Lesson 4:

REPORTING FUNDAMENTALS

The first step in finding data or generating reports in SAP is defining *search criteria* to limit the scope of the search. Search criteria are the values you have typed in or selected in the fields on the SAP screen to perform a certain task. The amount of data stored in SAP is huge. Limiting the search assures that you will get relevant information in a reasonable time frame and without putting excessive demand on system resources.

OBJECTIVES

In this lesson you will become familiar with basic functions used in SAP reporting. At the completion of this lesson you will be able to:

- ✓ Recognize the components of SAP basic search criteria screens
- ✓ Use two single-value search criteria types. For example: date search and text search
- ✓ Use Multiple Selection search criteria to create a report based on data from several cost objects and multiple date ranges
- ✓ Use the *Drill Down* option to obtain more detailed information

SUMMARY OF BUSINESS RULES

Users can generate reports in SAP based on their *SAP user profile* and *SAP authorizations*. Some data (e.g. Procurement data, some Master data) is "open" at MIT, which means that it can be viewed by every user with access to the system. Other data is protected from view by authorizations (e.g. Salary data), meaning that only users who are allowed to see that specific data will be able to access it.

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GETTING STARTED

Basic Search Selection Criteria

The purpose of this section is to familiarize you with the basic elements of a typical search selection screen and to cover **Basic Search** selection criteria. **Figure 1** on the next page is an example of a typical search selection screen that we will use in the practice exercises in this lesson.

In many instances you can specify the beginning and end of a range of values. In others you are limited to a single value. Some fields are not used in MIT's implementation of SAP and therefore are not useful for searching (e.g., "sales document" and "network" in **Figure 1**). Be sure to scroll down to the bottom of the selection screen to see all of the available fields; some selection displays are longer than one screen.

Figure 1 on the next page shows an example of a search selection screen, in this case the "*Purchase Documents per Account Assignment*" screen. In the following exercise you will learn to access this basic search screen. This search will result in a list of Purchase Orders that fit your selection criteria.

A Purchase Order is a document generated by Procurement from a requisition that has been submitted and approved. A purchase order is an official order sent from MIT to a vendor requesting goods and services. In the following exercise you will learn to access this screen.

To learn more about Purchase Orders and Requisitions please see the SAP for MIT web site or register for the SAP Requisition class http://web.mit.edu/sapr3/.

Drill Down

The process of double-clicking on an item to move to a level of greater detail is called **Drilling Down** in SAP. In SAP, you can drill down to a detail document supporting a line item in a report. For example you can drill down on a document listed on the Purchasing Document for Cost Center report to view the detailed Purchase Order.

To learn more about SAP reports, please see the SAP for MIT web site http://web.mit.edu/sapr3 or register for the SAP Reporting class.

The selection screen consists of:

- ✓ Labels describing the fields available for searching (1)
- ✓ Single-value selection criteria entry fields into which you will type your criteria (2)
- ✓ Buttons indicating that multiple selection criteria are available (3)

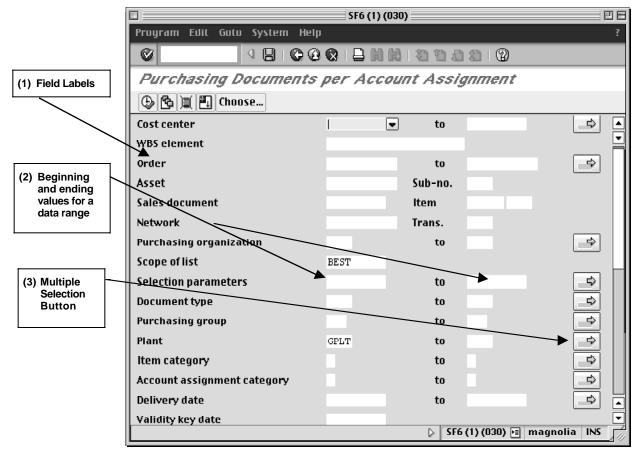


Figure1

Be sure to scroll down to the bottom of the selection screen to see all of the available fields; some selection displays are longer than one screen.



Search Using the Document Date Field

In this exercise you will search for Purchase Orders created between 7/1/00 and 7/10/00. You will generate an SAP Report using Basic Search criteria.

Navigation

Access the SAP User menu screen, if you are not already there.

1. From the **SAP User menu** screen, follow the navigation path:

User Menu

▼

Role ZMIT

•

Purchasing

PO Displays

▼

PO Search Displays

ME2K - PO by Cost Object (double-click)

- You can enter the transaction: /nme2k in the Command field and press the Enter/Return key.
- 2. In the Cost center field, enter 1633500.
 - In many other selection screens you are permitted to enter only one cost object type, i.e., Cost Centers or Internal Orders or WBS Elements, but never a mix. If you want to report on several different types of cost objects, you will need to run a separate report for each cost object type or use a different search function to capture the data you need.

Enter beginning date for date range

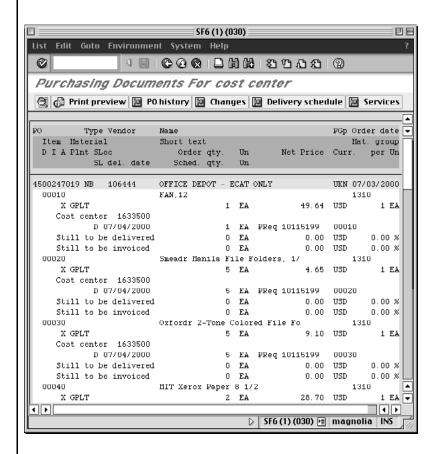
 Scroll down to **Document Date** and click in the leftmost field. Type 7/1/00 or click the Matchcode button to use the calendar to select that date.

Enter ending date for date range

 Click in the rightmost field for the **Document Date** criteria and type 7/10/00 or click the Matchcode button to use the calendar to select that date.

View List Purchase Orders found within Date Range

5. Click on the **Execute** button and review the resulting report. Scroll down, if necessary, to see the full report. (A sample screen is shown below.)



- 6. Click on the **Back** button to return to the selection criteria screen.
 - The criteria you entered are gone. You will have to enter new data to do another search. In some search selection screens, search criteria are not "erased" when you back out of the report.



Search Using Short Text & Vendor Fields

In this example you will search for Purchase Orders that were created for the vendor Office Depot and also include tape. You will generate an SAP Report using basic search selections that include vendor and short text fields.

Navigation

If you are not at the **Purchasing Documents** selection screen follow the Navigation path below. Otherwise, go to Step 2.

1. From the **SAP User Menu** screen, follow the navigation path:

User Menu

Role ZMIT

Purchasing

. . . .

PO Displays

•

PO Search Displays

•

ME2K - PO by Cost Object (double-click)

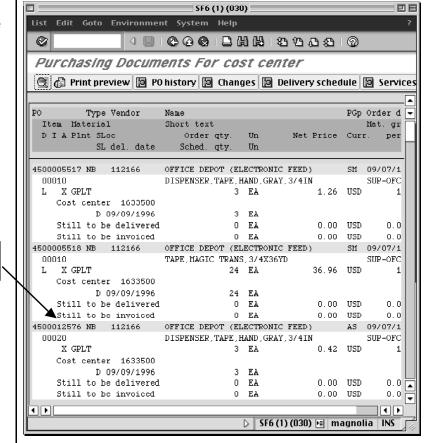
- 2. In the Cost center field, enter 1633500.
- Scroll down the to the bottom of the search selection criteria screen until you see the field labels Short text and Vendor name.

Use wild card search option (the wild card search uses * * on either side of the search term)

- Using the "wild card" technique, type *tape* in the Short text field (this refers to the short text field in the purchase order itself).
 - Requisitions and Purchase Orders are covered in detail in the SAP Requisitioning class.

- Using the "wild card" technique, type *Office Depot* in the Vendor name field.
 - When using wildcards remember that entering *office* might get you additional listings for PO's to other vendors with the word "office" in their name. On the other hand it is possible to miss some data if too specific a text string is entered, e.g., *envelopes* misses all the line items that have a description of "envelope". Wildcards should be used carefully and the resulting data should be examined for completeness.
- 6. Click on the **Execute** button and review the resulting PO's. To view all documents, scroll down to see the full report.
 - The display is in ascending order by SAP Purchase Order number.

View resulting list of PO's, on which the vendor is Office Depot and tape was ordered.



Purchase Order number

The report displays only those line items which include the purchase of tape, even if the Purchase Order has multiple other line items. If you want to see the entire Purchase Order, you need to drill down.

Drill Down

- 7. Double-click on a **Purchase Order number** (the PO number is the 10 digit number in the display that begins with 45 or 55) in order to view the entire PO with all the line items.
 - The Drill Down feature gives you the ability to look at the Purchase Order details screen by screen



- 8. Click on the **Back** button to return to the List Report.
- 9. Click on the **Back** button to return to the selection criteria screen.
 - The criteria you entered are gone. You will have to enter new data to do another search. In some search selection screens, search criteria are not "erased" when you back out of the report.

GETTING STARTED

Multiple Selection Search Criteria

The purpose of this section is to familiarize you with the basic elements of **Multiple Selection** searches.

You may need to generate reports using a more complex set of search criteria. For example, you might need to look at a series of nonconsecutive cost objects within several date ranges. To do this, SAP provides you with **Multiple Selection** search options on most search criteria selection screens.

The availability of such an option is indicated by the presence of the **Multiple Selection** button button in the right-hand margin of the screen. The **Multiple Selection** button appears to the right of the search field(s) for which it may be used, following along from left to right across the screen. If the **Multiple Selection** button is not there, it means that multiple selections are not available for the field(s) on that line. If the Multiple Selection arrow is green, it indicates that complex search options have already been selected.

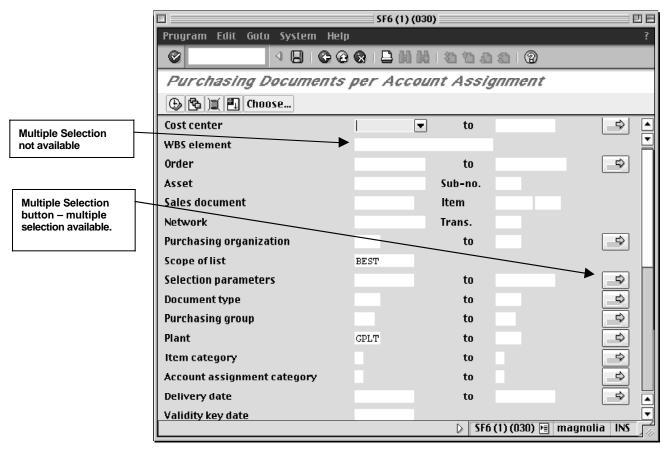


Figure 2

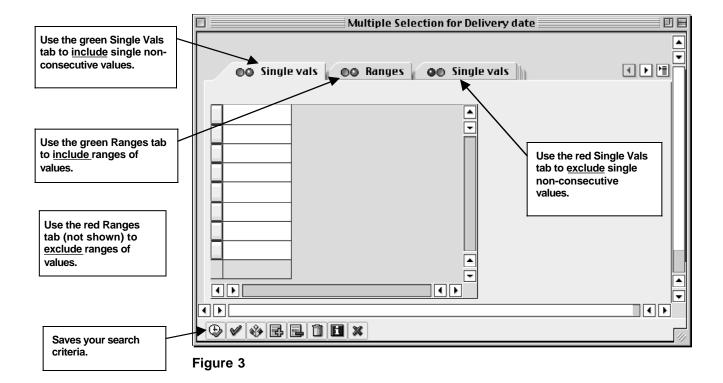
Figure 3 Shows the **Multiple Selection** screen, which is standard across all SAP screens. You can access the Multiple Selection screen by clicking on the Multiple Selection button from any **Basic Search** screen.

The **Multiple Selection** button allows you to use these types of selection criteria for reporting:

- ✓ Include or exclude individual nonconsecutive values
- ✓ Include or exclude multiple ranges values

Most of the time, the **Multiple Selection** button can be accessed either before or after entering your values in the fields on the basic search selection screen. Occasionally you will be forced to enter a value before clicking on the **Multiple Selection** button.

- ✓ Green buttons indicate to include values.
- ✓ Red buttons indicate to exclude values.

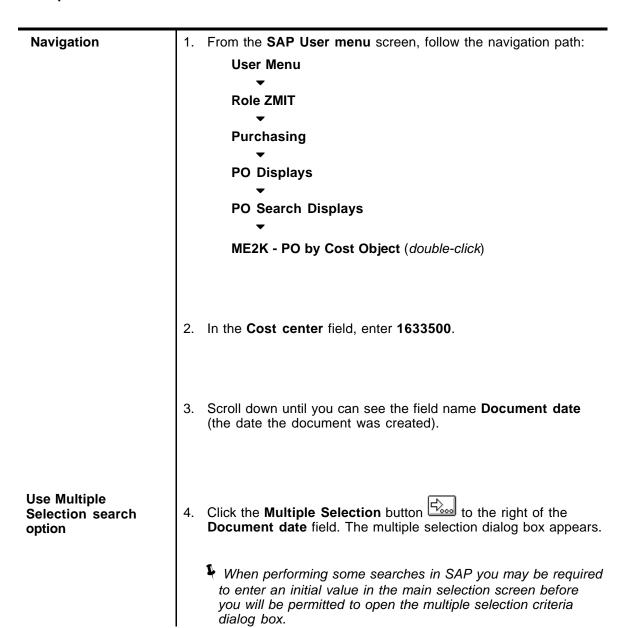


4-12



Search Using Multiple Document Date Ranges

In this exercise you will search for all the Purchase Orders created on two specific dates, as well as within several date ranges during 2000. You will generate an SAP report using **Multiple Selection** criteria.



Enter a single value document date

5. Under the **Single Vals tab** (with the green button) enter the following (observe the mm/dd/yy format):

First field: **07/02/00** Second field: **08/25/00**

You may also select the date by clicking the Matchcode button to the right of the field, which opens a calendar selection popup box.

Enter ranges of document dates

6. Click on tab (with green button) titled **Ranges** and enter the following (observe the mm/dd/yy format):

	<u>Left box</u>	Right box
First row:	05/01/00	05/15/00
Second row:	09/01/00	09/07/00

You told SAP that you want to see the PO's for July 2, and Aug. 25, as well as all those between the dates May 1–15, and Sept. 1–7 for cost object number 1633500.

Copy dates to search selection screen

7. Click on the **Copy** button to transfer these values to the "Purchasing Documents per Account Assignments" search selection screen. (*This is an essential step!*)

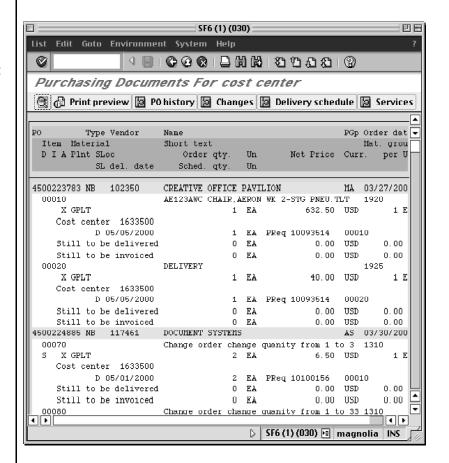
The Multiple Selection arrow for the **Document date** field has turned green indicating that there are multiple selection criteria in effect.

If you need to delete a multiple selection, click the Multiple Selection arrow, and then click on the Trash Can icon at the bottom of the popped up dialog box. (Do not do this now or you will not be able to complete the exercise!) When you click the copy button to return to the main screen, note that your dates have been deleted.

8. Click on the **Execute** button and review the resulting PO's. To view all documents, scroll down to see the full report.

View Purchase Orders found.

The POs in this report were created on July 2nd and Aug. 25th, as well as between May 1-5 and Sept. 1-7 for cost object 1633500.



9. Click the Exit button server return the SAP User Menu screen.



Using what you have learned in this lesson, perform the following tasks:

Questions

1.	Run a report for all of the Brinks Incorporated Purchase Orders that were created for between 1/1/00 and 1/31/00 . Your Cost center is 1633500 .
2.	How would you Drill Down on a Purchase Order in order to see the detailed line items?
3.	Using the Multiple Selection criteria, run a report for all Purchase Orders created between April 7 th and May 5th 2000, as well as June 4th and July 5 th 2000. Use the Cost center 1633500 .

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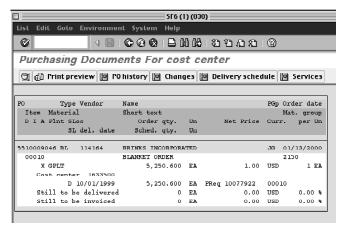
Answers to Self Check

1. Use transaction ME2K.

Enter 1633500 in the Cost center field.

Enter 1/1/00 and 1/31/00 in the Document date fields.

Using the Matchcode on the <u>Vendor</u> field, search for vendor <u>Name</u> ***Brinks***



- 2. **Double-click** on the Purchase Order number within the report.
- 3. Use transaction ME2K.

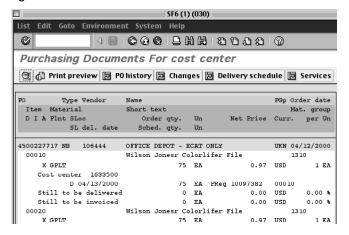
Enter 1633500 in the Cost center field.

Access multiple selections on the Document date field.

On the Multiple Selections screen, enter the following:

Single values: 6/4/00 and 7/5/00

Ranges: 4/7/00 to 5/5/00





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Lesson 5:

BASIC REPORT PRINTING

SAP reports can be printed via any SAP printer connected to MITnet. You should leave these printers on at all times. They have a powersave feature that saves energy when they are not being used, so there is no need to turn them off to conserve electricity.

OBJECTIVES

In this lesson you will become familiar with basic SAP report printing options. At the completion of this lesson you will:

- ✓ Understand the printing environment
- ✓ Understand the basic procedure for printing reports
- ✓ Understand how and where to get help with printing problems

SUMMARY OF BUSINESS RULES

SAP users who are authorized to generate reports are also authorized to print reports. This function tells SAP to send a copy of a report to the printer. The Print button can be found on the Toolbar of many SAP screens.

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GETTING STARTED

Printing Checklist (Before you begin printing)

- ✓ Make sure you know approximately how many pages of output will be printed by paging through the report on-screen first, or by using the Print Preview button.
- ✓ If you do print more than you need, see the "Troubleshooting" section.
- ✓ Make sure you know to where you are printing. The default printer (the printer to which your SAP printouts will be sent) is typically the one close to your office. Your user profile should have a default printer. If it does not, you will be prompted to enter the printer name each time you print the report. See Lesson 7 for instructions on setting your default printer.

Troubleshooting

SAP contains a huge amount of data, and it is possible to generate a report that is tens and even hundreds of pages long by running a report with overly broad selection criteria. If you unintentionally send a large print job to the printer, here is what you can do:

- ✓ Pull out the printer paper tray to stop printing
- ✓ Collect the information needed to seek help (see the section below)
- ✓ Contact the Business Liaison Team at business-help@mit.edu or 252-1177

If your requested SAP print job is not printing, here is what to do:

✓ Contact the Business Liaison Team at business-help@mit.edu or 252-1177

Getting Help

Before you seek Help, you should collect some basic information for the Business Liaison Team:

- ✓ The SAP environment that you are accessing: Production-1 or Production-2.
- ✓ The SAP spool request number, if you have one, from the bottom of your SAP screen.
- ✓ The four-character name of your SAP printer. Follow the menu path System>>User Profile>>Own data (transaction code: /nsu3) and click on the Default tab, this will provide you with the name of your Default Printer. Many SAP printers are labeled with the printer name, so check your printer for the label.

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Practice Printing and Reviewing Requisitions

In this exercise you will first practice printing a **List of Requisitions** in order to become familiar with one type of print procedure, and then practice printing an **Individual Requisition** in order to become familiar with the second type of print procedure.

- ✓ The List Requisition report will print using the basic SAP font, the Requisitions will be in a simple list format, and the report will have a cover page that indicates spool requests, owner, and other selection options.
- ✓ The Individual Requisition report will have MIT-specific formatting that resembles a spreadsheet and it will only include one requisition.
- You are not able to choose the format of your print job, the format is standard in SAP.

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Access the SAP User menu screen, if you are not already there.

1. From the **SAP User menu** screen, follow the navigation path:

User Menu

▼

Role ZMIT

•

Purchasing

•

Requisition

•

ZBP0 - Review/Print Req. (double-click)

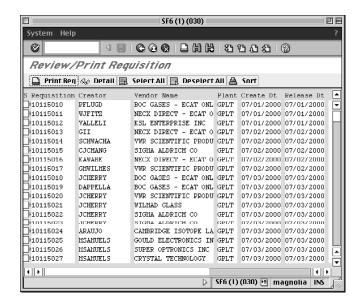
Or type the transaction code: /nzbp0.

- 2. In the Plant / Int. Service Provider field enter GPLT.
- 3. In the Creation Date field enter 7/1/00 to 7/4/00.

4. Click on the **Execute** button

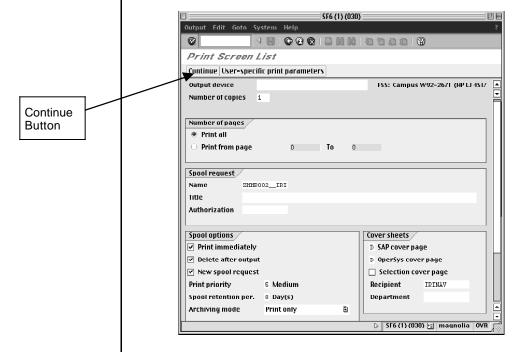


Review/Print Requisitions List Report



Print List

5. Click the **Print** button on the Standard toolbar to print the **List Requisitions** report.



6. Click the **Continue** button to start the print job.

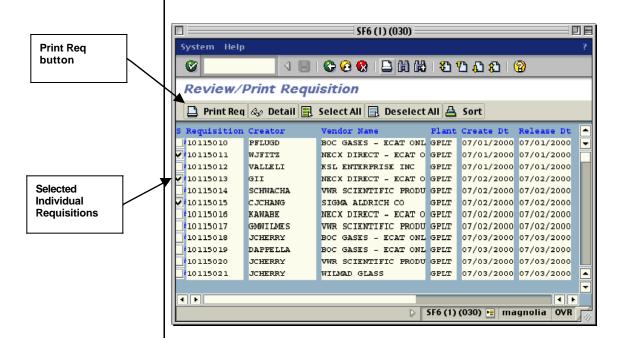
The "Print Screen List" screen contains the name of your SAP default printer. The screen also contains some customizing options. Please be sure to scroll all the way down. Confirm that all the **Spool options** boxes have been checked, and if you want a cover sheet, select "D" in the SAP cover sheet field. Cover sheets are useful in identifying your print job at the printer.

Clicking "Continue" causes the print job to begin. In a few moments, you should be able to collect a printout of the Requisition list at the printer. At the end of the print job you will return to the "Review/Print Requisition" screen.

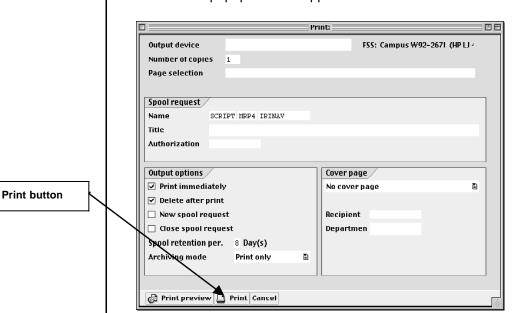
From the "Review/Print Requisition" screen:

Print Individual Requisitions

Check the boxes to the left of one or two Individual Requisitions that you want to print.



8. Click the **Print Req** button on the Application tool bar, in order to print the **Individual Requisitions**.



The "Print:" popup box will appear.

Enter other printing selection options

- Confirm that all the **Output options** boxes have been checked, as well as the **Cover page** options. Cover sheets are useful in identifying your print job from others if you have a printing problem.
- 9. Click on the **Print** button at the bottom of the screen.

Clicking the "Print" button causes the print job to begin.

A dialog box opens informing you of the number of Requisitions printed and what printer they were sent to.

10. Click the Continue button.

In a few moments, you should be able to collect printouts of your selected requisitions at the printer. At the end of the print job you will return to the "Review/Print Requisition" screen.

You can now compare and contrast the two different print functions. The differences between these two print functions can be best viewed through the results of the print job.

11. Click the Exit button it twice to return to the SAP User menu.



NOTES:

Lesson 6: (optional)

DOWNLOADING SAP REPORTS

Data from SAP reports can be downloaded, or transferred from SAP, into a local file on your desktop or server. That file can then be opened in a spreadsheet application such as Microsoft Excel, or imported into other applications. Downloaded data is typically unformatted – i.e. report titles and column headings are not downloaded, only data.

Data from externally maintained files (e.g. Microsoft Excel) can also be uploaded into SAP for the purpose of transferring large volumes of information. This is a convenient alternative to manually entering the data. To learn more about the Upload process please refer to the on-line documentation. http://web.mit.edu/sapr3/

Some users will never download or upload data, but others may use these functions, for example to combine SAP report data with data that is not in SAP for the purpose of creating customized reports in other applications.

OBJECTIVES

In this lesson you will become familiar with the SAP Download function, which permits you to download a report to a local file and then open it in your spreadsheet of choice. At the completion of this lesson you will be able to:

- ✓ Use the Download button to download an SAP report
- ✓ Use an SAP menu path to download an SAP report

SUMMARY OF BUSINESS RULES

Users can generate reports in SAP based on their SAP user Profile and SAP authorizations. You must have proper authorization to generate reports on particular cost objects, cost element groups, as well as SAP transactions.

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Download the Purchasing Overview by Cost Collector Report

In this exercise you will download the Purchasing Overview by Cost Collector (this term is used interchangeably with the term Cost Object) report into a Microsoft Excel spreadsheet by using the Download button.

Navigation

Access the **SAP User menu** screen, if you are not already there.

1. From the **SAP User menu** screen, follow the navigation path:

User Menu

Role ZMIT

Reports

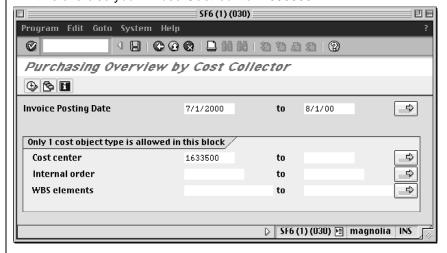
Purchasing Reports

ZBP3 - By Cost Object (double-click)

You can enter the transaction: /nzbp3 in the Command field and press the Enter/Return key.

Enter selection criteria

- 2. In the **Invoice Posting Date** fields, type **7/01/00** in the left and **8/01/00** in the right.
- 3. Enter a **Cost Object** (Cost center, Internal order, WBS element). In this exercise you will use **Cost center 1633500**.



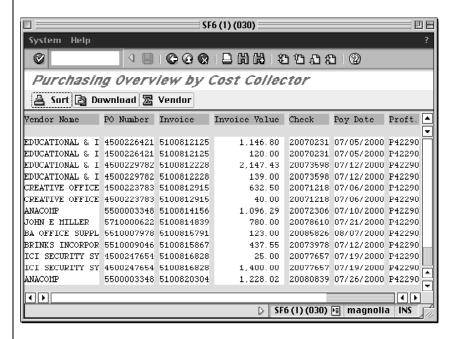
4. Click on the **Execute** button



Your report is displayed on the screen.

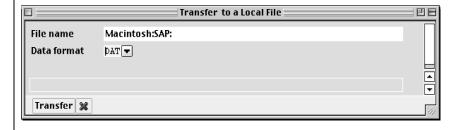
Begin Download 5 Click on the

5. Click on the **Download** button on the toolbar.



Select folder and file name for the downloaded report

6. The "Transfer to Local File" dialog box come up. Click on the **Matchcode** button to open the "Save as....." dialog box..

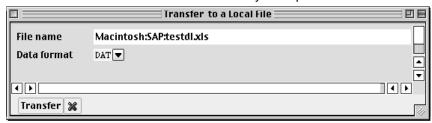


Save Report as a spreadsheet document

- 7. Use the standard **PC** or **Mac** procedures to choose a directory/folder to save the file in.
 - For the purpose of this exercise, save the file on your Desktop.
- a) Enter the file name testdl.xls
- b) Click the **OK** or **Save** button to accept your selection. The file name appears in the "Transfer to a local file" dialog box.

Select option to download file as data (DAT)

- 8. In the "Transfer to a local file" box, click the **Matchcode** button for **Data Format**. Select **DAT** from the matchcode list.
 - The **DAT format** downloads data ready to import into a spreadsheet. Column headings and cost element (G/L account) subheadings are not downloaded and must be entered manually into the spreadsheet.
- 9. Click the **Transfer** button to download your report.



- You will see a message, at the bottom of the SAP screen, indicating the number of bytes downloaded. This confirms that the download is complete.
- 10. To view the downloaded file, go to your Computer Desktop and double click on the testdl.xls file. You may be prompted for an application to use to open the file.

Opening/Viewing the downloaded report

- Note: You may save the downloaded report in any folder that you choose: you are not limited to saving it on the Computer Desktop.
- 11. Return to SAP and click the **Cancel** button on the "Download to local file" screen. This will take you back to report search screen "Purchasing Overview by Cost Collector".



Alternate Download Procedure Using a Menu Path

In this exercise you will download the Purchasing Overview by Cost Collector (term used interchangeably with Cost Object) report into a Microsoft Excel spreadsheet by using the alternate menu path method. This method is used when your report does not have a Download button, as is often the case with research reports.

Navigation

If you still have the **Purchasing Overview by Cost Collector** report open proceed to Step 5. Otherwise go to Step 1.

1. Type the transaction code **/nzbp3**. Or access the **SAP User menu** screen and follow the Navigation path:

User Menu

•

Role ZMIT

•

Reports

•

Purchasing Reports

•

ZBP3 - By Cost Object (double-click)

Enter the selection criteria

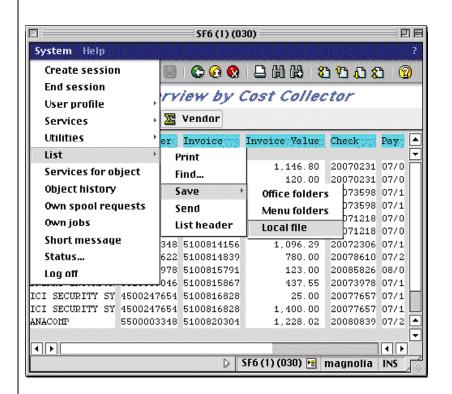
- 2. In the **Invoice Posting Date** fields type **7/01/00** in the left and **8/01/00** in the right.
- 3. Enter a **Cost Object** (Cost center, Internal order, WBS element). In this exercise you will use **Cost center 1633500**.
- 4. Click on the Execute button



Your report is displayed on the screen.

Begin download

- 5. Follow the menu path: System>>List>>Save>>Local file.
 - This method is used when the **Download** button is not available on the report.



Save report as a spreadsheet document

6. Click the radio button marked **Spreadsheet** to save the data with numeric processing capability, then click the **Enter** button



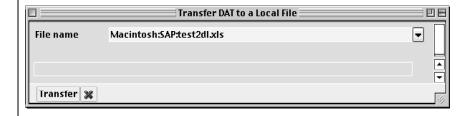
Select folder and file name for downloaded file

7. The "Transfer to Local File" dialog box (as displayed in the previous exercise) comes up. Click on the **Matchcode** button to open the "Save as..." dialog box.

8. Use the standard **PC** or **Mac** procedures to choose a directory/folder to save the file in.

For the purpose of this exercise, save the file on your **Desktop**.

- a) Enter the file name test2dl.xls
- b) Click the **OK** or **Save** button to accept your selection. The file name appears in the "Transfer to a local file" dialog box.



9. Click on the Transfer button.

Download is complete

The dialog box disappears, the file is saved, and a message appears on the status line of the SAP screen indicating that a specific number of bytes were transferred. This confirms the download has completed.

Downloaded file in spreadsheet

- 10. To view the downloaded file, go to your Computer Desktop and double click on the file.
- 11. Return to SAP and click the **Cancel** button on the "Download to local file" screen. This will take you back to the report search screen "Purchasing Overview by Cost Collector".

