details,

Purchase Document Number	Order Quantity
Company Code	Unit of Measure
Document Category	
Document Type	
Status	
Payment Term	
Material Number	
Plant	
Storage Location	

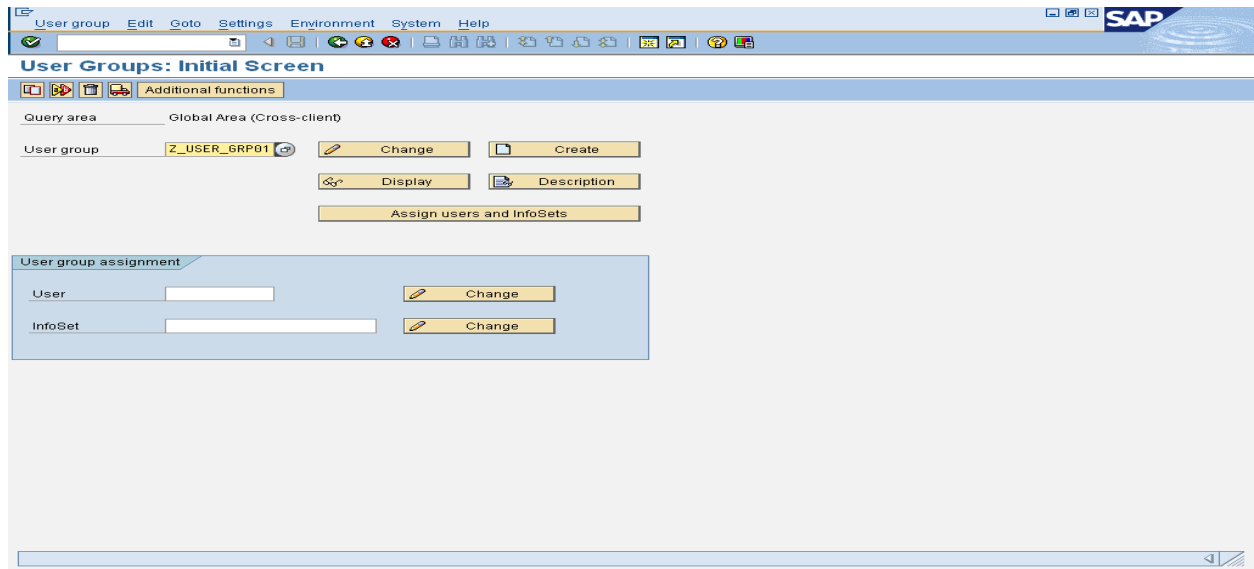
All the above information is stored in the base tables **EKKO** (Purchasing Document Header) and **EKPO** (Purchasing Document Item).

2.4 Step by Step Approach

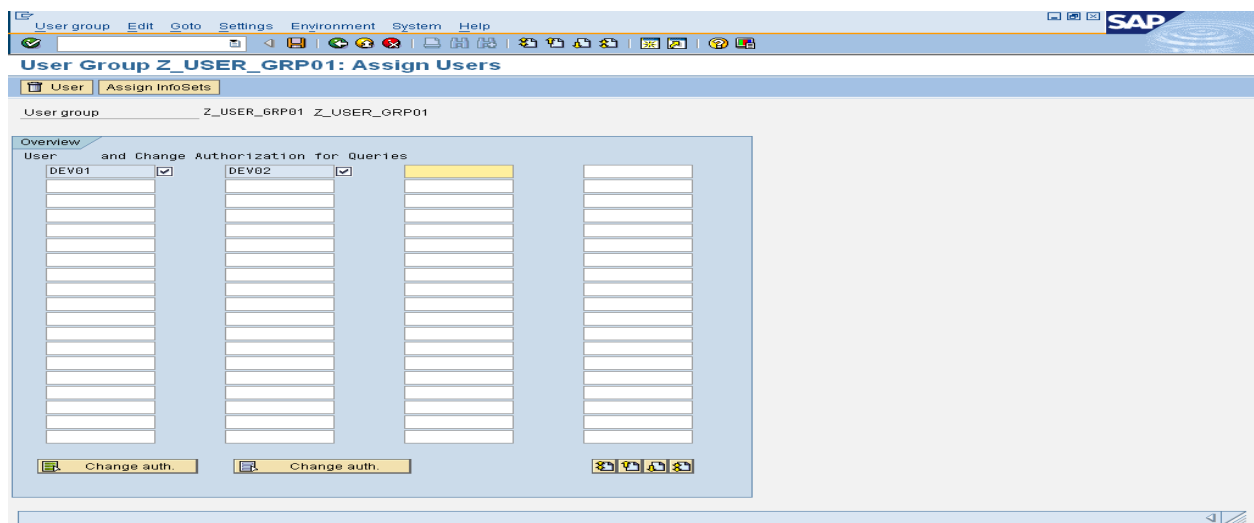
Step by step approach of creating ABAP query is as follows,

2.4.1 Create User Group

Navigate to SQ03 to create User Group. Give name of the user group and click on “Create”. The below picture is the snapshot of User Group: Initial Screen where “Z_USER_GRP01” is the name of the user Group.



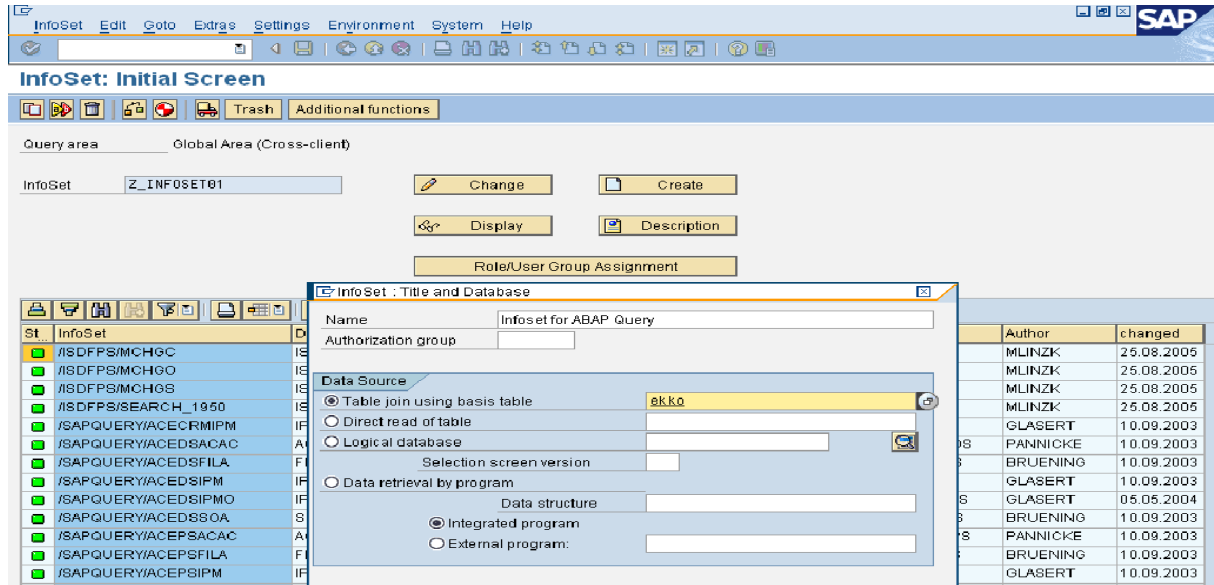
Once the user Group is created, users have to be assigned to this group. The users in the group are only eligible to run the query. The below screen shows “DEV01” and “DEV02” users are added to this user Group.



2.4.2 Create InfoSet

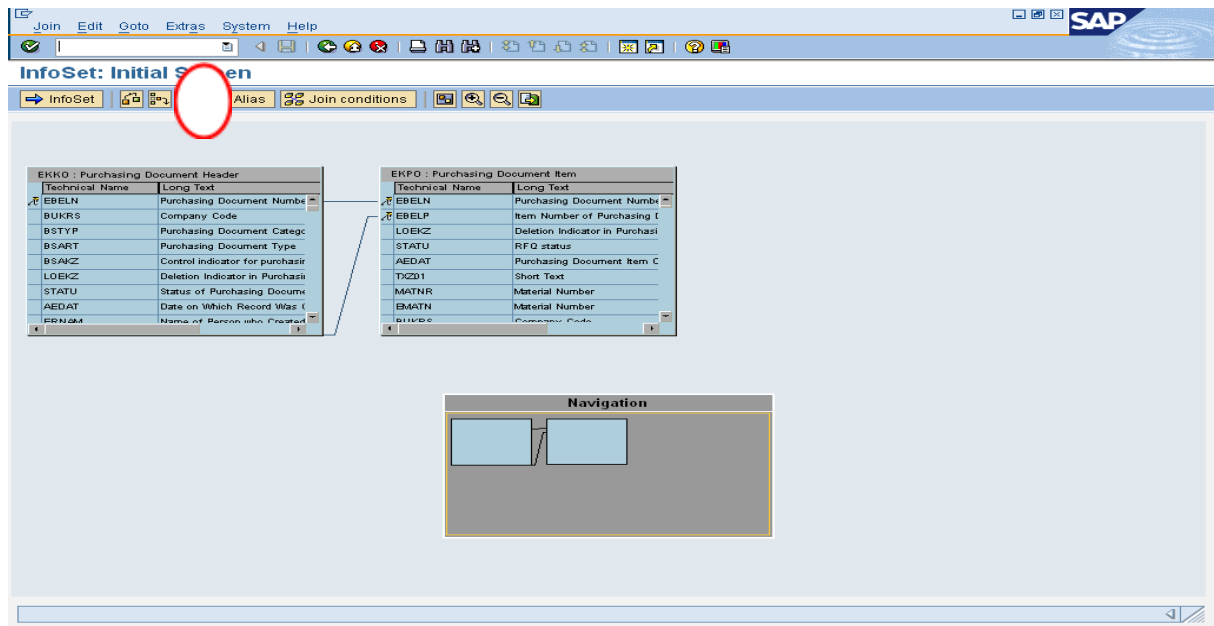
InfoSet holds the information about the query i.e. the tables used, fields needed, join condition etc.

Navigate to SQ02. Give the name and click on “Create”. Provide the Title and the table information in the fields provided as given in the below screen.

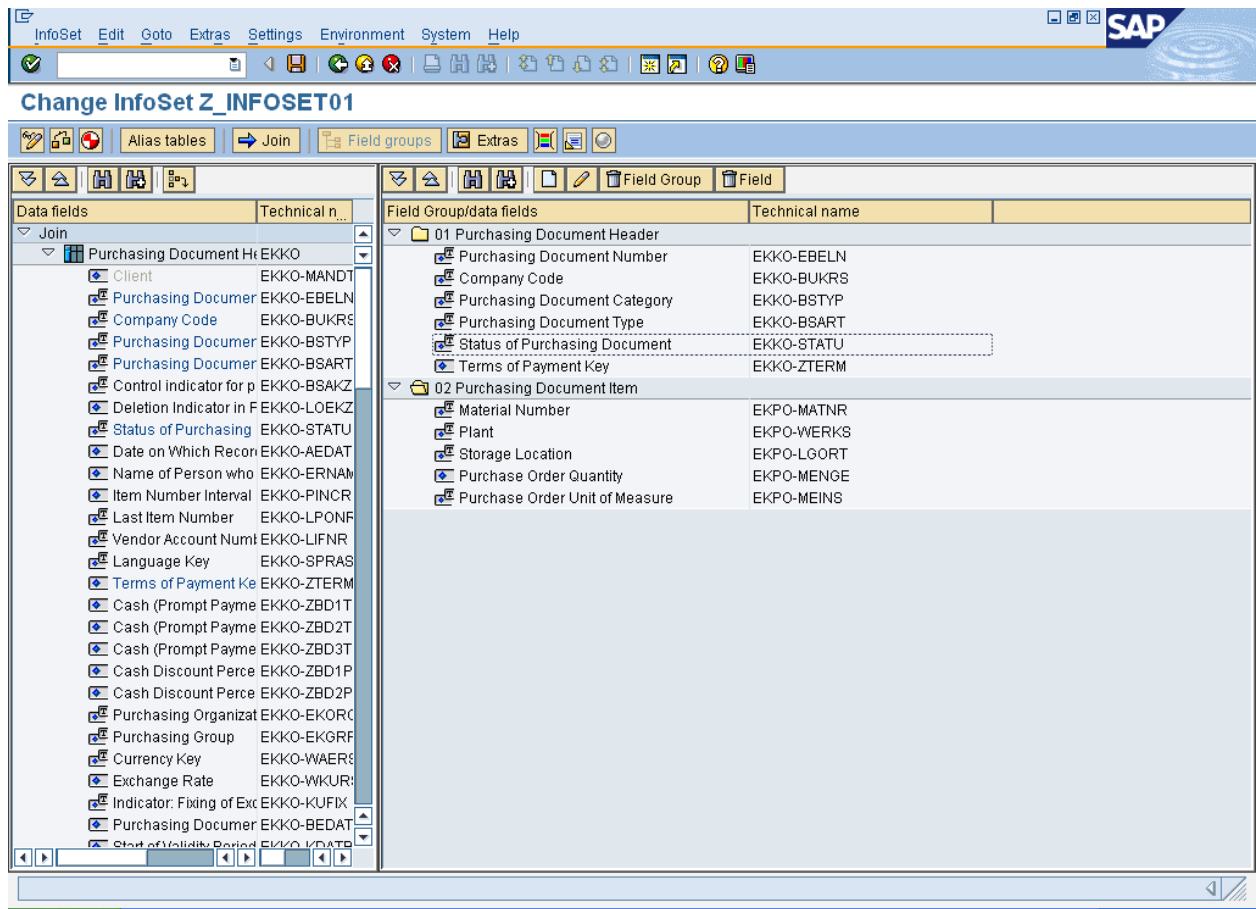


Till now EKKO table is only added in the infoSet, now EKPO table has to be added by clicking on “Insert Table” button in the below screen. Once both the tables are added, the pictorial representation of the tables are represented as,

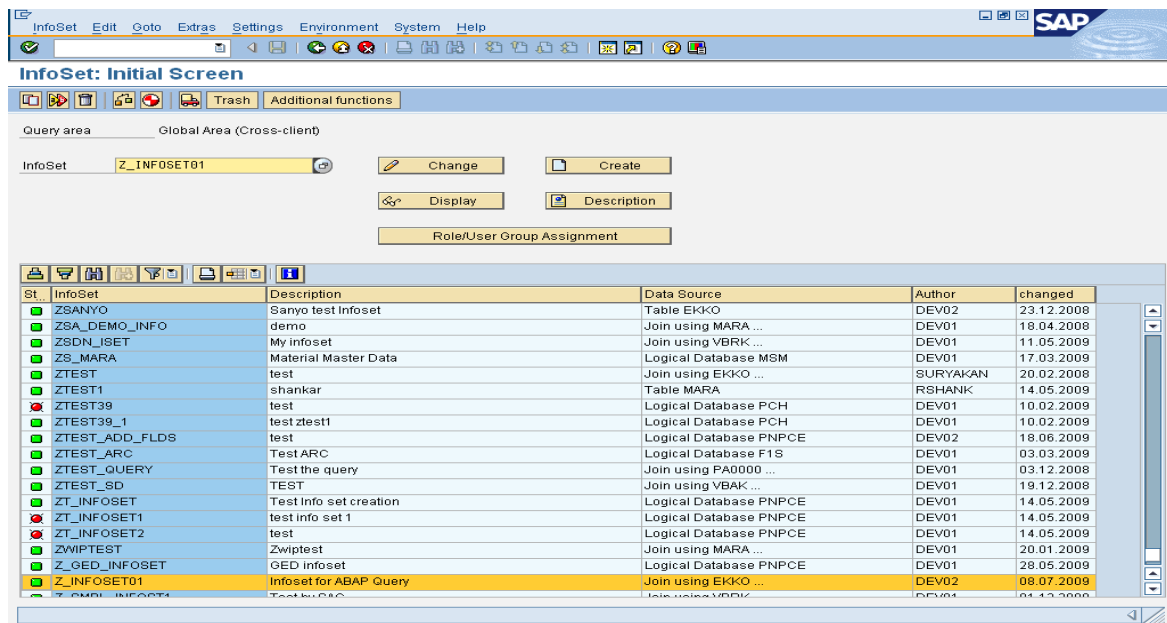




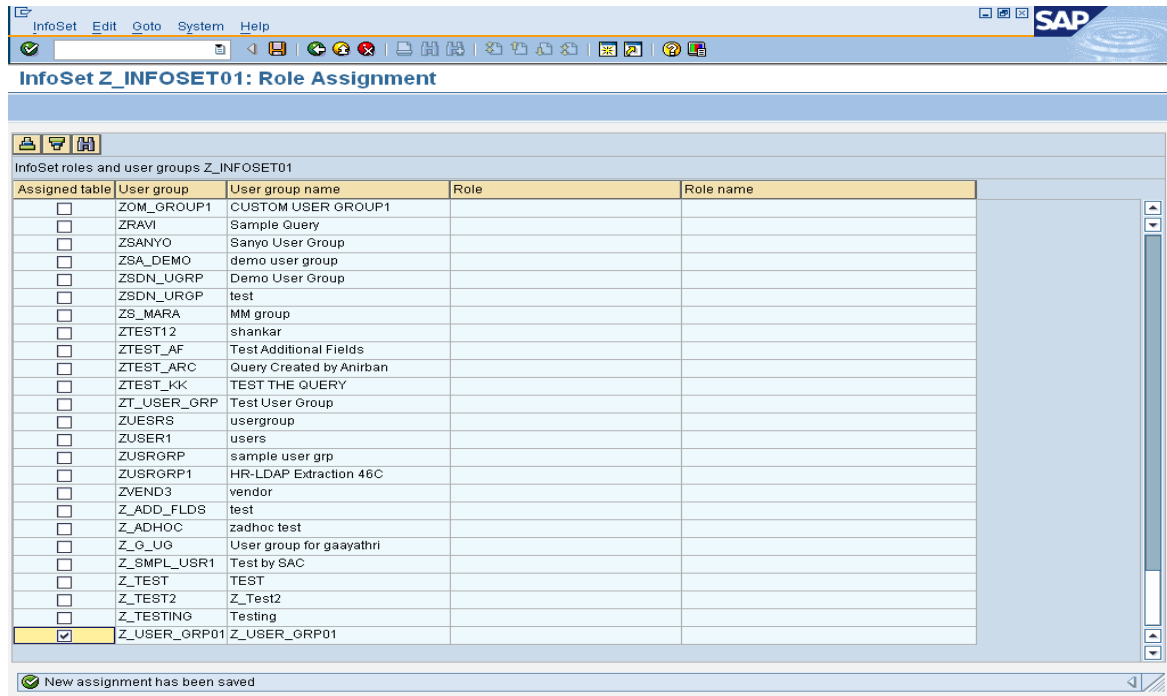
Select Fields: - This is achieved by clicking on “InfoSet” Button on previous screen. Fields are selected by simply dragging and dropping from left to right. Here we have selected only 6 fields from EKKO table and 5 fields from EKPO table.



Generate the InfoSet by clicking on “Generate” Button. Once the infoSet is generated it will be displayed in the list with its status marked as “Green”.

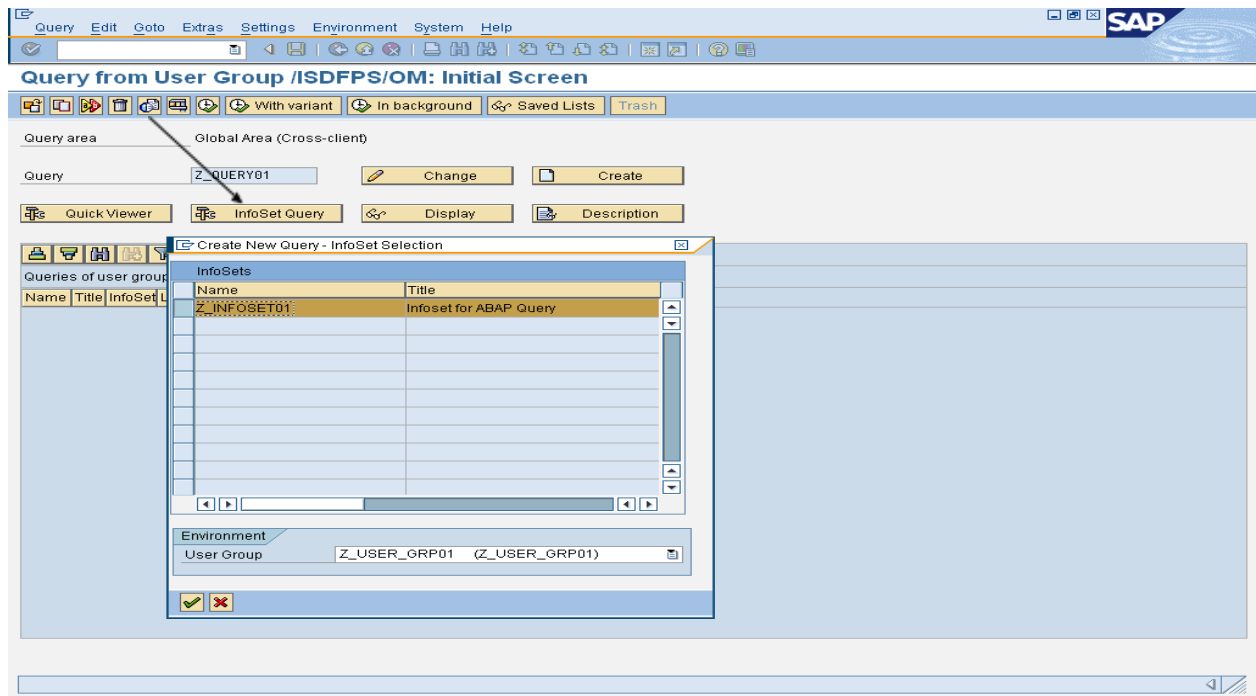


Assign Infoset to the User Group which we have created.

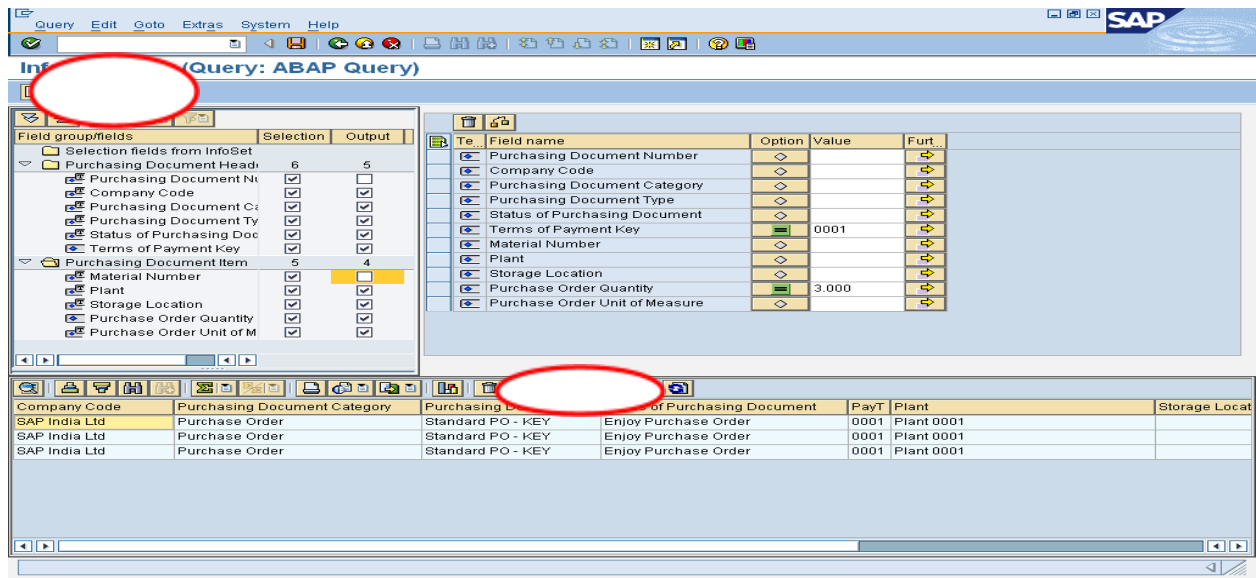


2.4.3 Create ABAP Query

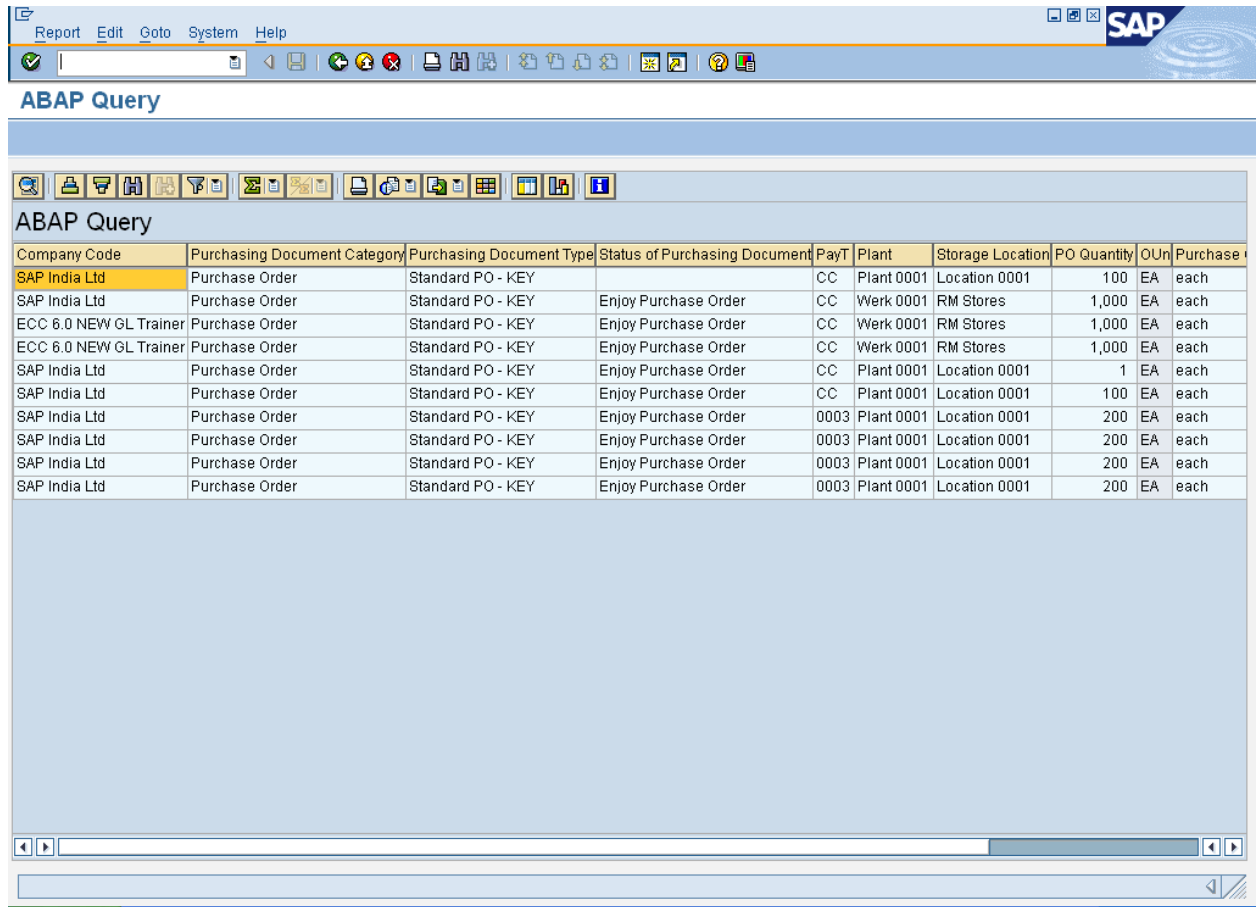
Navigate to SQ01 and click “InfoSet Query” button for selecting the infoset under which the query has to be created.



Among the selected fields in the infoSet, select the fields for outputting in the report as well as selection condition can also be given for each and every field before the report is generated. This is shown in the below screen,



Final report is generated by clicking on "Output" Button in the previous screen. This is the sample report for Basic list similarly Statistical and Ranking list can be generated by selecting the option from the dropdown provided in the previous screen.



The screenshot displays the SAP ABAP Query interface. At the top, there is a menu bar with 'Report', 'Edit', 'Goto', 'System', and 'Help'. Below the menu bar is a toolbar with various icons. The main area is titled 'ABAP Query' and contains a table with the following data:

Company Code	Purchasing Document Category	Purchasing Document Type	Status of Purchasing Document	PayT	Plant	Storage Location	PO Quantity	OU	Purchase
SAP India Ltd	Purchase Order	Standard PO - KEY		CC	Plant 0001	Location 0001	100	EA	each
SAP India Ltd	Purchase Order	Standard PO - KEY	Enjoy Purchase Order	CC	Werk 0001	RM Stores	1,000	EA	each
ECC 6.0 NEW GL Trainer	Purchase Order	Standard PO - KEY	Enjoy Purchase Order	CC	Werk 0001	RM Stores	1,000	EA	each
ECC 6.0 NEW GL Trainer	Purchase Order	Standard PO - KEY	Enjoy Purchase Order	CC	Werk 0001	RM Stores	1,000	EA	each
SAP India Ltd	Purchase Order	Standard PO - KEY	Enjoy Purchase Order	CC	Plant 0001	Location 0001	1	EA	each
SAP India Ltd	Purchase Order	Standard PO - KEY	Enjoy Purchase Order	CC	Plant 0001	Location 0001	100	EA	each
SAP India Ltd	Purchase Order	Standard PO - KEY	Enjoy Purchase Order	0003	Plant 0001	Location 0001	200	EA	each
SAP India Ltd	Purchase Order	Standard PO - KEY	Enjoy Purchase Order	0003	Plant 0001	Location 0001	200	EA	each
SAP India Ltd	Purchase Order	Standard PO - KEY	Enjoy Purchase Order	0003	Plant 0001	Location 0001	200	EA	each
SAP India Ltd	Purchase Order	Standard PO - KEY	Enjoy Purchase Order	0003	Plant 0001	Location 0001	200	EA	each

3. Conclusion

This document gives brief introduction on ABAP concepts and stepwise approach to create ABAP Query. It is basically a tool to test SQL query. It clearly depicts that, report program is not needed to test the single SQL Query.